

### RICHARD L. CRANDALL -

### Comshare's Versatile & Jalented President -

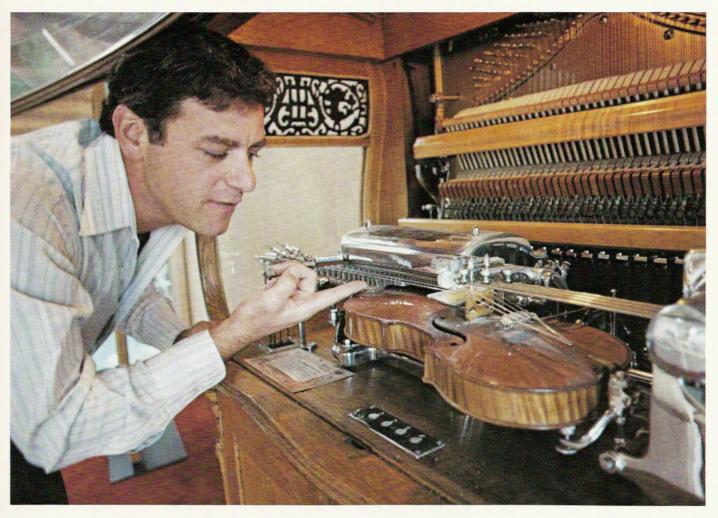


Photo: Richard Crandall with a beautiful mechanical violin which he purchased and restored a few years ago.

#### by CATHY PALMER

Would people spend a nickel to watch mechanical fingers tickle a harp or tease the strings of a violin?

Back in the gay nineties, a lot of ingenious inventors thought so. To test the idea, they built coin-operated music machines that are marvels of mechanical wizardry: harps, banjos, pianos—even violins—that play themselves.

Those inventions fascinate Comshare president Rick Crandall. He collects them: the Crandall home is a veritable museum of antique coin-operated music machines. He restores them: some he does himself, others he keeps in good repair once they've been refurbished. He researches them: Crandall and his

wife Trudy have collected enough information to produce a book on their history.

"The sheer inventiveness of those machines is astounding," Crandall says. "The individuals who built them had so few technological resources to work with, but so much creativity. It reminds me of the kind of factors that were present when Comshare started: a need, a challenge, and commitment in the face of a lot of doubting Thomas'."

Rick's absorption in his hobby is typical of the way he approaches many leisure interests, including photography and scuba diving. As his wife Trudy puts it, "I get interested in things on the normal level. But once something catches Rick's imagination, he gets so caught up in it. He'll get up at 5:30 in the morning just to spend a few hours working on his music machines."

The first machine to catch Rick's eye was a 6' x 3' x 2' Victorian music box: an exquisite creation of gold oak wood and sparkling etched glass. Because it can automatically choose a musical selection from twelve large perforated metal disks, it is the classic grandparent of the jukebox.

He bought the machine, repaired its mechanical gadgetry and restored its cabinet. It worked. He was elated. The fever had caught.

Before long, the Crandall's living room housed a self-playing, coin-operated violin. Then two self-playing banjos

Continued on next page

moved into the kitchen of their Ann Arbor condominium.

"Pretty soon, Rick moved his dresser out of the bedroom to make room for another machine," Trudy says. "He was actually putting his shirts and socks in the drawers of a music box!"

To learn more about the machines and their inventors, the Crandall's became historical reporters. Armed with tape recorders, they travelled to small midwestern towns in search of background for a book that Rick is writing on the role those machines played in American life. Old-timers and aging library records have yielded a wealth of information.

"I'm thoroughly fascinated by the people who invented these machines," Rick notes. "Not only were they mechanical geniuses, but they were brilliant marketers, too! They dreamed up an amazing number of gimmicks just to get people to put money in a coin slot."

Besides the resonant tunes of music

Besides the resonant tunes of music machines, visitors to the Crandall home enjoy other sensory pleasures that are the product of Rick's leisure interests.

To delight the eye, the walls supply a colorful sampling of Rick's wildflower and underwater photography. He does most of his wildlife photography in Michigan and his underwater photography in the Caribbean Sea.

"Scuba diving is a fascination, but photography adds a startling dimension to it," Rick says. "Superlatives can't describe the color you find underwater. It fades instantly if you bring plant or animal life to the surface, except through photography."

Rick also enjoys photographing wildflowers found in the Ann Arbor area. He and Trudy have cataloged over 150 varieties in a book they've kept since 1978.

As president of Comshare, Rick's primary job rewards come through teamwork and from establishing the right setting in which other people can perform. Consequently, his leisure time activities tend to be those that offer an opportunity for individual performance and the attainment of goals "with my own two hands."

"My parents used to say that at the rate I go at activities, I'd run out of things to do before I was 40. I think I'm about to prove them wrong. The more you learn, the more you're able to go on to . . . and there is an infinite variety of things to do in the world."

#### COIN-OPERATED MUSICAL INSTRUMENTS

#### MERRY MAKING IN A GOLDEN ERA

by RICHARD L. CRANDALL

During the Gay 90's and lasting through World War I, America was in transition from a country life to a bustling city life. Railroad junction towns became beehives of activity, literally cities in formation. At night the honkytonk piano and the black ragtime piano player created the musical backdrop for all forms of entertainment.

The era was an exciting one. Music was indispensible to its mood. Soon, the great demand for music in taverns, hotels, restaurants, gambling parlors and brothels exceeded the availability of good piano players. America's inventive spirit rose to the challenge.

At the same time that the automobile, the telephone and the phonograph were being perfected, some musically inclined inventors created music machines that could be triggered to play a tune automatically by the drop of a nickel. Around 1900, the coin-operated piano or nickelodeon came into existence. Its use spread rapidly. However, contrary to popular belief, the nickelodeon was not the very first coin-operated music machine.

In 1893 patents were issued to the American Automatic Banjo Co. of New Jersey for a self-playing banjo. The machine was perfected and brought to market under the Encore name in 1897. The machine was a marvel of oak cabinetry, fancy metal castings and a vertically mounted four-string banjo that was picked and fretted mechanically. Able to pick at rates up to 600 strokes per minute, the Encore Banjo played a five- or six-tune endless roll with favo-

rites like Yankee Doodle Dandy, Maple Leaf Rag and Suwanee River.

Somewhere between 1,200 and 1,-500 of these machines were originally produced. Only 16 are known to survive today. The Crandall's Encore is in original condition and restored to perfect working order.



Photo:R.L. Crandall with one of his coin operated musical instruments, a banjo-circa 1900....

Probably the greatest mechanical marvel of all the automatic music machines is the Violano Virtuoso. One man by the name of Henry Sandell responded to a challenge to produce a self-playing violin. By 1908, patents were issued for his wonderous machine, which uses an almost impossible number of electro-

magnets to finger the strings, create the bow action, produce the tremelo, rosin the bows and create a range of expression.

When completed, the violin was in great demand. However, setting up performances was clumsy, since a live pianist had to be hired each time to accompany the violin.

To solve that problem, the Mills Novelty Company (maker of early gambling machines and jukeboxes) funded Sandell's development of a mechanical piano. That piano—housed in a beautiful oak or mahogany case and controlled by a perforated roll—was added to the Violano Virtuoso. Over 4,000 Violano Virtuosos were produced between 1912-1928. They were especially popular in restaurants, dance halls, and even onboard ships. Their music ranges from fox trots and waltz dances to classical and operatic selections.

Although over 200 specimens of the Violano Virtuoso still exist in collections, only 10-15 of the early fancy case style depicted here have been recovered.

The inventors didn't stop with single instruments. Nickelodeons expanded into full orchestras with drums, xylophones, flutes, etc.

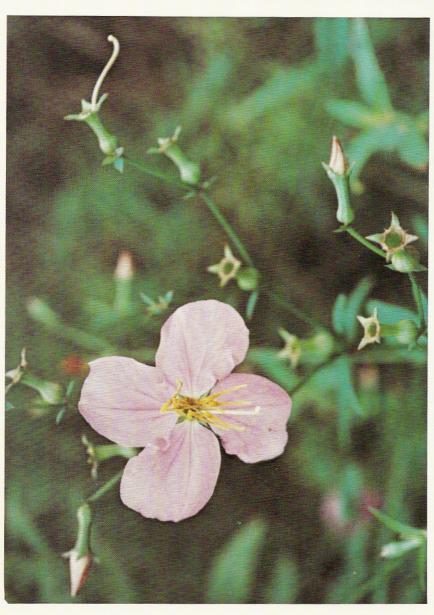
The death of these machines was caused by factory conversions during World War I and the subsequent rise of the phonograph, jukebox and radio. These latter musical inventions eventually produced good music for lower cost. But they'll never replace the fascination the listener experiences actually watching the earlier mechanical machines produce their music.



# NATURE & UN PHOTOG

by Richard L.

Photos: upper left, clockwise, Rich underwater photography in the Ca Central America; a yellow wood-so photographed by Crandall at Roa meadow beauty. These photograph tion of the hundreds of beautiful collection . . . we think they are sup





## ERWATER APHY

Crandall

Crandall diving to do his bean Sea, off the coast in l; a Moray eel; nudibranch, Central America; and a epresent a very small ports that Crandall has in his





