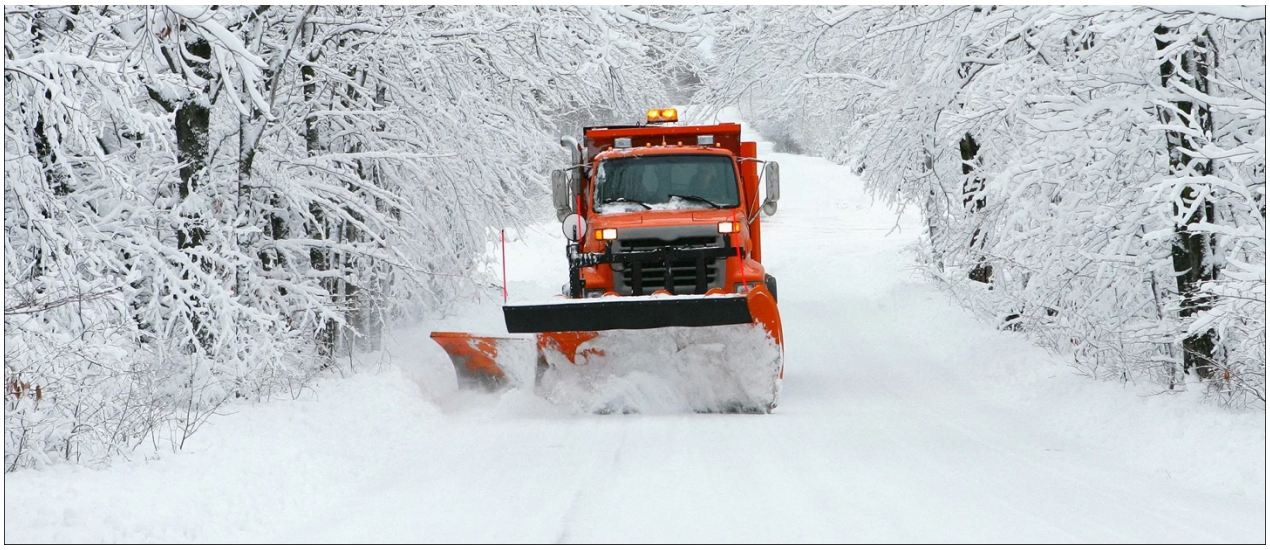
The History of the Snowplow



We all thoroughly can enjoy and appreciate the lovely sight and even sound of snow falling, but ever considered how people back prior to the invention of the snowplowed handled snow removal? Snowed-in roads were impassable depending upon the event, and businesses still had to manage along with travelers, so when exactly did the first snowplow mechanism come to be and when? Let's journey through time to show the manifestation and progression of what would be today a revelation in the snow removal industry.

Imagine during the great tales of storms and blizzards, such as the series of snowstorms (coined "The Great Snow of 1717") that buried the colonies of Virginia up to New England with over 4 feet of snow with drifts surpassing 20 feet! The only way back then was to wait out the storm, and travel was only by foot if they could manage. Here had come the invention of the snow roller during the 17th century. While to this day it's

unknown who invented it, this would become revolutionary to handle any brutal winters across the northern tier of the U.S., especially the Northeast.

Essentially, this primitive innovation was made up of a large log before upgrading to either two drums or barrels connected by an axle. Outside of it, a metal frame was built to maintain its composition and keep it stable, with a joint that was put in its center, which connected to the oxen or horses that would be the catalyst for allowing it to move. Attached to the top was a seat for the driver, and here this large snow removal mechanism would allow the snow to be crushed down and smoothed over making for travel possible, and a method to handle the snow at the time. Skis replaced the wheels, making it much easier and this became a huge asset for local farmers as they could barter and work to take care of the snow that blanketed roads.

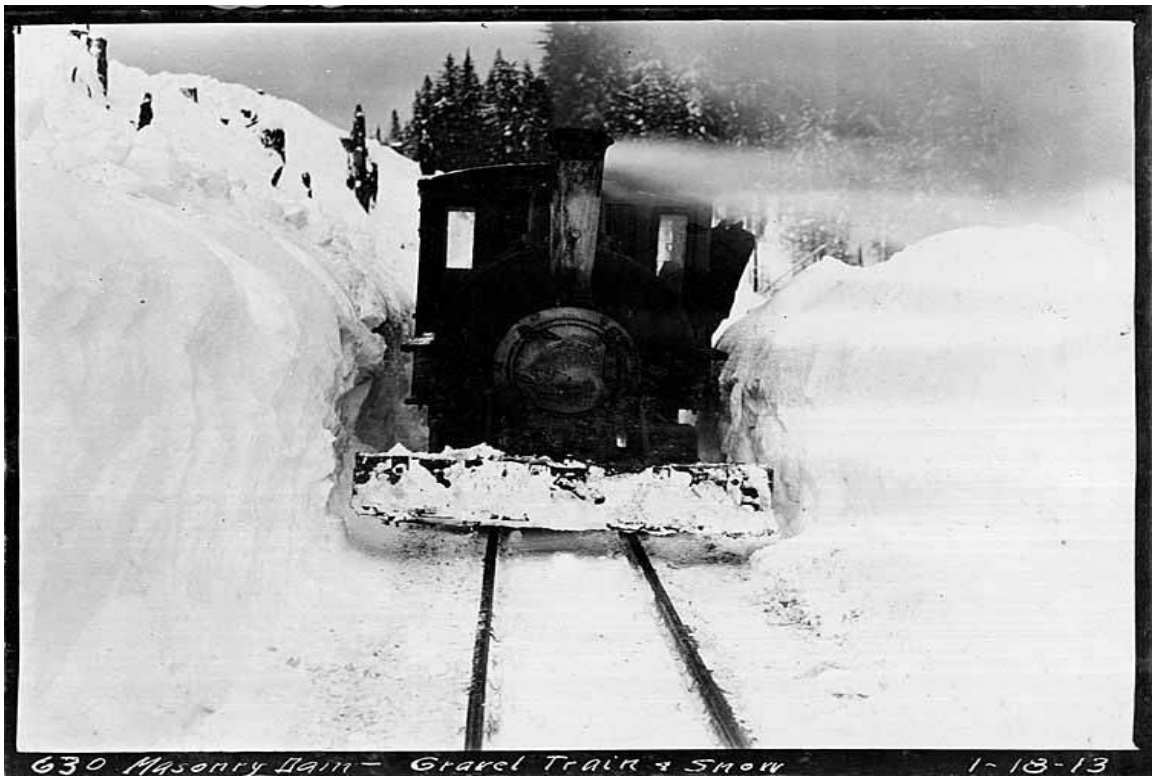
As the 1800's approached, urbanization increased as cities began to grow rapidly. This meant infrastructure picked up drastically, and snow rollers wouldn't be able to keep up with the expanding city streets and influx of populations growing. Fast forward to the 1840's, the first patent for a snowplow was issued. However, It took

until 1862 that the very first snowplow was established to remove snow in Milwaukee, WI according to the National Snow and Ice Data Center. They stated that the plow was pulled by several horses, which were attached to a cart and were able to push aside the snow making travel much easier and manageable.

Over the next several years, cities would come to adopt this practice. In fact, given its significance in removing snowfall, cities fostered municipal snow removal responsibilities every time after a snowstorm or snow event(s). With usually every new technological advance, however, comes caveats. Eventually, while the snow would be removed on the city streets, this became an issue for business owners and people traveling by foot. Snow would pile up on the sidewalks, and this presented a problem. Lawsuits would occur, like in the great city of New York, and these issues were handled by hired teams of shovelers along with horse-drawn carts.

What's forever fascinating are the human race, as constant innovation and perpetual striving forward leads to groundbreaking ideas that have elevated societies. Furthermore, humans are resilient, and this is especially true after natural disasters. These snowplows would be no match for the Great Blizzard of 1888, which would be to this day the most severe blizzard ever impact several cities and states, especially from Virginia to Maine. Buried in over 4 feet of snow, causing massive issues, a brand-new innovative technique needed to be brought into light. This was the "silver lining", as this deployed the idea to be proactive in being prepared prior to a storm and during, rather than wait for it all fall then remove.

By the 20th century, the first automobiles would now become a factor, and this meant roads needed to be cleared and readied in a timely fashion. With this revolutionary innovation, and snow removal methods that were continuously trying to be upgraded, it took until the year of 1913 that the first motorized snow plow was invented. The original snowplow to be used on motorized equipment was manufactured by Pennsylvania Good Roads, Inc., which would be officially used first in New York City.



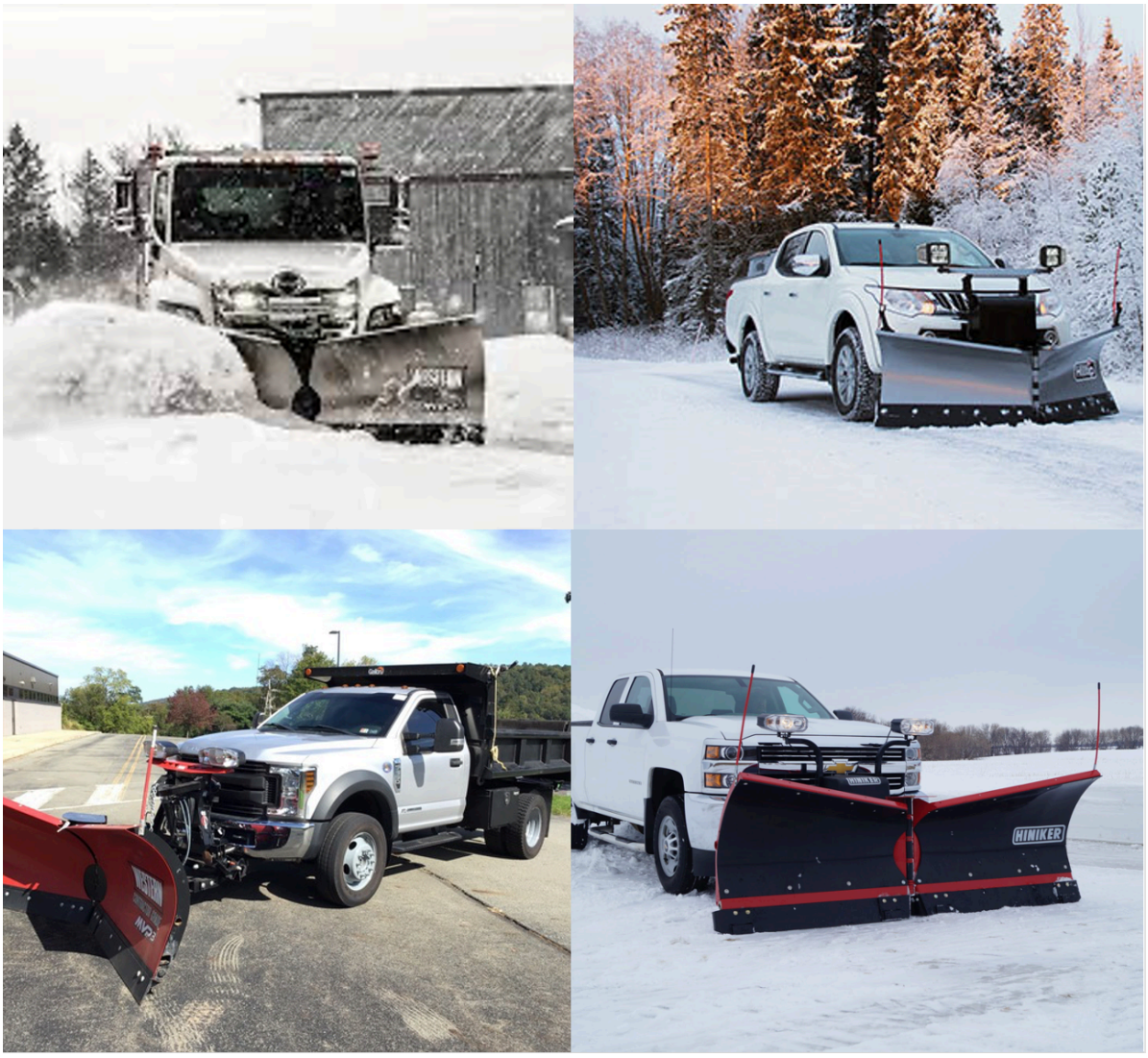
By the 1920's, another huge innovation was the snow loader. As vehicles became much more popular and cities continued to expand, demand drove up the cruciality to have snow-free roads to the point snow needed to be transferred. First used in Chicago, these snow-loaders like the one in the image below, utilized a conveyor belt to reel snow up from the pile and into a dump truck to be transported away. Then over the next several decades especially by the 1950's, governments made it mandatory to remove snowfall off the streets if the threshold hit 4'', according to the National Snow & Ice Data Center.

As parks expanded, businesses boomed, and shopping centers multiplied, it was time to invest into snow removal practices. With this demand, it allowed for customizable snowplows to ramp up in production toward the second half of the 20th century.

Eventually, these snowplows would be used to fit onto trucks, especially after the 1960's when the pickup truck became prominent. This meant attaching customizable plows onto large dump trucks, that were needed for highways and this brought into the little details of the shape of the plow like "V-shaped", "straight blade", and "winged". Certain angles of the plow helps to remove the snow more effectively, though these different shaped-plows are used situationally like for major highways or side streets.

TODAY

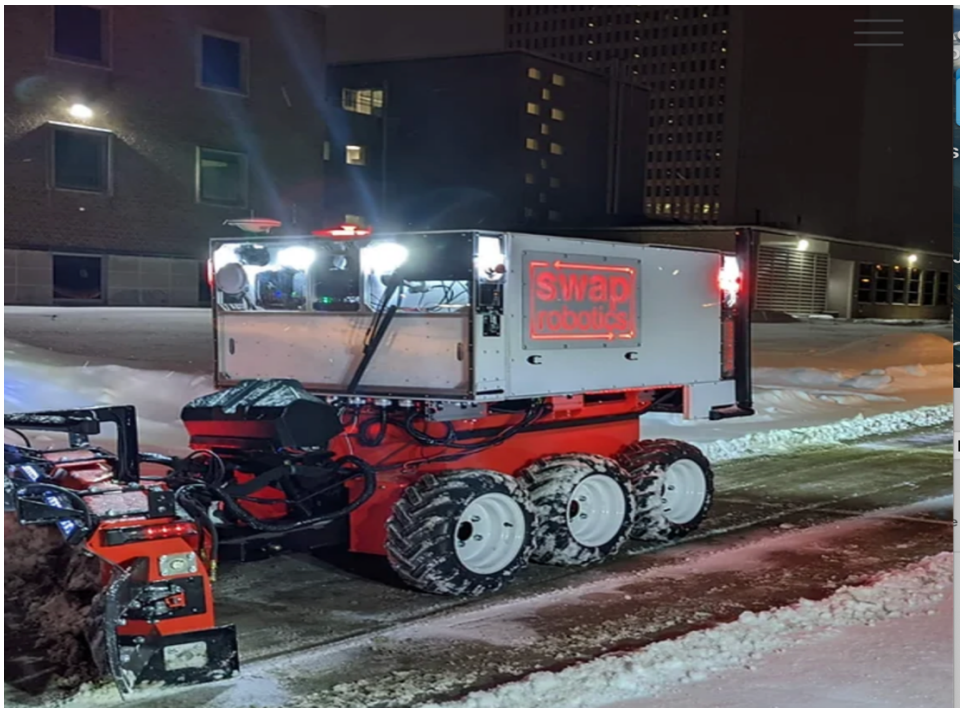
As you can imagine, we've seen a substantial advancement in snowplows, and how they operate today across the U.S. Not only have their shapes and sizes been completely revolutionized, but the technological advancements are incredible. These snowplows nowadays can maneuver and shift to a certain degree off the road, adjust one side relative to the other, and are made in general with expansive material to create long-lasting sturdiness. The biggest breakthrough today, is that the newer snowplows have instruments that measure both road and air temperature, along with wind. This allows for the snow plower to ascertain what type of chemical treatment such as salt or brine, to be used as they plow.

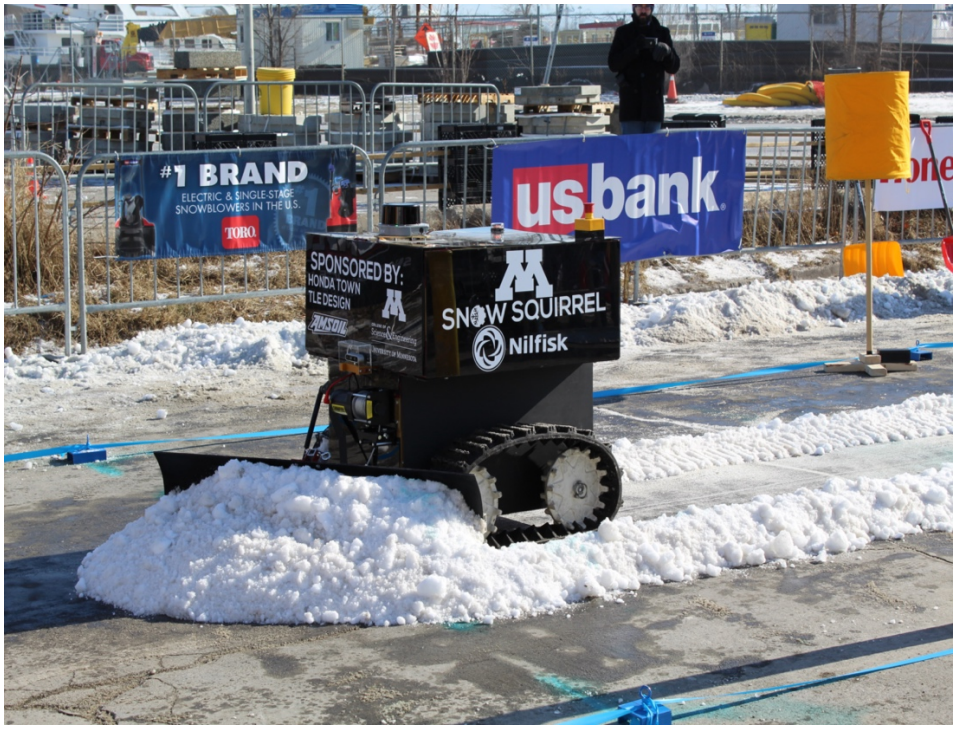


FUTURE IMPLICATIONS

While it'll take time, and the modern-day snowplow isn't going obsolete anytime soon, there are continuing efforts to reduce costs and save money for municipalities. One current breakthrough and "in the works", are the efforts for autonomous snowplows. With someone controlling it, instead of deploying a team to work consecutive possible days dealing with potential dilemmas, one person can oversee the operation. This also reduces possible human-induced error with the decision-making ingenuity of programmed robots. Of course, this remains in its "infancy", but with the current innovation and advancement of artificial intelligence and

engineering developments, it likely won't be long before these robotic plows begin to take steps in helping removing snow.





Snowplowing has become a staple in our society given its significance in allowing everyday individuals to be able to operate their businesses, work, and travel to their destinations. It has come a significant way over the past few centuries to where it is now, and where it began! Today, snow contractor's months in advance come up with contracts for the winter season and for their customers. They work out a deal by bidding, which includes compensation for snow removal and determine the costs. Regardless, thanks to the invention and operation of snowplows, many businesses can sustain and thrive, especially if the winter season produces a great deal of snow. For those who plow during the winter, happy plowing!