

Charitably



Speaking

353 Southern Artery

Quincy, MA 02169

A PUBLICATION OF THE MASSACHUSETTS CHARITABLE MECHANIC ASSOCIATION

President's Message

It was great to see so many of you at our 76th Triennial Celebration last month. It was a wonderful event, and we owe thanks to our Functions Committee and others who planned, coordinated, and made it happen. And as this holiday season concludes, we are excited to move forward in several key areas to ensure MCMA's continued success for the next 100 years. I'd like to mention a few of them.



It's clear that our members recognize the importance of reversing the decline in our membership over the past decades. Membership growth is essential to MCMA's vitality. Think about what inspired you to join and share that enthusiasm with others! We are among the oldest philanthropic organizations in the United States, incredibly rich in history, and dedicated to supporting the mechanical arts and enabling employment opportunities for the disabled. This is something to be proud of and to share! I encourage you to recommend potential new members who will adopt that same passion for MCMA.

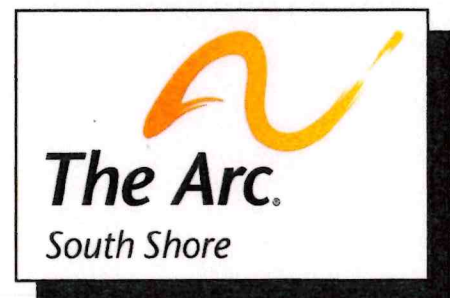
We also recognize that financial health is crucial for our growth and long-term sustainability. We are blessed, thanks to those who preceded us, with endowments that largely enable us to fulfill our mission. We rely on your support to fill the shortfall, but for the long term we need to actually grow those endowments, which are so essential for fulfilling our mission. It's a challenging goal in today's financial climate, but member support in this area is vital to maintaining and expanding MCMA's impact.

And the importance of social functions is possibly overlooked. Beyond our quarterly meetings, we've enjoyed past social events like Christmas get-togethers and harbor cruises, and we have on occasion coupled quarterly meetings with visits to nearby attractions like Heritage Plantation or the Saugus Iron Works. We've heard from many members and their guests about how much they enjoy these opportunities to connect and build relationships, and we want to encourage that aspect of MCMA. Our Functions Committee will be looking for opportunities to do so in 2025, and they will welcome any ideas or suggestions you may have for them.

With your input and involvement we can succeed in these goals. I encourage you to actively participate in MCMA's growth and help us create an organization that others are eager to join. I look forward to the next three years serving as your president. – **Sincerely, Tom**

Helping Others

It has been nine years since we last highlighted **The Arc of the South Shore** in this newsletter, but we have maintained a continuous relationship with this Hingham-based organization, and it's time for an update. The Arc's primary service area includes Braintree, Cohasset, Hingham, Hull, Milton, Norwell, Quincy, Randolph, Scituate, and Weymouth, but it has a presence throughout Southeastern Massachusetts and is affiliated with 700 Arc chapters nationwide. Founded in 1951, and

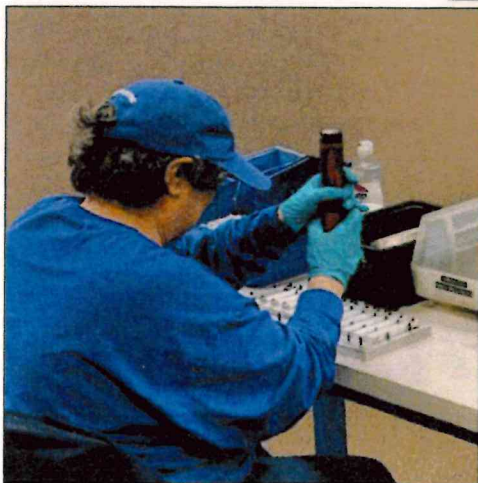


formerly known as South Shore Arc, this family-oriented, community-based agency provides high quality services and advocacy for children and adults with cognitive, physical, and other intellectual and developmental disabilities. They strive to provide services that fully integrate individuals into the community and incorporate effective systems of family support. The services offered are extensive, but it is their work in the area of employment training that has consistently drawn our attention and support.

For many individuals with disabilities, The Arc notes, meaningful employment is a key part of living a full life. Earning their own income can boost self-esteem, and employment stimulates and challenges the mind while providing opportunities to learn from others with diverse backgrounds and experiences. Through The Arc's *Pathways to Employment* program, staff help individuals find and maintain jobs based on their skills, interest, and strengths. They provide a job preparation curriculum, on-the-job training, transportation, and more to ensure individuals' success. Many of these individuals work in group supported work sites, with two or three working alongside a job coach, while others are able to work more independently. Many area employers help make this program possible, and individuals work meaningful jobs where they feel seen, respected, and valued. They also earn a fair wage.

The types of work are varied, and in some cases jobs are shared by individuals who work there on a rotating basis. Examples: twelve individuals perform light assembly work of small component parts at Russelectric in Hingham; five individuals perform recycling services at Burke Distributing in Canton; two individuals employed by local supermarkets (Shaw's and Stop and Shop) have been employed for more than 25 years and are highly valued; and a landscaping service started with an MCMA grant suffered a setback during COVID, but it is working its way back and providing employment opportunities. The Arc is currently developing a museum guide training curriculum with the Hull Lifesaving Museum, and they continue to look for more opportunities for group supported employment and for those individuals who desire independent employment.

MCMA's direct support has been mainly in vocational training and employment services and tools, but we have also provided equipment and tools as The Arc expanded training into the areas of food service, a farm stand, and an online store. Overall, The Arc of the South Shore annually serves 5,000 people, 20% of whom have mobility issues, and 50% of whom have autism. It's a tough challenge, but they have a 98% satisfaction rate among the families they serve. And we at MCMA are pleased to be able to continue our support of their fine work.





Thomas Willis Pratt
(1812-1875)

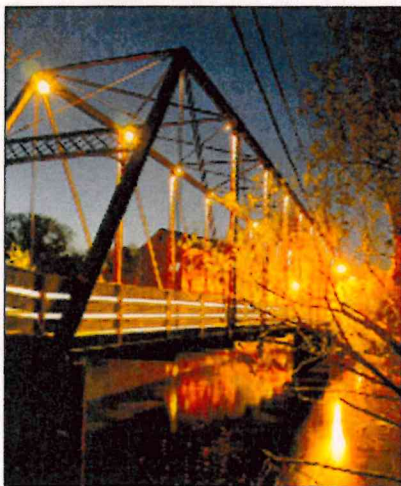
MCMA History

We have noted in previous issues that reminders of the work and accomplishments of MCMA's past members are all around us. The buildings and monuments of our architects and builders are the most easily recognized. For others, like the Concord grape or the steam-driven pile driver, we at least know they were developed or invented by members. In some areas though, the contributions of our members were in the significant improvements they made to existing technologies ranging from compasses, lathes, bicycles, and pianos, to quarrying and railroading. Those improvements are still with us, even if the connections to our members may be less "visible." One exception to this last category, however, must certainly be the work of member **Thomas Willis Pratt**.

Born in Boston in 1812, Thomas was the son of **Caleb Pratt**, a noted housewright and one of MCMA's early members. Following his education in Boston schools he attended the Rensselaer School, later to become Rensselaer Polytechnic Institute, in Troy, New York. He

was first employed by the U.S. government as an assistant engineer in building the dry-docks in Charlestown, Mass. and Norfolk, Va. But he soon took a keen interest in the railroad industry, then in its infancy. He was employed by the Boston & Lowell, Boston & Worcester, Providence & Worcester, and a succession of other New England railroads, acting in the capacity of civil engineer or superintendent. Just one example of his work is the bridge that he built over the Merrimack River at Newburyport for the Eastern Railroad. MCMA's annals say of Pratt "He was a man of few words, studious, attentive to all the details of his profession, and possessed of a retentive memory, which served him well in his field labors. He was recognized by railroad managers as an authority in engineering science, and his opinion was often sought upon the professional questions which were frequently arising."

Pratt did have interest in other areas as well, and patented several inventions, including, among others, a steam boiler and a method of ship hull construction with the aim of reducing friction. But Pratt's fame derives from the truss that bears his name. In 1840, at a time when trusses were made mainly of wood, William Howe patented a truss that used vertical iron rods in tension, and the design became widely popular. But the design did have limitations and inherent problems. Pratt studied the deficiencies and developed his own design, which he patented in 1844. The Pratt truss reversed the configuration of the 1840 Howe truss, putting the shorter web members in compression and the longer (diagonal) web members in tension, which greatly reduced the



Four Points
Bridge (1876),
Emmitsburg,
Maryland

◀ Hanover
Bridge (1885),
Hanover,
Minnesota
(a Pratt
through-truss
bridge)





Fair Oaks Bridge (1909), Fair Oaks, California

to about 250 feet. By the 1870s it was the standard American truss type for moderate railway and highway spans and continued to be so until well into the 20th century. The Pratt truss also inspired a large number of variations and subtypes.

Thomas Pratt was a fellow of the American Society of Civil Engineers, and after his death their report said of him: "He was one of the pioneers of the American railroad and bridge systems, and during his useful life was not less distinguished by modesty than by integrity." T. Willis Pratt (*which is how he entered his name in our Signature Book*) joined our association in 1844, becoming just the second member to list his occupation as civil engineer. In that same year he and his father entered the bridge design in MCMA's Fourth Exhibition by building a model bridge to connect Faneuil Hall with Quincy Hall, where the Exhibition was being held ... and were awarded a Gold Medal. Thomas Pratt died in 1875 at the age of 63, leaving one son and one daughter. We see truss railroad bridges almost daily without giving them much thought, but maybe now we can appreciate that a past member had much to do with their development.



Dearborn River High Bridge (1897), Augusta, Montana



West Street Bridge (1913), Westerly, Rhode Island

chances of structural failure through buckling. The basic form of a Pratt truss includes a triangular truss design whose diagonal members, from both ends, slant down toward the center of the bridge. And at a time when the structural action of trusses was just beginning to be understood, the Pratt truss was one of the first to signal the transformation from experimental to scientific bridge design.

Over time, as iron and then steel became more predominant in bridge construction, the Pratt truss came to be favored for its strength and straightforward design, and especially for its ability to span distances up

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