

*Farmer, Student, Instructor, Inventor,
Professor, Administrator, Entrepreneur:*

William Boss and His Specialty Manufacturing Company

Harlan Stoehr

Asked in his 86th year how he had come to found the Specialty Manufacturing Company some six decades earlier, William Boss said it began when his neighbor, Harry Turner, asked what he was going to do with a grass catcher he had made. “Nothing. Trying to forget it. No money to work with,” Boss had responded. Another neighbor, businessman A.J. Reeves, suggested Boss patent his grass catcher rather than forget it.¹ None could have foreseen the reach of the business resulting from that conversation or the wide application of the products it would produce.

Boss, then 30, the fourth child and second son of Scottish emigrant parents, had grown up on a Wabasha County farm southwest of Lake City. Both grandfathers were stonemasons. His father, a

bookkeeper who also farmed, eventually owned 360 acres. Brother Andrew, two years William’s senior, liked horses and livestock. William, mechanically inclined, had little interest in the animals. Andrew

and his father planned the farmwork; William’s role was to help do the work. “The work didn’t require much thought,” he reflected; “I thought about easier ways of doing it.” His first mechanical experience came when he was about nine, working the bugs out of his father’s new wire-tying grain binder, one of the first machines of its kind in the country.

“There wasn’t much money on the farm. We hired a man to do the fieldwork for about \$15 a month and that didn’t appeal to me. . . . I decided that if I could learn to be a carpenter I could get higher wages. . . . We built an addition to the house when I was about 18. The carpenter who built it was a good mechanic who taught me several things about carpentry,” Boss related.

Moving On

With the house nearly ready for plastering, its roof sheathed but not shingled, the carpenter received a job offer as construction superintendent for a packing-house at the South St. Paul stockyards, provided he came at once. “What about finishing the house?” William’s father asked. “Will can do that,” the man replied. “I won’t need my tools, so I’ll leave them here for him to finish the job.” By the time Boss finished the house he had a job offer from the carpenter, who was now in charge of a construction crew. Borrowing \$10 from his father to cover train fare, a week’s room and board, and tools he might need, he left for South St. Paul. He returned to the farm that winter. Encouraged by their father, brother Andrew had enrolled in the second class (1889–90) of the University of Minnesota’s new School of Agriculture (SA), where classes were held between fall harvest and spring planting so students could work on the farm during growing season. On a visit home Andrew



William Boss, right, in the trousers and vest to the right of the engine with his hand on the throttle, instructs creamery students in the initial class in steam engineering at the University of Minnesota’s dairy school. This photo from 1892 also shows how the power generated by the steam engine was transferred through a system of belts and pulleys to the creamery machinery on the floor above. Boss Family and Business Collection. Photo courtesy of the Minnesota Historical Society.



William Boss, left, first standing row, with the members of his class in the School of Traction Engineering in 1906. This photo was taken at the Minnesota State Fairgrounds with the students sitting and standing on and around a steam tractor. Photo courtesy of the Minnesota Historical Society.

showed his brother his drawing instruments for a manual training class.

“That was just what I wanted. I had used blueprints. I knew about plans for building, but I hadn’t had experience in making the plans.” Boss recalled. In fall 1890 he enrolled in the third class at the SA, earning his way by sweeping the carpenter shop and tending its furnace and the furnace in Pendergast Hall. His income, 12½ cents/hour, covered his expenses. With no desire to be a farmer, Boss enrolled in no required agriculture class, earning a confrontation with agriculturist Willet M. Hays and a trip to the principal’s office. Henry Brewster, the sympathetic principal, said he’d have to take up the matter with University president Cyrus Northrup; Boss, meanwhile, could continue in classes he chose. There the matter ended. Boss took no classes in agriculture, horticulture, or dairying.

Hays, an innovator well ahead of his

time, had recurring use for a good mechanic; Boss filled the role and they became good friends. Advantaged over other students in manual training because he knew how to sharpen tools and use them effectively, Boss earned grades of 100% and his instructor’s confidential remark that should the school ever grow to where he could have a helper, Boss would be his man.

Boss, who had learned about steam engines on the farm, became licensed as a stationary steam engineer and operated the small steam engine in the basement of the dairy building that, through a belted line shaft, powered cream separators and churns on the floor above. Cream separators, which use disks and centrifugal force to separate cream from milk, require operation at a fixed, steady speed. To be a successful creamery operator then required knowledge both of steam engines and how to calculate pulley sizes

and belting to drive a separator at the proper speed.

Dairy professor Theophilus L. Haecker knew a lot about dairy cows and milk but little of engines or pulleys. Coming into the dairy building one afternoon he found his students in the basement asking Boss questions about regulating the engine speed and sizing drive pulleys. Sensing both a need and the solution for meeting it, Haecker asked Boss if he could teach an engineering class there. Boss said he could, providing he had certain equipment. Haecker arranged for it and Boss became instructor in engineering.

By 1892, in addition to tending furnaces, being in charge of the students who tended the kerosene lamps that lit the buildings, and teaching steam engineering, Boss also assisted in carpentry and manual training. With no course in agriculture to his credit, he did not qualify to



Left, the Easy Emptying Grass Catcher that Boss invented attached to a standard reel, push-type, lawn mower. Right, Boss demonstrating the ease of emptying the grass catcher. Boss Family and Business Collection. Photo courtesy of the Minnesota Historical Society.

graduate, but he continued as an instructor at the University.²

In 1895 Boss was instructor in carpentry, power machinery and steam engineering, was in charge of the carpenters who did work on buildings and equipment, and earned \$900/year.³ That fall he married Edna Rider, a schoolteacher whose father operated a store at Oak Center, not far from the Boss farm. The newlyweds set up housekeeping in a rented house at 2306 Priscilla Street in St. Anthony Park.

The next spring Boss went to his local hardware store to buy a lawnmower. Always interested in saving labor, he studied the available grass catcher, small and permanently attached to the mower, thought it relatively useless, and took his new mower home without one. Their lawn was small and sparse, so he and Edna raked its grass clippings. Why, Boss wondered, did no one make a larger catcher that held about a bushel of clippings and was easy to remove to empty?

In 1899 the Boss's son, Ronald, was born. The Boss family moved to a home at 2306 Pratt (later Alden) Avenue with a larger, lusher lawn, and Edna now had less time for raking. In the interest of saving labor, Boss made a grass catcher for his lawnmower. He bought heavy wire and

a piece of 8-ounce canvas cloth, bent the wire to form a frame, asked his wife to sew the canvas to the frame, made attachment brackets for each side of the mower, put a screw eye into the mower handle for the third point of attachment, and gave the catcher a wooden handle parallel to the mower handle for emptying. It did the job.⁴

His First Commercial Venture

The U. S. economy fell into recession in the 1890s, triggered by the failure of the Reading Railroad, which prompted European investors to withdraw their

investments, led to a stock market and banking collapse and left the U.S. financial system in a mess. Unemployment rates skyrocketed.⁵

In the winter of 1900–1901 the Boss's neighbor, Harry Turner, an insurance salesman, was out of work. Turner told Boss he didn't know how he could get through the winter, but he had a large woodshed, and if Boss would buy materials, he could make some grass catchers in his woodshed that winter and sell them in the spring. Turner offered to make them for 10 cents each and sell them for another 10 cents. Boss said he'd think about what it would cost to make them and whether he could sell them for \$1 at a profit. He talked it over with Reeves, who'd suggested patenting; Reeves took a silver dollar from his pocket, handed it to Boss, and said he'd take the first one.

Boss borrowed \$300 for 6 months at 6% interest from a carpenter working for him at the University, bought materials, and Turner went to work, making some 300 grass catchers in his woodshed that winter. They all sold in spring. Boss decided to go into business, naming his venture The Specialty Manufacturing Company (SMC).

About then Turner found a full-time job at the post office, effectively ending his grass-catcher production. John Olson, who had a hardware business and tin shop south of the Raymond Avenue bridge, said business was slow and he could make grass catchers in his shop for 8½ cents each for labor if Boss would put in a sewing machine and a gas engine to power it; Olson's shop had no electricity. Boss did,



An advertisement from a 1933 issue of Poultry Supply Dealer magazine for an Acme Egg Weighing Scale manufactured by SMC beside an example of the scale in the SMC collection. The advertisement is from the Boss Family and Business Collection, Minnesota Historical Society. The photo of the Egg Scale is courtesy of the Specialty Manufacturing Company.

and Turner turned out about 3,000 grass catchers the winter of 1901-02.

In spring 1902 Boss received orders for 4,000 grass catchers, leaving him with 1,000 orders unfilled. In May the patent he applied for on Reeves' recommendation was granted. Boss decided it was time to seriously increase production and to do his own manufacturing. He rented the Churchill building on Raymond Avenue north of the Raymond Avenue Bridge.

Adept at multitasking long before the term became known, Boss built a new home at 1439 Raymond Avenue, a block off the St. Paul campus, across the street from brother Andrew, also a University faculty member, who had built his home two years earlier. William installed gas pipes for lighting, but he also wired his house for electricity and managed to get a line run for electrical service before ever lighting with gas.

He bought a hose for watering his lawn. The sill-cock on his house was close to the sidewalk leading to the back door; if he coiled the hose on the ground it obstructed the sill cock. Thus was born, manufactured and sold, the Handy Hose Rack and Carrier, a detachable double-hairpin shaped piece of round iron that slid into a cast-iron bracket screwed to the house siding and could be removed with the hose coiled on it for inside storage in winter. Eventually tiring of awkwardly winding and unwinding his hose on the rack, Boss developed The Detachable Hose Reel on which his hose would coil without twisting.⁶

At the University

Boss was licensed as a chief engineer by the State of Minnesota in 1896 and registered as an electrician with the State Board of Electricity in 1889.⁷ Eventually, the administration at the School of Agriculture decided to overlook his deficiency of agricultural courses, graduating him with the class of 1904 and a diploma retroactive to 1892.⁸ In 1905, still a full-time employee of the University, Boss resigned to devote full time to building SMC. His resignation was countered with a plea to continue on a half-time appointment as professor of farm structures and engineering. He did so, for \$1,500/year, while continuing as financial manager of SMC.⁹

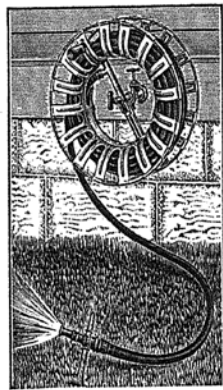
THE SPECIALTY MFG. CO.

DETACHABLE HOSE REEL

No Handling of Hose
Readily Attached and Detached
Hose Unreels While Water Runs

The "Detachable" Hose Reel is the most convenient and practical device of its kind ever invented. It is novel in its construction, yet it is a simple and sturdy article that makes the task of watering the lawn and garden a very agreeable one.

The hose is left permanently attached to the reel and is carried with it from place to place. One spoke and the axle of the reel are hollow, the hose being attached to the hollow spoke, which has a standard hose thread to receive it. The axle fits into a special faucet which is permanently attached to the water pipe. The joint where the axle of the reel fits into the faucet is made water tight by a hard fibre washer that will wear indefinitely.



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How It Operates

The reel revolves on the faucet allowing the hose to be pulled out as desired in any direction while the water is running. When the sprinkling is finished the hose can be reeled up readily without any handling required, and since the hose is always kept in a neat compact form, free from kinks and twists, its life is increased materially.

SAINT PAUL, MINN.

Always Ready for Use

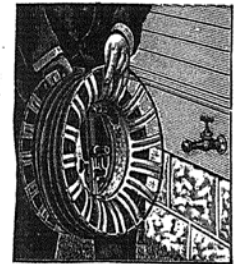
The hose is never kinked or knotted, and the nozzle end is always in immediate reach of the operator, an important feature in case of fire.

Lasts a Long Time

The reel is made from galvanized and malleable iron. The faucet is brass, nickel plated. The spokes are corrugated and very strong. There is nothing to wear or get out of order. We guarantee it to give entire satisfaction in every way.

Saves Money on Hose

Prevents the hose from kinking or twisting, thus greatly increasing its length of service, and as the reel and hose are quickly moved from one faucet to another, less hose is required.



Attached and Detached Quickly

Simply slips into the faucet and is quickly clamped. The revolving joint is water tight.

Reel Revolves on Faucet

The water will run through the hose regardless of whether it is unreeled, and to drain the hose it is necessary only to revolve the reel.

The Detachable Hose Reel is 20 inches in diameter, 8½ inches wide, and easily holds 125 feet of ¾-inch hose. Weight of reel, crated, including faucet, 10 pounds.

LIST PRICES

Detachable Hose Reel, including faucet...\$5.00
Extra Faucets, each 1.50
Packed in corrugated fibre boxes.

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This illustration from a 1920s SMC sales handbook shows how the Detachable Hose Reel that Boss invented is attached to the outside water pipe on the side of a house. The axle of the hose reel fits onto a specially designed faucet (see the photo of this faucet on page 24) that allows the hose reel to revolve and the hose to be pulled out as needed to reach any place sprinkling needs to be done. Boss Family and Business Collection, Minnesota Historical Society.

Fostered by a request from B.B. Clark, editor of *American Thresherman* magazine, published in Madison, Wisconsin, Boss agreed to teach a School of Traction Engineering at the Minnesota State Fairgrounds in summer 1906, and wrote 16 booklets covering his lectures to the 190 students. Class ended, he revised his booklets and published them that fall as a book: *Instruction for Stationary and Traction Engineers*.¹⁰

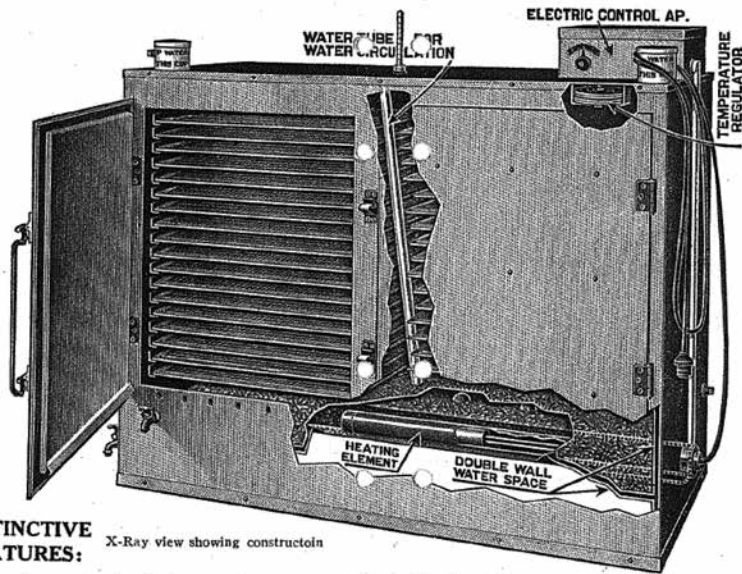
In 1907 he was an organizer and became a charter member of the American Society of Agricultural Engineers (ASAE) and published his second book, *The Heath Book for Threshermen*.¹¹ This book, a revision of the first adapted for

the Canadian market, had a first edition of 3,000 copies. The Canadian government bought them all, giving one to each Canadian thresherman.¹²

In the spring of 1908, William Boss was a half-time professor and head of the Division of Farm Structures and Engineering. In this capacity, he was the sole instructor of a 144-student, six-week-long mechanical engineering short course. He also oversaw the equivalent of seven half-time instructors. Boss and these instructors taught six School of Agriculture courses of one to five sections and 93 to 380 students, and five college courses of 9, 10, 34, 40, and 45 students. He wrote to Dean E.W. Randall requesting funding for a building

THE MINNESOTA ELECTRIC SEED GERMINATOR

which has been manufactured and sold for ten years, has earned its undisputed position of leadership by reason of its efficiency, convenience and durability. It is constructed along scientific lines through the collaboration of an experienced seed analyst, specializing on the testing of seed, and engineers trained in the development of heat control.



DISTINCTIVE FEATURES:

- Automatic control of temperature
- Requires but little attention
- Large capacity
- Moderate price when compared for efficiency and capacity
- Control of moisture, assuring proper germination
- Cannot overheat or cook the seeds
- Low cost of operation

This drawing of the electric seed generator that SMC manufactured is from one of the firm's product manuals. Boss Family and Business Collection, Minnesota Historical Society.

program, and that someone be appointed to head his division full-time so he could leave the university to manage SMC.

The following spring, Boss was still there half time, and the number of students he was teaching had gone up by 20%. He wrote Senator Joseph Hackney, who represented the district in the state legislature, that the regents of the university had cut a \$569,000 building request to \$169,000. He pressed his case for buildings, including a mechanical engineering building, and enclosed his engineering sketch of a proposed three-story, 100- x 168-foot structure with a one-story, 168- x 160-foot shop wing.

The 1909 legislature appropriated funds for the engineering building of Boss's design. He resigned July 31.

Growing SMC

As full-time general manager, Boss finally could focus fully on SMC's business. He had continued to develop, patent, and market new products, including machines for precision planting seeds in

test plots and for threshing and grading seed of the crops they grew.

His Minnesota Seed Germinator, an electrically heated, thermostatically controlled galvanized metal cabinet 5 feet high, 4 feet wide, and 16 inches deep with shelves holding seeds for testing in a uniform germination environment, was widely used in the United States and Canada. Boss's Acme Egg Weighing Scale, for weighing and grading individual eggs, had huge market potential. There then were hundreds of thousands of farm poultry flocks and weight is a factor in the market value of eggs.¹⁷

SMC outgrew space in the Churchill Building, eventually moving into the new Northwest Furniture Exposition Building at the corner of University and Raymond Avenues.¹⁸ Back on the University's St. Paul campus the new building Boss designed was completed and occupied in summer 1913.¹⁹

The U.S. entered World War I in 1917; the War Department asked the University's Division of Agricultural

Engineering (DAE) to provide special manual and technical training for enlisted men, which began in spring 1918. By summer three DAE faculty members, including John T. Stewart, who had succeeded Boss, took leave for military service. Boss, urgently requested to return as interim chief, declined, wishing to tend to SMC's growing business. Pressed by University administration, he reluctantly agreed to return temporarily on a half-time basis September 1, 1918.

Between April 1 and October 1, 1918, a period avoiding interruption of regular classes, three military contingents of some 500 men each received 8 weeks of training in blacksmithing, electrical work, carpentry, and general shop work. The DAE contracted to train five more detachments between October 15, 1918, and June 15, 1919. That contract was canceled with the November 1918 Armistice that ended the fighting.



An avid fisherman and duck hunter, William Boss had a cabin on the north shore of Lake Mille Lacs. The KD (for knock-down) Duck Decoy, available as mallard or blue bill, was a short-lived SMC product in the 1920s. Photo courtesy of the Specialty Manufacturing Company.

On his return from military service, John Stewart resigned from the Division. Faculty and staff wrote the dean, urging that Boss be appointed head. Possibly weary of sales pitches by administration, he finally accepted, entrusted day-to-day management of SMC to son Ronald, and was appointed professor of agricultural engineering, chief of the Division of Farm Engineering, and chairman of agricultural engineering group July 1,

1919.²⁰ His annual salary: \$4,500 (about \$61,000 today).

Boss's pay was raised to \$4,800 in 1922 and his responsibilities expanded to include managing disposal of surplus WWI explosives, mainly dynamite.²¹ He got rid of a lot of dynamite in northern Minnesota blasting out tree stumps to clear land for farming. The logic behind this project was that returning soldiers could then farm the cleared land.²²

The Red Wing Project

More to Boss's liking was his 1923 appointment to head The Red Wing Project, a systematic feasibility study of bringing electricity to farms. Fostered by the State (of Minnesota) Committee on the Relation of Electricity to Agriculture, it is considered the first U.S. experiment to collect and publish engineering and eco-

nomic data on the topic. While electricity had become widely available to small towns, taking it to farmsteads was considered too costly to be practical, given the distances that were involved. A cooperative project between Northern States Power Co. (now Excel Energy) and Boss's Division of Farm Engineering, supported by manufacturers of electrical and farm equipment, brought electricity to nine farms in the Red Wing area.

Power was turned on Christmas Eve Day, 1924. Within three years these farmers were using electric motors to power everything from water pumps, cream separators and feed grinders to hoisting hay, mixing concrete, and threshing grain. Data generated by the project and recommendations based on the experience laid the foundation for the expansion of rural electrifica-

tion and creation, in 1935, of the federal government's Rural Electrification Administration (REA).²³

Boss's return to head the DAE is generally considered the beginning of a long period of its rehabilitation and professional advancement. In 1925 the Board of Regents approved a four-year course leading to the B.S. degree in agricultural engineering.²⁴

When the ASAE, of which Boss was a founder, held its annual meeting on the St. Paul Campus in 1927, he was elected its president and its representative on the American Engineering Council. In 1929 he became registered as a Professional Engineer in Minnesota. He served many years on ASAE's Jury of Awards, chaired it in the mid-1930s, earned a place in *Who's Who in America*, and was elected an ASAE Fellow.²⁵



Here William Boss demonstrates his Man Dynamometer device that he developed in the early 1930s to compare the estimated cost per horsepower per hour of power on farms depending on its source: human, wind, water, oxen, horse, steam, gasoline, and electricity. Boss Family and Business Collection. Photo courtesy of the Minnesota Historical Society.



Many of SMC's early products demonstrated Boss's practical, inventive mind. Seen here are a Tightlock Clothesline Reel, a Handy Hose Rack and Carrier, and a faucet used with the Detachable Hose Reel. All of these products were likely to be sold in hardware stores. Photos courtesy of the Specialty Manufacturing Company.

In 1931 he invented a man dynamometer, which showed the insignificance of energy generated by manual labor to do tasks that machines could do. This device was widely reported by the press and gained much attention, generating awareness of what Boss considered a growing problem.²⁶ He addressed it in a 1937 meeting of The Agendum, an agricultural engineering discussion group:

We need to reevaluate man's place in the economic setup. Machines can now perform at a cost of 1 cent an hour many tasks that formerly were performed by manual labor. It is obvious that man cannot continue to perform these tasks and earn a living wage. He must learn to perform new tasks to obtain his share of the benefits of machine production.

To make this change the cooperation of capital, industry and labor will be required, and every force of education and government must be enlisted. Our economic system has developed and changed so rapidly

that we have been left behind, and it going to be a mighty task to catch up.²⁷

Boss reached 68, the University's mandatory retirement age, in fall 1937. When he retired at the close of the fiscal year, June 30, 1938, he had served the University of Minnesota over a period of 46 years with a gap from 1909 to 1918, 37 years of actual service. His compensation, \$4,800/year, had not changed since 1922.²⁸

Back at SMC

Boss had by then been granted 17 patents, authored 10 books, and been involved with 295 publications of one kind or another on engineering subjects.²⁹ Eldest son Ronald, a mechanical engineer, continued as manager of SMC; second son Harlan, a respected St. Paul interior designer with a degree in architecture/interior design, was SMC's treasurer.

SMC continued to grow and add new

products during Boss's service to the University. Back full time as its president, he oversaw a period of accelerated growth. In the early 1940s several products for military use were manufactured under contract, among them a washer used in products many firms manufactured under military contracts.³⁰ In 1944, with orders for 1,400 Scotch® tape dispensers/day and SMC's two suppliers unable to supply the castings because of war production, SMC bought the Andersen foundry at Bayport. The foundry employed about 30; Boss became its president.³¹

About this time Boss founded The Boss Engineering Co., a consulting engineering firm. He and sons Ronald and Harlan acted as the firm's principals. Boss listed himself a professional engineer, Ronald as mechanical engineer, and Harlan as interior architect. They were, the promotional piece stated, "Counselors



An early cast-iron tape dispenser manufactured by SMC for 3M. Photo courtesy of the Specialty Manufacturing Company.

in designing, manufacture and sale of mechanical articles, industrial and factory buildings, plant organization and equipment.”³²

By 1947, the year it finally was incorporated, SMC had some 200 workers on its payroll and occupied all 125,000 sq. ft. of the Northwest Furniture Building at University and Raymond in which it first rented space thirty years earlier. Boss bought the structure and renamed it The Specialty Building. The firm did contract manufacturing of many specialized machine parts.³³ Edna Boss died in fall 1953, son Ronald died the following May. Employing Florence Anding, a niece, as housekeeper, William lived on at 1493 Raymond Avenue, continuing his involvement with SMC until in his late 80s.³⁴

In 1906 he had been a founder and member of the executive committee of the St. Anthony Park Grange³⁵ and in 1945

a founding member of St. Anthony Park Historical Association (SAPHA) and chair of its Housing and Furnishing Committee. The SAPHA would later incorporate as The Ramsey County Historical Society.³⁶ Boss served as a trustee and then an elder of St. Paul’s Central Presbyterian Church, and for twenty-five years headed its finance committee. In 1943 he received the John Deere Gold Medal for “distinguished achievement in the application of science and art to the soil.”³⁷ He put it in his safe deposit box, valuing it in his records at \$150.³⁸ Gold was then valued at \$35/ounce.

In the mid-1950s, Boss received the University of Minnesota’s Outstanding Achievement Award and the honorary D.Sc. (doctor of science) degree from both Jamestown (N.D.) College and Macalester College, St. Paul.³⁹ He was a founder of the Midway Club, later the Midway Chamber of Commerce.⁴⁰ Following his wife’s death (1953), he founded the Boss Foundation in her honor to assure continuing support to their community.⁴¹

In their later years Boss and older brother Andrew, across the street, golfed, hunted and fished together. While hunting game both would fire and both miss, they once explained, so there were no arguments. Andrew took pride in a 1,000-sq.-ft. vegetable garden he tended in his back yard, and the money he saved through its produce. William was no gardener, because of that “machine-minded trait,” he explained, preferring to spend his time making movies of agricultural engineering work, soil erosion projects, and other agricultural subjects.⁴²

Son Harlan threw a party at his Summit Avenue home in October 1964 for Boss’s 95th birthday. Asked about his longevity, Boss explained that three lessons he learned early in life had paid off: (1) stay away from hard liquor; (2) don’t smoke (there’s nothing to gain by it); and (3) don’t ever take a sitting-down job.⁴³ Apparently he sat little during his University career. When Boss died after a long, productive life on July 30, 1965, SMC still manufactured his *Easy Emptying Grass Catcher* and *Detachable Hose Reel*.

Folders of correspondence between Boss and son Harlan over many years



William Boss in the 1930s, from the frontispiece to a history of the University of Minnesota’s Division of Agricultural Engineering that was dedicated to Boss. Boss Family and Business Collection. Photo courtesy of the Minnesota Historical Society.

suggest a close relationship. “Dear Dad,” Harlan wrote following his father’s award of the John Deere Medal. “To congratulate one’s father for his award of the John Deering [sic] medal is indeed a wonderful moment. Perhaps it’s partially that I now know that others know what a grand fellow he is. . . .”⁴⁴

SMC After Boss

From the foundation Boss laid, SMC continued to grow and thrive. *The Specialty Flash*, its employee newsletter, reported in 1976 that the firm would introduce nine new products, a lawn cart, watering wand, “Z” utility shelf hangers, their links, a 20-gallon trash can cart, grain gate, light duty hand truck, heavy duty hand truck, and a wheelbarrow at the National Hardware Show in Chicago. The Detachable Hose Reel had evolved into a portable hose reel.⁴⁵

SMC outgrew the Specialty Building, moved in 1990 to a new facility of its own at 5858 Centerville Road, St. Paul, and

exited the lawn and garden business in 2000. Today it is organized into six divisions, SMC valves, Safeway Hydraulics, Marr Valve Co., Rola-Chem Corp./Paradise Industries, New Ulm Precision Tool, and SMC Contract Manufacturing. Its clients range from Pentair to John Deere, 3M, Hewlett-Packard, and the National Aeronautics and Space Administration (NASA).

SMC's *Valve Products Division* manufactures a wide variety of valves and check valves used by numerous industries including automotive, water purification, medical, beverage, and chemical dispensing. *SafeWay Hydraulics* supplies quick-action hydraulic couplings for the industrial, agricultural, and mobile equipment industries. *Marr Valve Company* manufactures and sells small pneumatic valves, manifolds, and custom injection molded parts for the dental industry. *Rola-Chem Corp./Paradise Industries* produces peristaltic pumps, controllers, flow meters, and other products for the pool industry. *New Ulm Precision Tool* manufactures custom fixtures and tools.

The *Specialty Contract Manufacturing* division manufactures small precision-stamped components for the medical, electrical, and communications industries, provides precision machining production with computer-controlled multi-axis machine capabilities for custom parts machining, and provides a full-service plastic injection molding facility incorporating in-house mold design, fabrication, and on-site repair.

Now in the second decade of its second century, SMC has never known an unprofitable year. When Boss incorporated the firm in 1947, he assigned 40% of its stock to himself and 20% each to his wife and sons. SMC is still owned by the Boss family. Great-granddaughters Robyn Sandberg Woodruff and Heidi Sandberg McKeown are the sole stockholders; McKeown is chairman; Daniel McKeown, her husband, is president.⁴⁶

"We intend to remain a privately held, family-owned business, and our clients and employees value this," Daniel McKeown says. "That we have financial stability, are family owned, and have long-term, tenured employees really distinguishes The Specialty Manufacturing Company."



Edna Rider Boss, left, with William Boss in the late 1940s. Photo courtesy of the Minnesota Historical Society.

William Boss's legacy of community involvement lives on through SMC's support of United Way and other events and through his family foundation. The foundation annually invests more than \$300,000 into the community through grants in music, theatre, the arts, education, and family support.⁴⁷

Over the years, Harlan Stoehr has contributed several articles dealing with Ramsey County residents with rural connections to this magazine. He and the editor thank the University of Minnesota Archives, Daniel McKeown, and the Specialty Manufacturing Company for their assistance in the research for this article.

Notes

1. William Boss, *The Beginning Years Of The Specialty Mfg. Co., St. Paul, Minnesota*, transcribed from recordings made in 1959 at the Boss home with the assistance of S. E. Cleland and Mrs. C. E. Stewart, William Boss Collection, University of Minnesota Archives, Minneapolis, Minn.
2. William Boss, *Early Experiences At The School And College of Agriculture*, transcribed from recordings made March 8, 1958, at the Boss home with the assistance of S. E. Cleland and Mrs. C. E. Stewart, William Boss Collection, University of Minnesota Archives. References to Andrew and William Boss in publications over the years sometimes credit them as founders of the University of Minnesota's School of Agriculture and put Andrew in its first class, that of 1888–89. The best source of information on the subject is Ralph E. Miller, *The History of the School of Agriculture 1851–1960*, published by the University's Institute of Agriculture, Forestry and Home Economics (1979). Miller lists each member of the School's first class and shows Andrew Boss entering in its second class in fall 1889 and William entering a year later. Neither man had anything to do with founding the School. Other published references to William Boss vary in reference to year or detail. The information in this article is accurate to the best ability of its author to determine.
3. William Boss Family Papers, William Boss Collection, University of Minnesota Archives.
4. *The Beginning Years Of The Specialty Mfg. Co.*, 1–4.
5. This summary is of facts generally known of that decade.
6. *The Beginning Years Of The Specialty Mfg. Co.*, 5–11.
7. Personal Record of William Boss, box 1, William Boss Family and Business Papers, Minnesota Historical Society, St. Paul, Minn.
8. *Early Experiences At The School And College of Agriculture*, p. 2.
9. Personal Record of William Boss, 1.
10. *Early Experiences*, 23, 24.
11. Personal Record of William Boss, 1.
12. *Early Experiences*, 24.
13. William Boss letter to E.W. Randall, dean, Department of Agriculture, University of Minnesota, April 8, 1908, William Boss Family and Business Papers.
14. Personal Record of William Boss, 2.
15. William Boss, letter to (Minnesota) Senator Joseph Hackney, January 28, 1909, William Boss Family and Business Papers.
16. Personal Record of William Boss, 2.
17. *The Beginning Years Of The Specialty Mfg. Co.*, 9.
18. *Information on Specialty Manufacturing Company, St. Paul*, Internal Memorandum, Minnesota Historical Society, St. Paul, Loris Connolly, cataloger, May 9, 1988, William Boss Family and Business Papers.
19. Recommendation By Committee of University Honors On Outstanding Achievement Award, Recommendation for Boss Award, June 12, 1958, William Boss Family and Business Papers.
20. Harry B. Roe et al., *Agricultural Engineering At The University Of Minnesota To 1942*, edited by A.J. Schwantes, Department of Agricultural Engineering, University of Minnesota, St. Paul, 17, 30–32.
21. Personal Record of William Boss, 2.
22. *Agricultural Engineering At The University Of Minnesota To 1942*, 42.
23. *Ibid.*, 24; also The Red Wing Project, on Utilization of Electricity in Agriculture–2009, Historic Landmarks Project, American Society of Agricultural and Biological Engineers, St. Joseph, Mich.
24. *Agricultural Engineering At The University Of Minnesota To 1942*, 54.
25. Personal Record of William Boss, 2, 3.
26. *Agricultural Engineering At The University Of Minnesota To 1942*, 81. For an example of newspaper accounts see the *Reno (Nevada) Evening Gazette*, February 16, 1931, p. 1.
27. Excerpt from text of William Boss's 1937 address to *The Agendum*, an agricultural engineering discussion group, box 1, William Boss Family and Business Papers.
28. Personal Record of William Boss, 2, 3.
29. Committee on University Honors, 2.
30. *Beginning Years*, 9.
31. Personal Letter, William Boss to Harlan Boss dated November 1, 1944, box 1, William Boss Family and Business Papers.
32. Promotional folder for The Boss Engineering Co., mid-1940s, box 6, William Boss Family and Business Papers.
33. *The Beginning Years Of The Specialty Mfg. Co.*, 7.
34. *Information on Specialty Manufacturing Company, St. Paul*.
35. *The Minneapolis Journal*, February 7, 1906, p. 8.
36. St. Anthony Park Historical Association folder, box 6, William Boss Family and Business Papers.
37. "The Brothers Boss, They Go On and On," *St. Paul Pioneer Press*, January 21, 1945, magazine section, p. 2.
38. Personal Balance Sheet, June 9, 1952, William Boss Family Papers.
39. Ralph E. Miller, *The History of the School of Agriculture 1851–1960* (St. Paul: Institute of Agriculture, Forestry and Home Economics, University of Minnesota, 1979), 29. Report of Necrology Committee, P.W. Manson et al, College of Agriculture, Forestry and Home Economics, University of Minnesota, *Faculty Letter*, Winter 1965–66, 12.
40. *The Beginning Years Of The Specialty Mfg. Co.*, 12.
41. Correspondence with Daniel McKeown, President, SMC, July 24, 2014.
42. "The Brothers Boss, They Go On and On," 1, 2.
43. Boss Family Press Clippings, undated, unidentified clipping quoting Boss circa his 95th birthday, William Boss Family and Business Papers.
44. Letter from Harlan Boss to William Boss dated July 7, 1942, box 6, William Boss Family and Business Papers. John Deere and other records show that the John Deere Gold Medal was awarded to Boss in 1943, a year later than the date on Harlan's letter.
45. *The Specialty Flash*, SMC employee newsletter edited by Albert Sandberg, summer 1976, box 6, William Boss Family and Business Papers.
46. William Boss's eldest son, Roland, and his wife had one child, a daughter, Nancy Harlan, the second son never married. Nancy Boss married Albert Sandberg, who joined SMC in 1952 and was its president from 1970 to 1981. The Sandbergs had three children: a son, William Boss Sandberg, who is deceased; and daughters Robyn and Heidi.
47. Correspondence with Daniel McKeown, July 21–31, 2014.