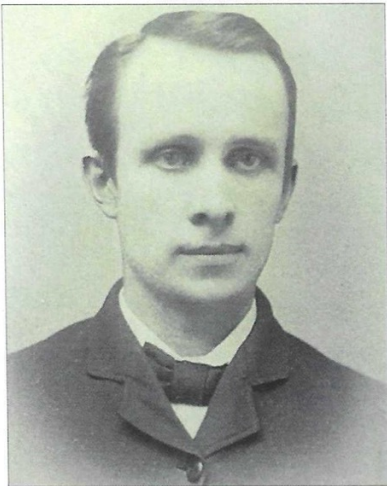


In 'Isle of Wight Sand Bells and the mysterious Mr Carpenter', *GeoHistories* 75, April 23, I discussed the identity of the maker of the incredible sand bells made in mid 19th century Isle of Wight, far superior to those of other makers of that era and not surpassed since. The catalyst for the sand bells was the availability of coloured sands in the cliffs of Alum Bay and the growing demand

for souvenirs with the increased popularity of tourism on the Isle of Wight.

Somewhat later, across the Atlantic in Iowa, USA, another stroke of geological luck and the talent of one man in particular saw the production of similar coloured sand creations, this time in bottles rather than glass bells. This sand art reached new levels of magnificence.

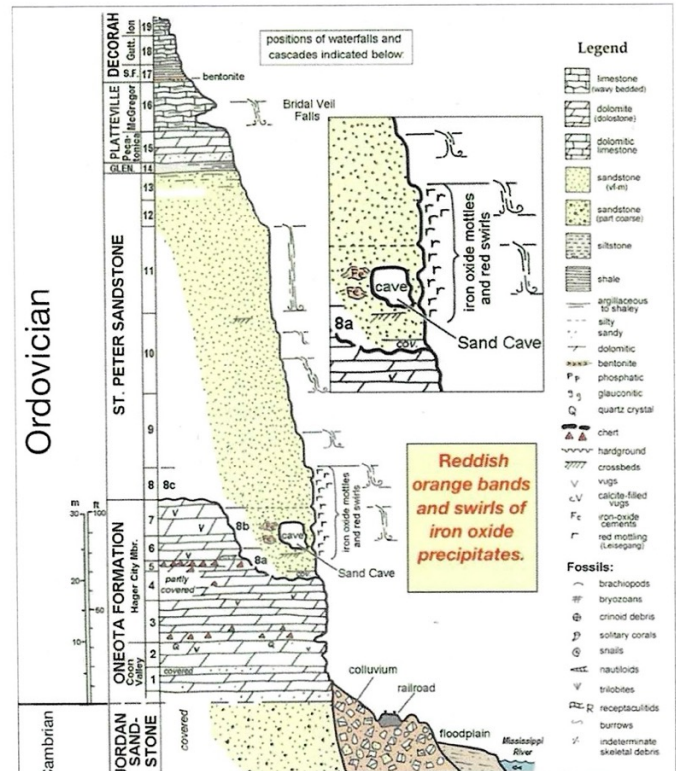


Andrew Clemens (1857-1894) Public Domain

Andrew Clemens 1857-1894 was born to immigrant parents; his father was from Prussia, and his mother from Germany. They had emigrated to the United States in 1851, meeting on the ship during the crossing, and subsequently married in Milwaukee, Wisconsin in October 1852. By the time Andrew, the third of their six sons, was born, the family had moved to Dubuque, Iowa, on the Mississippi River. Shortly afterwards they moved a little further north on the Mississippi to the town of McGregor.

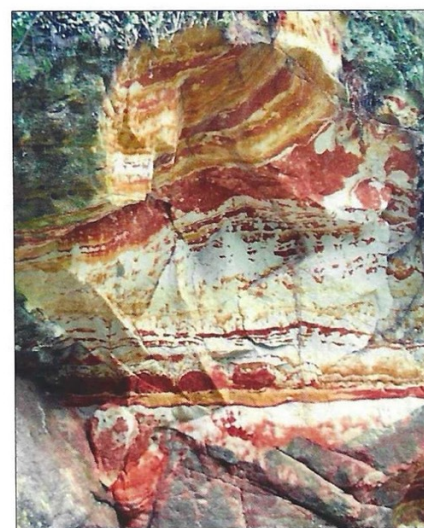
When Andrew was about 6 years old, he developed either meningitis or encephalitis, simply called brain fever at that time. Although he recovered, the disease caused him to become deaf, which in turn affected his speech. Being a bright lad, he learnt to lip read, and at the age of 13 he was sent to the Iowa Institute for the Deaf in Council Bluffs, 330 miles away.

During school holidays Andrew and his brothers would often explore the area immediately to the south of McGregor in what is now Pikes Peak State Park. It is a heavily wooded area of steep terrain with many trails, some leading to the Bridal Falls, the water from which descends to a wooded glen know as Pictured Rocks where there is an exposure of Saint Peter Sandstone. Unlike the Tertiary aged coloured sands of Alum Bay, (c.45 million years), the sandstone of Pictured Rocks is Middle Ordovician in age, (c.460 million years). The sandstone in and around the Sand Cave at Pictured Rocks has



Geology and drainage of the Pikes peak area (slope not to scale) Courtesy of Ray Anderson & Brian Witzke, 2000.

naturally coloured, reddish-orange bands and swirls of iron oxide precipitates. Estimates of the number of colours obtained vary from 33 to 42, compared to 21 from Alum Bay.



Exposed St Peter Sandstone Courtesy Ray Anderson

Andrew and his brothers would collect sand twice a year, using 50 to 100 cloth sacks holding 10 pounds in each. Andrew experimented with making bottles, and eventually a local grocer gave him some space inside his shop to allow him to sell them. By the age of 17 he had made it his career.

The McGregor newspaper, the *North Iowa Times*, announced his return from School on 25th June 1874 and reported that he was '... putting sand from Pictured Rocks in bottles of various sizes, arranging colours in a handsome manner, and lettering in sand as parties may desire. The specimen bottles shown us are the

Andrew Clemens' Sand Bottles

handsomest we have ever seen Clemens was just 17 years old at the time.

Others were also making bottles but generally with simple bands of colours. Andrew's talent was clear, and his bottles exceptional. It might take him anything from 2 to 3 days to as long as a few weeks to make each one.

He would dry and sort the sand, separating coarse and fine, and later crushed it when needed. He made a set of tools for the work—long slim hickory sticks with a rounded end for tamping. One stick had a tiny quarter-teaspoon scoop attached to the end, and later a small scoop fashioned from tin. The tools were each about 9 inches long.



Original Andrew Clemens sand art tools.
State History Society of Iowa. Photo: Roy Sucholeiki)

Shown below is an early Clemens bottle with colours clearly reminiscent of the Pictured Rocks. The words read:

FILLED BY
A. CLEMENS
A DEAF MUTE
OF
MCGREGOR, IOWA



An early Clemens' sand bottle

Phil James

This wording suggests that Andrew was aware that people might generally underestimate the capabilities of individuals with disability. However, I suspect his situation actually helped him to focus on making these bottles, undistracted by the noise of the world going on around him.

Over the years Clemens' bottles became more and more sophisticated. As I discussed in my previous article, there is nothing added to these bottles other than dry sand, carefully arranged into a design, and then thoroughly tamped down. To prove this point Clemens once worked at the Kohl & Middleton's Dime Museum in Chicago. He constructed simple designs in front of the public. Once finished each bottle was dramatically smashed with a hammer to demonstrate that no magic was involved. In a letter written in 1892 to a customer, Martha Van Ness, Clemens states

I will say that the sand is pulverized and put in dry. The sand is put in, in required quantities, with a little scoop and then worked into position with a sharp, pointed stick. When the jar is full, I put a cork in the mouth of the jar and press it down with a wooden hammer & a round piece of wood. Then I pound the jar on a piece of rubber for half an hour and hammer the cork down every five minutes. When I can get the cork down no more, the sand is tight.



The Van Ness bottle—this took Clemens two days to make.

The price was \$4, equivalent to about \$138 (£105) today. The average weekly wage at the time was about \$10.

Photo courtesy Sharon and Braxton Dodd

One incident that provided a dramatic illustration that it really was 'just' sand happened when a customer who had ordered two bottles got so excited that he held them up together causing them to clash and shatter, letting all the coloured sands pour onto the floor. We might well imagine his reaction!

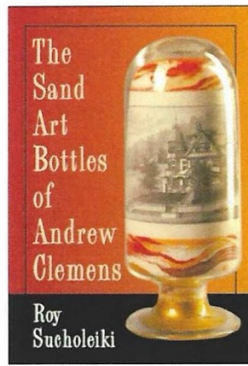


A close-up of 'just' dry sand in a bottle, with colours showing different sized grains

Clemens used either conventional pharmaceutical bottles or inverted apothecary display bottles. The former allowed the sand to be filled the "right way up" whereas the latter had

to be created upside down just like the Isle of Wight sand bells.

As for prices—by the early years of this century these had increased to a few thousand dollars. However, following the appearance of a number of Clemens' bottles on episodes of the American Antique Roadshow, prices started to climb significantly. This trend was accelerated further by the publication of Roy Sucholeiki's fabulous book in 2015, after which prices rose quickly to tens of thousands of US dollars. In



September 2021, a rare and important 'Portrait' bottle sold for a staggering \$956,000 (£700,000+) against an estimate between \$100,000 and \$150,000. Many of these bottles had remained with the original families for well over 100 years, and therefore had extremely well documented provenance, but now the prices being realised have brought several onto the open market.

Unlike the very sketchy history of the Isle of Wight sand bells there is a great deal of information on Andrew Clemens and this article is only able to touch the subject lightly. There are many good references on the internet, and I thoroughly recommend Roy Sucholeiki's book.

To round off this brief account I would like to finish with what is considered to be Andrew Clemens' 'Masterpiece': The George Washington Bottle. Dated June 1st 1888, it was made by Clemens for his mother over an 18 month period. It is a twelve-inch-high inverted apothecary bottle, so it had to be created upside down through a very thin neck. It remained in the family until Sept 1948 when a Mrs Clemens, the wife of Ray Clemens, a son of August Clemens, one of Andrew's brothers donated it to the Iowa State Historical Society. In July 1888 the North Iowa Times had reported as follows:-

McGregor has an artist nowhere equaled in this world in his line of artistic work. He invented and became skilled in an artistic work all unaided and alone. He invented and made his own tools. He has thus brought to a surprising perfection—an art of which he alone is the inventor, the master. We refer to the pictures wrought in sand from pictured rocks, by Andrew Clemens. Our people do not properly appreciate this art invention. The master doesn't seem to realize his exalted position among the inventors of the world. Mr. Clemens lately completed what may be regarded a masterpiece. He has made many fine efforts before. This last one is a perfect picture of Gen. Washington on horseback. The artist has surpassed the copy. He gives the coloring, shading, form, all complete and perfect and all done in sand. The work shows Mississippi river steamers running at full speed, a group of Indians in camp, the flag of our country with lettered motto, landscape—sky, mountains, river, fields, and harvest scene—all perfect and wrought with sand in a glass jar. The jar is open at the bottom and the work is commenced at the top of the picture. But to appreciate this wonderful work one must see it as we have seen it. It is one of the wonders of the age and ought to have a place among the great art work of the world.



Andrew Clemens' George Washington Bottle.

Photos courtesy Roy Sucholeiki



The trompe-l'oeil effect achieved on the columns within the George Washinton Bottle.

Photos courtesy of Roy Sucholeiki

It really is a quite staggering piece of work, with so many incredible images captured with 'just' dry sand. Amongst the components, at the sides are geometric columns which demonstrate the quite remarkable skill he had. Just look at the way they appear to stand out in '3D' with their angled and shaded sides. The sands at the bottom of the bottle are again done in the style and colours of the 'Pictured Rocks' themselves within which are the words 'A. Clemens, Artist. June 1st 1888, McGregor, Io.'

Many others have tried to copy Andrew Clemens' work, both at the time and since. Some have managed to get close, but no one has ever quite matched his skill and artistic talent.

Roy Sucholeiki's splendid book can still be purchased, secondhand, at around £50 plus or, as I did, a Kindle copy can be obtained from Amazon for £16.46.

Phil James
philip.r.james55@gmail.com