

Gideon Sundback

Born 1880. Inventor of the zipper.

Available online at www.livesretold.co.uk



Contents

1. Introduction
2. Whitcomb Judson
3. Gideon Sundback Arrives
4. Early Customers
5. The Growth of the Zipper
6. Later Life

1. Introduction



Gideon Sundback.

The following chapters were archived in 2021, with acknowledgement and thanks, from the America Comes Alive website at www.americancomesalive.com.

Gideon Sundback is credited with inventing the first zipper, but he was not the first to patent the device. Sundback, however, created the first zipper to work well, and he also invented the machine that could make these fasteners more quickly.

Zippers are something we take for granted. We zip them up and down many times daily without ever giving a thought to who invented them or how complex they are.

But take a look at a zipper on something you're wearing. You'll see the little teeth are lined up on two separate pieces of cloth tape. The slider device that unites the teeth must move smoothly and be operated by a small but easy-to-use pull-tab. Once closed, the teeth need to provide a firm hold.

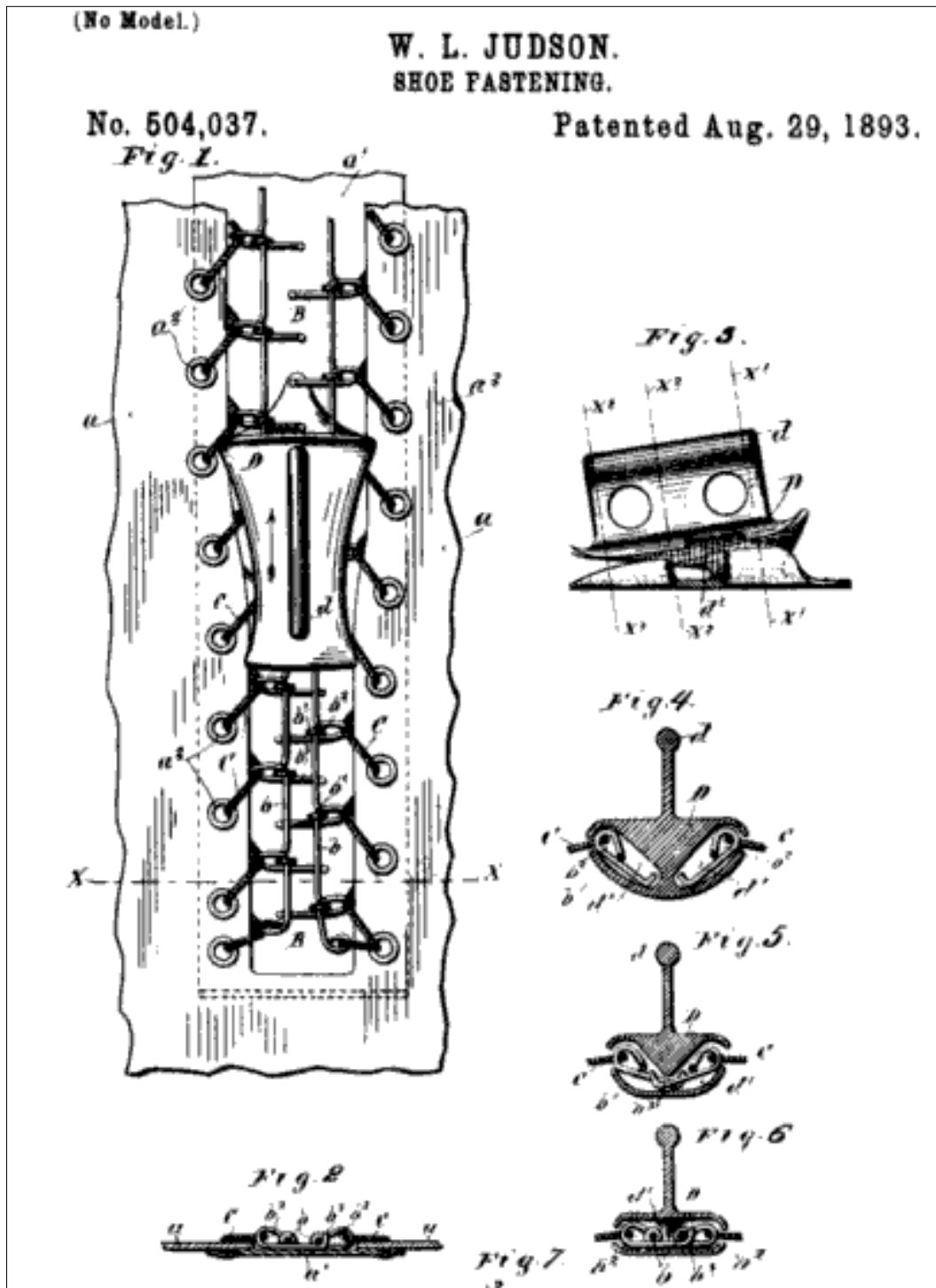
Zippers also need a “stop” piece at both the top and the bottom of the zipper to keep a slider from running off its track.

The challenge of the earliest zippers was making ones that were reliable and would lie flat. If the zipper buckled, twisted, or gapped open, it was no good to anyone.

The first known effort at making this type of closure system was made by Elias Howe in 1851. His invention was a series of clasps united by a connecting cord that slid up and down on ribs. It was called an “automatic continuous clothing closure,” but it was never marketed.

2. Whitcomb Judson

Forty years later, Whitcomb Judson, a mechanical engineer, was tired of fastening the high-button boots that were in fashion at the time. He developed a hook-and-eye fastener that featured a hand-pulled guide to clasp hooks and eyes sequentially, thereby closing the boot or the article of clothing.



Whitcomb Judson's patent for a clasp locker.

Judson (right) spent two years drawing and re-drawing the closure he envisioned. At last he got a patent on what he called the “clasp locker.” The device was inventive enough that it was accepted for display at the 1893 World’s Columbian Exposition in Chicago. Because of this exposure, Judson received investment money from Lewis Walker, and the two men started the Automatic Hook & Eye Company (later known as the Universal Fastener Company). The product attracted interest, but it was problematic. Sometimes the interlocking part didn’t mesh, and other times, the fastenings popped open. But Judson saw the need was real and kept at it.



Throughout the 19th century, all clothing, suitcases, pouches and shoes had to be fastened closed using buttons, snaps, buckles, or some sort of system of pins. These closures were not speedy or convenient. And with some items of clothing, the assistance of another person was required. The Universal Fastener Company enjoyed some early sales, but business was slow. Judson knew the product still needed work. Gideon Sundback was hired to address the problem.



The 1893 World Columbian Exposition, Chicago.

3. Gideon Sundback Arrives

Gideon Sundback (1880-1954) was born in Sweden in 1880 and finished his electrical engineering studies in Germany before emigrating to the United States in 1905. His first job was at Westinghouse Electric Company. About a year later, he received an offer from Whitcomb Judson.

IN 1906, Gideon Sundback was made head of design at Universal Fastener. His first development is known as the Plako fastener. The Plako fastener operated with the closure guide carefully moving up the tracking loop through the hooks and eyes that were attached to cotton twill tape on either side.



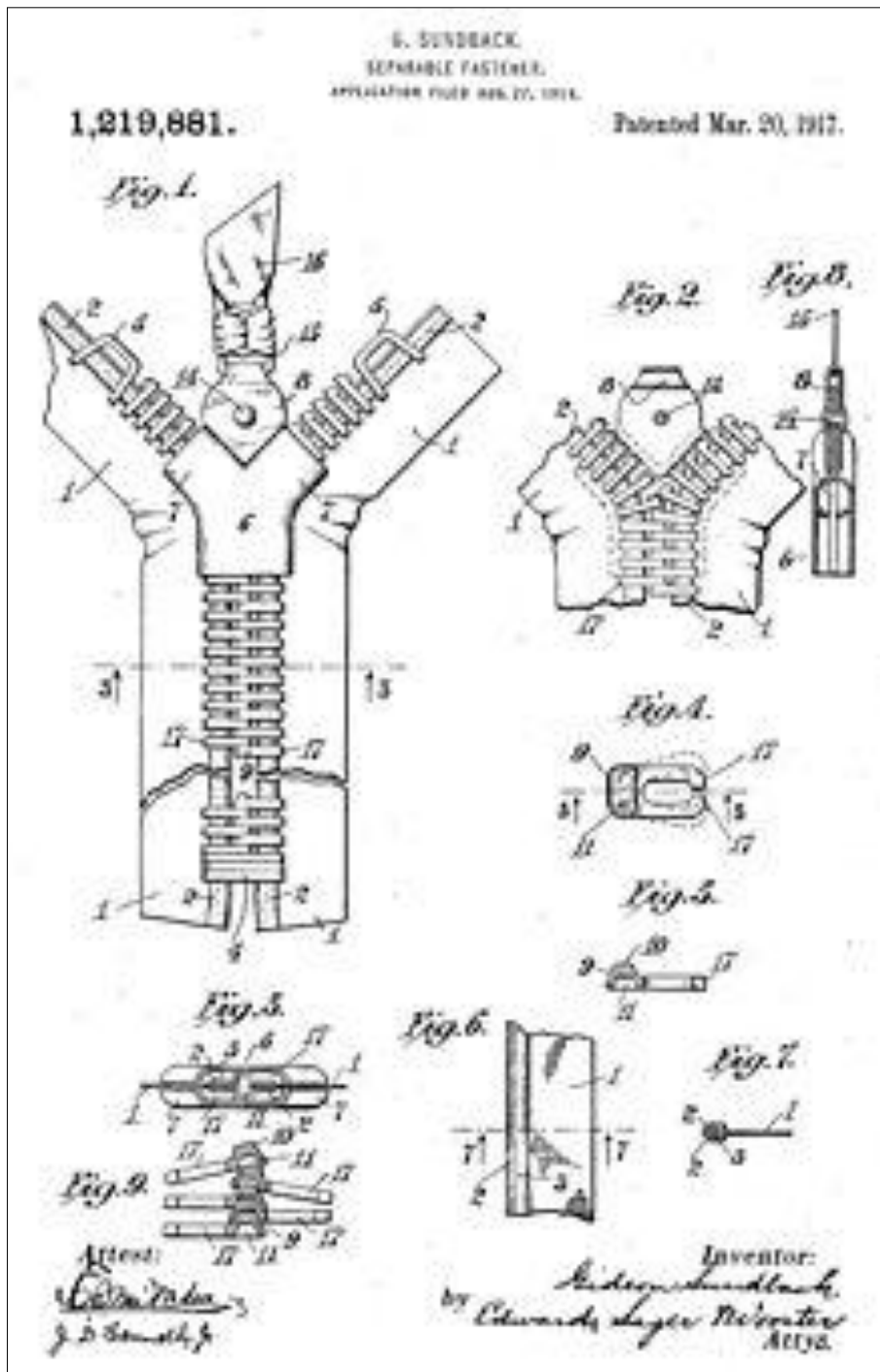
Plako zipper.

It was considered a “bridge” technology as it was a stepping stone to what was eventually going to be the zipper. (The Plako patent #788317 was filed under Whitcomb Judson’s name, but companies frequently kept patents in their founders’ names.)

Sundback continued to work on the design, and in 1913, he received a patent for what he called “the Hookless No. 2.” In 1917, he patented changes he made to the 1913 design. With the 1917 patent, Sundback improved many of the flaws that had bothered them all. He found a way to manufacture “cup-shaped teeth” that interlocked; each pair nesting within the pair below as the fastener was pulled between the two sides.

Sundback also invented a machine that could make the separate strips with teeth. The first factory was built in St. Catharines, Ontario, Canada, just west of Niagara Falls. Sundback spent time traveling between the

company's main office in Meadville, Pennsylvania, and the plant in Canada to supervise the work.



Sundback patent, 1917.

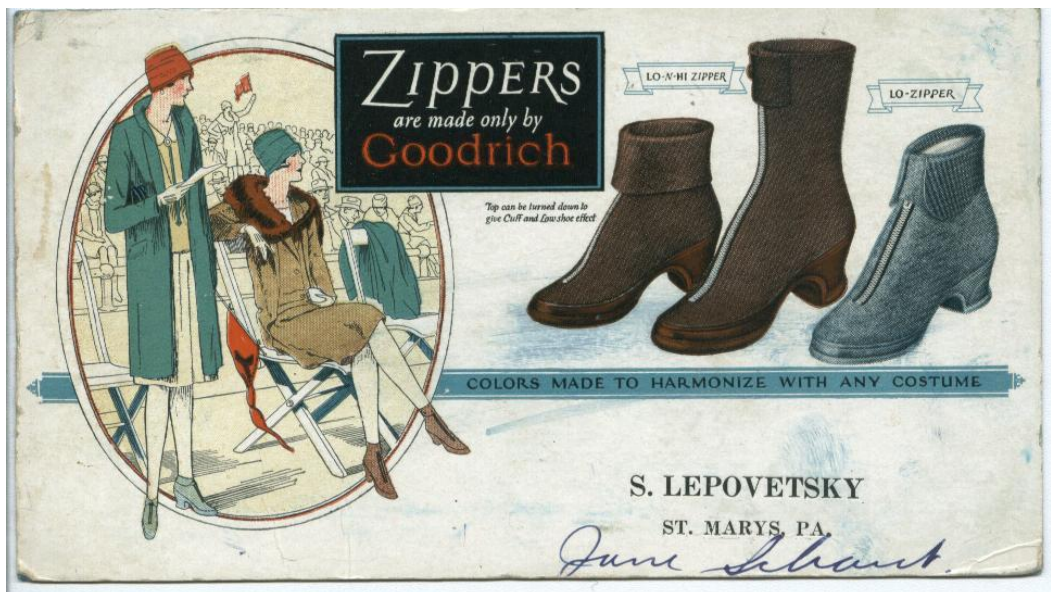
4. Early Customers



A money belt with an early zipper.

The U.S. military saw the promise of this new type of closure device—faster and easier than any type of button or snap. In 1918, the Navy ordered 10,000 hookless fasteners for their flight suits. Other parts of the military experimented with them on life vests and money belts.

But just as Whitcomb Judson knew when he began tinkering with creating the fastener, they could be a huge help if used on shoes and boots. In the early 1920s, a designer at B.F. Goodrich saw the possibilities. He realized that if rubber boots could be closed in this way, it would reduce the amount of water that seeped in—a problem they had with other types of closures.



"Zippers" by Goodrich.

Goodrich had them added to a new style of boot they were making, They head designer called the new boots, "zippers." Though the term was intended to refer to the style of boot, the name soon became permanently attached to the fastening device.

at the flap. None but the genuine has the word "Zipper" there. And none but the genuine can give you the smooth-sliding, sure-action HOOKLESS FASTENER, which Zippers have brought to fame.

Over fifty thousand department and footwear stores can now show you the correct new colors of genuine Zippers—and to those who send the coupon, we will mail a complimentary copy of the 16-page "Goodrich Zipper Color Harmony Guide."

THE B. F. GOODRICH RUBBER COMPANY, Inc. 1870 Akron, O. In Canada: Canadian Goodrich Co., Kitchener, Ont.



Stares on the cuffs of these Tan or Gray Lo-Zippers lend a dash of smartness to the foot which wears them so gracefully. They come just fast enough up the ankle to enhance its pleasing lines.



CAUTION!
All are not Zippers that close with a sliding fastener. Look for and find the name Zippers on the flap—and be sure of authentic Goodrich style, as well as the HOOKLESS FASTENER which cannot rust, stick, or loosen.

ZIPPERS

TRADE MARK REG. U.S. PAT. OFF.

ARE MADE ONLY BY

Goodrich

The B. F. Goodrich Rubber Company,
Zipper Dept., Desk 3, Akron, Ohio.

Send me complimentary copy of Hazel H. Adler's
Goodrich Zipper Color Harmony Guide, con-
taining the Taylor Color Harmony Chart, which
shows the authentic color combinations of Zip-
pers, shoes, hose, dresses and accessories.

NAME _____
ADDRESS _____
CITY _____ STATE _____

VINTAGE SHOE ARCHIVES
BLOG.DANCESTORE.COM

5. The Growth of the Zipper

Soon after this success, the zipper was added to clothing of various types. Elsa Schiaparelli was said to be the first designer to use zippers in her clothing. Over time, more garment makers did so. In the 1930s, Esquire magazine featured the “newest tailoring idea for men,” raving about the zippered fly. Initially, boots and tobacco pouches were the primary use for zippers; it took another twenty years before they caught on in the fashion industry. About the time of World War II the zipper achieved wide acceptance for the flies of trousers and the plackets of skirts and dresses.

By 1934, 60 million zippers sold during a year. They were being used on men’s and women’s clothing, sleeping bags, handbags, and eventually knapsacks and suitcases.



The newly built Lightning Fastener plant at 50 Niagara Street, St. Catharines, Ontario, Canada, in 1937.

War shortages eventually led to making zippers out of plastic, and the industry adapted. But the zipper business still suffered because raw goods were still in short supply because of the war. In 1946, a businessman in El Paso, Texas, wrote a letter to the government (reprinted in the El Paso newspaper) noting that his zipper business still suffered because the government was not yet opening the market for leather goods. Because there were no hides, no one made bags, and if no one made bags, there was no need for zippers.

6. Later Life

Sundback also created the manufacturing machine for the new zipper. Lightning Fastener Company, one early manufacturer of the zipper, was based in St. Catharines, Ontario. Although Sundback frequently visited the Canadian factory as president of the company, he resided in Meadville, Pennsylvania and remained an American citizen. Sundback was awarded the Gold Medal of the Royal Swedish Academy of Engineering Sciences in 1951.

Sundback died of a heart condition in 1954 and was interred at Greendale Cemetery in Meadville, Pennsylvania.

On June 5, 1909, Sundback had married (Naomi) Elvira Aronson, daughter of the Swedish born plant manager Peter Aron Aronson (Aronsson), in Hoboken, New Jersey.

Zippers today are largely an imported item (mainly from Japan), and their sales are still affected by fashion. Think of the pants and jackets that have zipper adornment or the styles of dresses that feature an oversized silver zipper down the back. These trends come and go. Yet the practical needs for zippers all remain. Even later inventions like Velcro are no substitute.



Modern zipper manufacturing.
