

## Charitably



## Speaking

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**A PUBLICATION OF THE MASSACHUSETTS CHARITABLE MECHANIC ASSOCIATION**

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### President's Message

As my second year as president of MCMA is coming to a close, I remain amazed at the dedication of the members and officers of this august organization. I would like to take this opportunity to extend my thanks for your help and support. The officers and committees make my job easy.

I would be remiss if I didn't mention that this year was marked by the passing of two of our past presidents, Mr. William Stickney and, just recently, Mr. Almon Bridges ... they will be greatly missed by all.

We are working to keep MCMA strong into the future and to that end I would like to make our annual appeal for your donations to help keep this unique 219-year-old organization strong. Please ... think about it ... and donate what you can. Thank you. – **Rich Adams**

### Recent Happenings

Our October Quarterly was held at Montvale Plaza in Stoneham, where, following an invocation by past president Bud Hanson, we enjoyed a family-style turkey dinner before getting down to business. A moment of silence was observed for recently deceased members Lee Clark, Ed Rogers, and Wendell Hollett. President Adams noted that the updates and modifications to our website have been completed, and he encouraged members to check it out. For the Membership Committee, Tony Scalse reported that an application for membership has been received from Mr. Miguel Gomez-Ibenex, an architect and president of North Bennet Street School, and he asked that anyone wishing to comment on this application contact the office.



Planning Committee Chairman Paul Lohnes then introduced our guest speaker, Ms. Susan Ring Brown, Director of Development for Northeast Arc, an organization with which MCMA has had a long relationship. Northeast Arc, through a wide range of services, works to help people with disabilities, both developmental and physical, become full participants in the community. Employment services are a key element in this effort, and Ms. Brown described how these take place both in the structured environment of their training center and through supported employment out in the community. We were also pleased to hear directly from Mr. Rob Meal, who participates in that program, and he gave us a good understanding of the work he does and the coaching and support he has received from Arc staff members. Many of our Planning Committee members are directly familiar with the work of Northeast Arc, and we appreciate that Ms. Brown and Mr. Meal were able to convey their story to more of our members.

### Helping Others

We were able last year to once again support the efforts of a very worthy organization providing vocational, social and alternative residential programs for individuals in the southeast area of Massachusetts. **PRIDE, Inc.** dates to the late 1960s, when it was founded on the grounds of

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Taunton State Hospital to provide vocational training and opportunities for patients with mental illness. Incorporated as Preparatory Rehabilitation for Individual Development and Employment (PRIDE), they moved within a few years to a community-based facility in Raynham, expanding to provide services to a wider range of individuals with many types of disabilities. In the 1980s they relocated to their present facility in Taunton, again expanding their capabilities to offer innovative programs and services to meet the growing needs of the communities they serve. Today those programs and services include adult foster care, day habilitation and PCA management, in addition to the employment and work services that are of particular interest to MCMA.



With regard to these employment and work services, PRIDE offers: a school-to-work program aimed at high school seniors; community employment and placement services for job seekers who have been diagnosed with a disability; vocational evaluations; and work services, where job readiness skills may be developed and improved upon through paid work opportunities at the PRIDE, Inc. production and packaging facilities. Assessments are done in an employment setting to determine participants' ability to follow work schedules, directions, supervision, and rules. Individuals may explore a wide variety of production and assembly work to coincide with varying interest and abilities and prepare for the transition to community employment.

Below is Keith Bradshaw, with a nameplate from the engraver donated by MCMA.



Over 100 individuals with disabilities come to work at those facilities each day, and PRIDE is constantly working to find additional opportunities for employment by improving and expanding the services they offer to customers. Consequently, when they identified an opportunity to expand their mailing and business service, Prep 'N Post, by adding commercial engraving (for nameplates, handicap signage, etc.), they asked for, and we were able to provide, the equipment needed to make that possible. As with equipment MCMA has provided in the past, PRIDE will use it to provide training that will hopefully enable some very capable people to gain and maintain employment in the community.

## MCMA History

Among our past members is an inventor whose work, though little known by the public at large, was hugely important to the industrialization of America.

**Thomas Blanchard** was born in 1788 in Sutton, Massachusetts, near Worcester. The fifth of six sons of a hard-working farmer, he stammered badly as a boy, making him the target of much ridicule. At school he was shy and seemed backward, but away from school he early-on showed ingenuity and a talent for wood carving. While still a schoolboy, he constructed an apple-paring machine after hearing a friend speak of seeing such a machine in Boston. His initial effort did not work well (it cut too deeply), but he refined it after more closely examining how the thumb was used as a gauge. After that, young Thomas was in demand at "paring bees" far and wide, where he easily pared more fruit than any six rivals



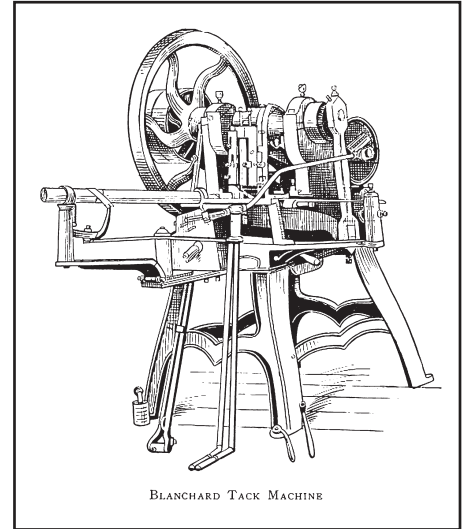
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working together. More importantly, he gained confidence, and he learned that, if a machine were to supplant a human hand, it must be able to imitate every act of that hand.

A trip to the local blacksmith had instilled in the boy an interest in metals and a desire to work as a mechanic, despite his father's efforts to make a farmer of him. He went to work at the tack-making shop of his brother Stephen, who employed 20 men and boys at his shop in West Milbury. Thomas was stationed at a vise, heading tacks one-by-one, a task he found so tedious that he insisted to his skeptical brother that he would invent a machine to do such work. (Machines for this purpose had been brought out before, but without practical success.) He began his effort at age 18, working when time allowed, and refining his idea constantly, until he pronounced it completed six years later and showed it to his family. Blanchard's machine steadily churned out 200 tacks per minute, all with better heads and points than those produced by hand. He sold the patent for \$5,000, which he thought to be a sizable sum, but which was a mere fraction of its real value.

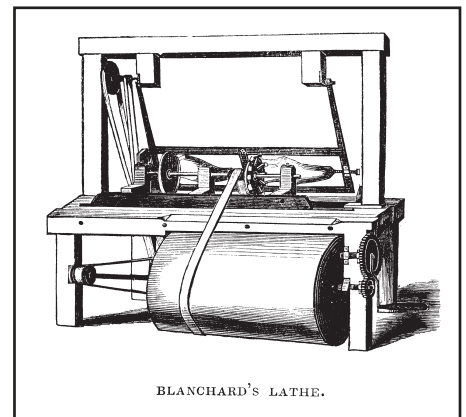
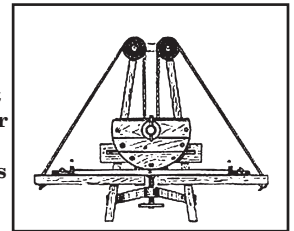
Blanchard's success with the tack-making machine had earned him fame throughout New England as a man of rare inventive faculty. He was subsequently sought out by a manufacturer of muskets in Milbury, not far from his brother's shop, to improve upon his method for finishing his gun barrels. For most of their length, the barrels were finished in a lathe, but the few inches at the breech end required chipping and filing along two flat and oval sides. Blanchard studied the problem carefully, and solved it by adding to the gun lathe a simple cam motion, controlled by a lever, that quickly executed the flats and ovals with ease. He soon turned his attention to gunstocks, convinced that there must be a way to produce these items mechanically. Eventually, he hit upon the idea of a hinged carriage to hold a feeling wheel, and alongside it a twin cutting and copying wheel. He successfully built such a machine and patented his idea. Entering the employ of the U.S. Armory at Springfield, he built in 1822 a gunstock-making machine (still on display at the Armory) that produced two gunstocks per hour, though later versions would better that pace severalfold. Along with a dozen more specialized Blanchard shaping and inletting machines, the Armory was able to mechanize much of its gun making production.

To Blanchard's misfortune, however, his preoccupation with the needs of the Armory had diverted his attention from his chief item of property, the copying lathe. It was quickly realized that his lathe was readily adaptable for other commercial uses, and before long at least 50 were in operation by pirates, mainly in northern New England and into Canada. It was both difficult and costly to track down and prosecute such pirates, so Blanchard for years made little income from his invention, save the royalty of nine cents he was paid by the U.S. Armories at Springfield and Harper's Ferry for each gunstock turned on his lathes. The shoe industry was another beneficiary of Blanchard's invention, as he was particularly innovative with lathes adapted to the making of shoe lasts. Multiple cutters of increasing sizes would be arranged so lasts of five or more different shoe sizes could be cut at a time from a single pattern, and he was able to adapt his machines to easily cut lasts of the opposite foot from the same pattern. Alas, his U.S. patent did not extend to Canada, so lasts made from Blanchard lathes taken into that country flooded the U.S. free of duty until tariffs eventually stopped that practice.



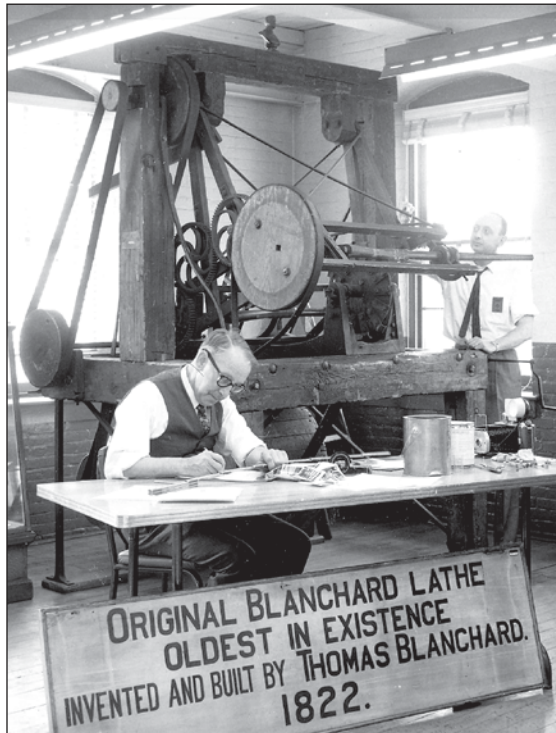
BLANCHARD TACK MACHINE

Above is Blanchard's tack machine (1806). At right is his device for bending wood (1851). Below is his copying lathe (1822).



BLANCHARD'S LATHE.





Blanchard's inventive mind extended into many other areas, one being the use of steam. In 1825 he built for his own use the first American automobile, a 2000 lb. steam-powered machine in which he drove around Springfield. He became interested in railroads, and designed a steam carriage for that purpose, but was unable to obtain financing for his railroad ideas, and so abandoned them. He did, though, succeed in building several steamers for use in the waterways of the northeast, and this led to an invention that would finally secure his fortune. Blanchard found in building the hulls for his steamers that the knee timbers, for which he paid a high price, were sometimes weak and faulty. This led him to examine the processes used for steaming and bending timbers, which often resulted in splintering and cracking along the outer curve. After much experimentation, he developed an alternative method that used compression only, and so avoided stretching and weakening the outer fibers of the wood. For this machine's application to the bending of ship timbers he received \$150,000. It also profitably turned out handles for plows and other farm implements, curved fellos for wheels, and frames for pictures and school slates. (A royalty for the slate frames alone would earn him over \$2,000 in its first year.)

His financial security assured, Blanchard moved to Boston, where a considerable part of his time was devoted to serving as an expert in patent cases. As such, his perceptions as a mechanic, his wide and varied experience in machine shops, and his impeccable honesty gave unimpeachable value to his judgements. Thomas Blanchard joined MCMA in 1848. He died in Boston in 1864 at age 76.

(The idea for this article was suggested by Tom Crowdis Jr., who serves on our History Committee. The information was largely obtained from the book *Leading American Inventors* by George Iles.)

### ... and MCMA Miscellany

Samuel Yendell was 20-years-old when he carried the flag for the boatbuilders contingent of the procession that paraded to meet and greet President George Washington as he entered Boston in 1789. A few years later he was ship's carpenter on the Boston-based *Columbia Rediviva*, the first ship to enter the sandbar-obstructed mouth of a river in the Pacific Northwest. During a nine-day venture up that river in May of 1792, the ship's captain planted an American flag, claimed the territory for the United States, and named the Columbia River after his ship. Though little was thought of the discovery at the time, that trading expedition was later used to bolster the claim of the United States (vs. Britain) to the Pacific Northwest Territories, a dispute not finally resolved until the Oregon Treaty of 1846 ceded British Columbia to Britain, and to the U.S., the area containing the future states of Oregon, Washington, and Idaho. **Samuel Yendell** joined MCMA in 1816 and remained a member for 44 years.

