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D. J. Oullahan: Wagon Freighter

The following story was first printed in the April-June issue of CHISPA, a publication of the Tuolumne County Historical Society, Inc.

by Parsons Holladay



Denis Joseph Oullahan
*Courtesy Holt-Atherton Center
for Western Studies, University of the Pacific*

A great deal has been written about the horde of people from all walks of life who rushed to the Mother Lode to strike it rich in 1848 and 1849. However, it seems relatively little has been thought of, let alone written, about the gigantic freighting efforts required to supply this quickly increasing population that had magically appeared in the California gold country within a span of a few months. In this article I hope to contribute to the reader's knowledge of those efforts by offering a picture of one of the many freighting men from Stockton and the Bay Area who did everything possible to meet the miners' needs. It must nevertheless be remembered that many of those suppliers of freight were men of vision and ambition who parlayed money received from freighting into other business ventures later on. It's important to realize that many were men of education and culture who chose this path to riches rather than the much more unpredictable, less stable prospector's route. Therefore, I feel it necessary to present

a total view of such a man in order to give a more accurate picture of the true freighters of the time.

Denis Joseph Oullahan was a native of Dublin, Ireland, where he was born in 1824, the son of a prominent civil engineer:

"He was educated in the best schools of the great Irish city, and, upon graduating, commenced the study of medicine, entering a college for the purpose. He became disgusted with the horrors of the dissecting room, however, and abandoned the idea of becoming a physician, taking up civil engineering instead. The study of the latter proved more congenial to him, and he adopted it as a profession, meeting with considerable success."¹

I had the good fortune to interview Oullahan's eighty-eight year old granddaughter, Margaret Thorpe, in her Santa Barbara home during December 1989 at which time she gave a vivid account of her trip to Ireland in 1970, where she visited her grandfather's old family home in Dublin and the Oullahan burial plot in Glasnevin Cemetery. She expressed her keen impression of his cultural upbringing in a taped interview.²

In 1849 Oullahan caught the California gold fever and put aboard a ship destined for San Francisco by way of Cape Horn. He arrived in June 1850 and quickly entered the merchandising and commission business. After one year, he moved to Stockton and established a freighting operation between that city and Sonora.³ To set this business in motion, he purchased the best mule and oxen teams and wagons available to haul the merchandise needed by the miners and made business arrangements with merchants and shopkeepers. Geo. H. Tinkham, in his "History of Stockton," recorded:

"It is probable that never in the history of trade has business been so brisk as during the flush times of 1849 and the ten succeeding years. The principal branches of merchandising houses were groceries, clothing stores, saloons and commission houses, with a sprinkling of barber, butcher, apothecary and blacksmith shops. The great bulk of the business was carried on with the mines, and the goods were transported from Stockton by teams. The primitive way of transportation was on the

backs of mules. Samuel Catts came to Stockton from Mexico in 1849 with a drove of mules which he sold for \$100 apiece. Each mule was packed with a load of 400 pounds of coffee, sugar, potatoes, furniture, etc., it being no strange sight to see a mule with a bureau and three or four chairs on his back. They were driven in bands of from 50 to 200, and were in the charge of from two to six Mexicans."⁴

A "Columbia Gazette" newspaper in 1853 tells of mule teams from Stockton transporting goods to the mines. "The number employed in hauling goods to the mines is immense. We see teams from 2 mules up to 12 and 14, and wagons capable of hauling from 3,000 to 18,000 lbs."⁵

Another granddaughter, Leonore Oullahan, now deceased, gathered much information on her grandfather, and her findings were later donated to the University of the Pacific by yet another granddaughter, Katherine Grant. In Leonore's notes, she refers to George Tinkham's book, "History of San Joaquin County," and states, "Oullahan was paid thirteen hundred dollars for a pair of mules, the two largest mules in the state. Mules had first been brought to California in 1849

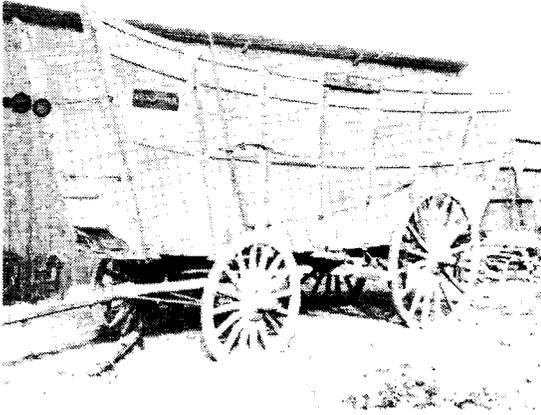
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"Mountain Freighter," typical example of the heavy freight wagons which served the gold mining districts.

Courtesy Holt-Atherton Center

and at that time sold for only one hundred dollars."⁶

Leonore also furnished an anecdote on Oullahan's mules from Tinkham's book: "...as one of the teams belonging to D.J. Oullahan was being driven along Stockton's Main St. in 1857 one of the mules pushed aside the fire cistern's wooden cover and, falling into the deep hole, drowned in eight feet of water."⁷

To enhance his business, Oullahan regularly advertised in both the Columbia and Sonora newspapers. In the June 20, 1857, issue of "The Weekly Columbian" we find:

FREIGHTING — FREIGHTING

Freight at reduced prices. The undersigned begs respectfully to state that from and after this date and until further notice he will forward merchandise and other goods by first-class mule teams to Columbia and vicinity at the following reduced rates of freight, viz.: For heavy goods, groceries, provisions, liquors, per mule teams, per 1½ cent lb. (per ox teams, per 1¼ cent lb.

For case goods, drygoods and others of bulky nature, per mule teams, 1½ cent and 2 cents lb. (per ox teams, 1¼ cent and 1¾ cent lb.

Stockton, Calif., June 20, 1857, D.J. Oullahan⁸

In the Sonora "Union Democrat" during the 1860's, up to April 30, 1864, the following advertisement appears in nearly every weekly issue:

D.J. OULLAHAN

Forwarding and Commission Merchant
Stockton

Goods forwarded to all parts of the Southern Mines with dispatch, and at the lowest rates of freight.⁹

Earlier, Oullahan advertised in the "Sonora Herald":

FREIGHTER & FORWARDER
Stockton

Particular attention paid to the receiving of Merchandise from Steamboats and Sailing Vessels and forwarding with dispatch, at the lowest rates of freight, without any extra charges or commission or otherwise.

The best of references given when required.¹⁰

In the Tuolumne County Recorder's Office I came across an agreement between Oullahan and the Spier, Rankin Co., dated Sept. 14, 1860, wherein he agreed to supply the highest grade wheat to their flouring mill in Columbia for a two year period. The agreement provided, in part:

"The supply of wheat to be equal to the sales of flour, and offal to be made from it and the capacity of the mills for grinding provided this does not exceed such sales: The said supply of wheat to be the best merchantable article he said Oullahan can procure in San Joaquin Valley...They agree not to accept or grind wheat for any other person than said Oullahan, except by his consent while this agreement is in force."¹¹

George Tinkham also tells in his "History of Stockton" of the "prairie schooners" built to transport products such as wheat to the mother Lode. "One of these wagons, called the Stocktonian, was built by William P. Miller. It was 28 feet long, 8 feet high, and 5 feet wide. The hind wheels were 7 feet in diameter. It cost \$1,000 and weighed 5,000 pounds.

Mr. M. Caricuff drew in three of these wagons, one fastened behind the other, 31,000 pounds of wheat to the Stanislaus mills at Knights Ferry, with only fourteen mules.¹²

Leonore Oullahan again refers to "The History of San Joaquin County" and says that her grandfather and his

brother, Edward, owned and farmed 1,000 acres south of the Calaveras River at Stockton on land eventually owned by the Smith Family and donated by the Smiths for the present University of the Pacific Campus.¹³

It is very likely that Oullahan used this land to produce part of the wheat he transported to the Columbia Flour Mills.

There is also a good possibility that another of Oullahan's grain sources was one of his best friends, J. D. Peters. Peters, in that day, was one of the largest grain dealers in the Stockton area, besides having interests in shipping, banks, and railroads.¹⁴

On Jan. 8, 1990, I had the pleasure of interviewing Oullahan's grandson, Bill Winterberry, at his Jamestown home. In discussing his grandfather's freighting activities, Mr. Winterberry recalled how Oullahan and his brother Edward brought with them around the Horn portable metal frame houses. Having lived in Columbia for a number of years, the grandson is sure he transported some of these houses to the Mother Lode and that probably a few of them are still standing in Columbia.

Mr. Winterberry also recalled the Green Jumper Mine his grandfather owned in Sutter Creek. He remembered how, when he was a child, he and his family would visit the mine. The granddaughter, Margaret Thorpe, also reflected on spending a day at the mine when in her teens. I had the occasion of seeing several photos of Margaret and her family taken at the mine while I was reviewing Oullahan documents in The University of the Pacific.

Leonore, in her notes, indicates that as Oullahan's financial position became more sound, he ventured into the real estate business. She makes reference to Langley's *San Francisco Directory*, which shows he had real estate offices in several San Francisco locations in the 1860's and 1870's. Among Leonore's papers I found the following business card:

D.J. Oullahan
Real Estate Broker
12 Montgomery St., San Francisco¹⁵

While Oullahan was involved in freighting and real estate, he also was very active in politics. I quote from the *San Francisco Post's* Nov. 5, 1889, obituary column:

"Mr. Oullahan had been a conspicuous figure in state politics, being a delegate to nearly every state Democratic convention held during the last sixteen years. Governor Stoneman appointed him to succeed W. A. January in 1884 as State Treasurer, and at the succeeding convention Mr. Oullahan had a certainty of the renomination, but party reasons led to his withdrawing in favor of Mr. Herald, the incumbent. He took a leading part in that campaign and made an earnest but hopeless fight for his party, neglecting his own interests for that purpose."¹⁶

Underlying all of Oullahan's activities was the deep involvement in his family life and with his close friends. In 1859, he married Miss Julia Franklin Baine, a daughter of a prominent judge. Margaret Thorpe states that they had seven children, two of whom died, one in child birth. She adds that he never forgot his Irish heritage and probably revisited Dublin and his family more than once.

Leonore remarks that the family home was located on the southwest corner of Lafayette and Commerce in a then elite area of Stockton.¹⁷ I'm sure he entertained there such old friends as J.D. Peters. Margaret remembers family outings to Mr. Peter's home on the outskirts of Stockton and the warm relationship held by him and her grandfather. Their talks must have drifted back to the earlier days when they were freighters in the fifties and sixties, Mr. Peters also having been a teamster from Stockton to the Mother Lode. Tinkham writes: "At the present time there are many old teamsters living in the city, some of them among our best citizens, such as Andy Blossom, J.D. Peters, D.J. Oullahan, and Samuel, Jacob and Andrew Meyers."¹⁸ It's likely the once-in-a-lifetime memories these men must have shared overshadowed their later accomplishments. There is no better way to study history than to look into the lives of the people who helped make that history.



Headquarters of Louis Eugene Chicard & Co., forwarding and commission merchants of Stockton, who served the Southern Mines. Louis' sister married Jules Pache, who was engaged in the same business and associated with Chicard for a time. These are typical of the teams and wagons which supplied the mines.

Courtesy Holt-Atherton Center for Western Studies, University of the Pacific

NOTES

1. *San Francisco Mail*, Nov. 5, 1889.
2. Margaret Thorpe's 21 page written synopsis of her 1970 trip to Ireland.
3. *San Francisco Mail*, *Op. Cit.*
4. Tinkham, George H., *History of Stockton*, W. M. Hinton & Co., San Francisco, 1890, p. 309.
5. *Columbia Gazette*, Nov. 12, 1853.
6. Leonore Oullahan's documents filed in the Holt-Atherton Center for Western Studies, University of the Pacific, Stockton. Quoted from Tinkham, George H., *History of San Joaquin County*, Historic Record Company, Los Angeles, 1823, p. 97.
7. *Ibid.*
8. *The Weekly Columbian*, June 20, 1857.
9. *Union Democrat*, Apr. 30, 1864.
10. *Sonora Herald*, Mar. 1, 1856. This short advertisement contained no less than four typographical errors!
11. Agreement between D. J. Oullahan and Spier, Rankin & Co. (Joseph Spier & J. M. Rankin) dated Sept. 23, 1860, recorded in v. 9, p. 528 of *Deeds*, Tuolumne County Records.
12. Tinkham, *History of Stockton*, *Op. Cit.*, p. 310.
13. Leonore Oullahan's documents, Tinkham, *History of Stockton*, *Op. Cit.*, p. 325. The James Smith family?
14. Wood, R. Coke and Covello, Leonard, *Stockton Memories - A Pictorial History of Stockton, California*. Valley Publishers, Fresno, 1977, p. 44.
15. Leonore Oullahan's documents, *Op. Cit.*
16. *San Francisco Post*, Nov. 5, 1889.
17. Leonore Oullahan's documents, *Op. Cit.*
18. Tinkham, *History of Stockton*, *Op. Cit.*, p. 311.

About The Author

Parsons Holladay graduated with a Bachelors Degree in Sociology from the University of California at Berkeley and holds a Masters Degree from the University of Southern California in Public Administration. He is a native Californian and has just recently retired after a thirty year career as a California State Parole Agent.

As an avocation, Parsons has been interested and involved in researching the transportation and freighting of the Old West for many years. His grandfather, Ben Holladay, owned the Overland Stage Line that ran between St. Joseph, Missouri, and Salt Lake City during the Civil War years. He also owned and operated freight lines between Missouri and California during the 1850's and 1960's.

Now residing in Twain Harte with his wife, Earlene, Parsons feels that he has discovered a new career: the researching and writing of the history of the Mother Lode.

Bocce - A Game of Companionship

by R. W. Clottu

Many Italians came to California during gold rush days and made their way back to Stockton when the Mother Lode didn't produce for them. Some farmed the Delta, many engaged in profitable boating enterprises on the San Joaquin River, some became businessmen, and many became farmers in the eastern part of Stockton. They brought their knowledge for tilling the soil and hard working ethic with them. They also brought a sport called Bocce for relaxation on Sunday afternoons. "Bocce is a basic ingredient of life and it holds the old timers together," says Aldo Navone, a cherry grower on the Waterloo Road and the statewide Bocce Champion in 1963.

The farmers customarily wore bib overalls, but on Sunday the men wore suits or shirts and trousers and would gather along packed earthen alleys trying hard to roll a big wooden ball to come as close as possible to a small wooden ball. The farmers' wives would also gather to prepare special Sunday meals of hot soup, homemade bread, fried chicken and platters of fresh vegetables. On very special occasions they would make ravioli and fruit pies.

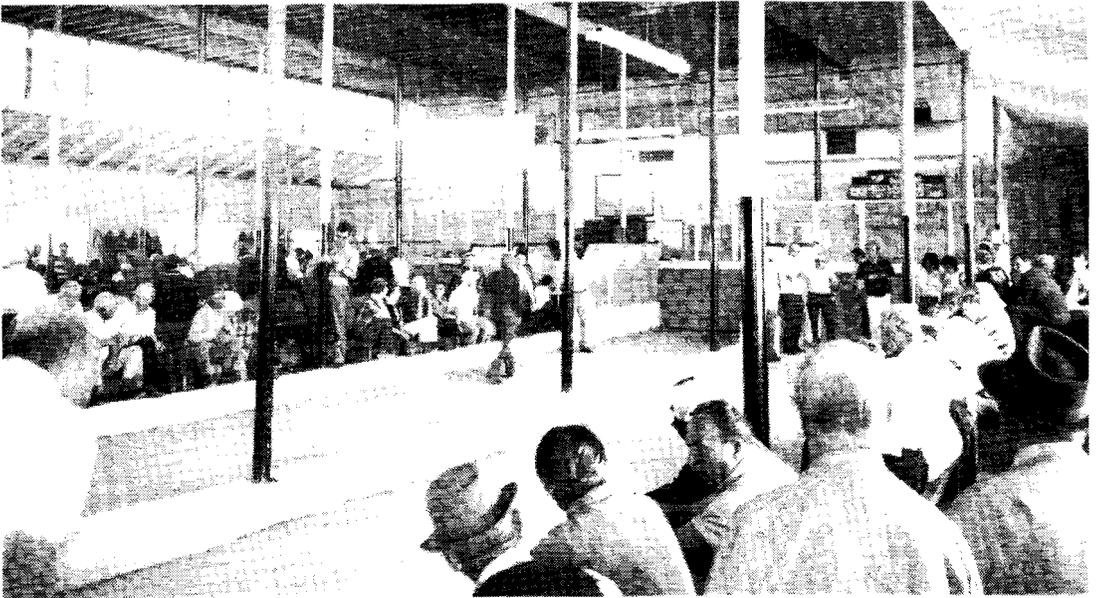
The ladies did not "intrude" in the male sport in those early years.

There were Bocce alleys in back yards and driveways, and the older generation will remember commercial alleys in Stockton at the Europa Hotel, Columbo Hotel, Italia Hotel, Cavour Hotel, Waterloo Club, the Lido Hotel, Mel's Bar, Turn Pike Club, Central Hotel, Brown's Pavilion, and DeMartini Farms. These are all gone now; however, the Waterloo Gun and Bocci Club provides a facility for San Joaquin County Players.

Bocce was a perfect recreation in those years because the game cost almost nothing. No one had much money so the sport thrived. Even today the cost is minimal compared to other sports; it is co-ed now and draws larger crowds of enthusiasts than ever before.

Friday night at the Stockton Waterloo Gun and Bocci Club is amateur night, and both men and women join in the sport. The companionship is a central element to the game and there is a certain language that goes with it.

Bocce is well known as an Italian sport, but it began in Greece about 800



Waterloo Bocce alleys

B.C. A good Bocce alley is composed of a bed of crushed oyster shells rolled and packed every day; a regulation alley is ninety-one feet long and ten feet wide. Two teams of three or four players each are required. Each player throws two balls about the size of a grapefruit — the balls weight about 2½ pounds and some are made of bronze; newer ones are made of a plastic composition. The “Jack” is a hardwood ball about the size of a golf ball; the object of the game is to roll the bronze ball closer to the jack than any other player - the closest ball scores two points and the first team to reach 10 wins the match. It is often possible to knock away the balls of the opponents.

In 1955, local Bocce ball players became interested in sharing facilities with the Waterloo Gun Club. A corporation was formed with 1400 share holders (there are now about 1700 share holders). Legal papers bore the name Stockton Waterloo Gun and Bocci Club and the members decided to accept the name even though BOCCE is the accepted word. Italian authorities claim that either Bocci or Bocce is correct. A building was erected to accommodate

500, including a bar, lounge, and four bocce alleys. Additional improvements have been made through the years for parking and to provide facilities for use during tournaments, picnics, dinner-dance parties, and other social events. It is said that the club has the best facilities in California.

The Stockton Waterloo Gun and Bocci Club has some of the best Bocce players in the state, having produced both state and national champions. John Muzio is one of these champions, having been in competition for world championship in Macon, France, in 1976 and champion of the 1985 United States Bocce Tournament. John Muzio has been President of the club since 1976. He retired from his partnership in the Stockton Scavenger Association and his farming activities. He now volunteers his time in behalf of the club.

Bocce has become a co-ed sport with more sophisticated facilities and expanded its popularity. It is no longer limited to Sunday afternoon for Italian farmers, but it is still a game of companionship and a “basic ingredient in the lives of old timers....”



Stockton Waterloo Gun and Bocci Club — Lino Bozzano, vice president; John Muzio, president; and Aldo Navone, director. Photo: 1986

The Vanishing Ancient Abacus

by Bill Hathorn

Mark Twain tells in his book "Roughing It" of his fascination with a Chinese merchant tallying an account with an abacus (soon poon), "...we were impressed with the genius of a Chinese book-keeper; he figured up his accounts on a machine like a grid-iron with buttons strung on its bars; the different rows represented ones, tens, hundreds and thousands. He fingered them with incredible rapidity--in fact, he pushed them from place to place as fast as a musical professor's fingers travel over the keys of a piano." The year was sometime between 1861-1866; the place, Carson City, Nevada.

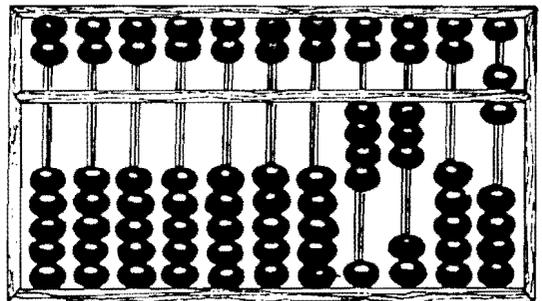
The abacus, one of the oldest counting instruments known to man (second perhaps to the fingers and toes) is widely used today in China, Iran, Japan, Korea, and Russia. Japan leads the world in production of both electronic calculators and bead calculators (abaci, sounded ab-a-si: kids prefer --abacuses). Traditionally, the Oriental businessman would no more leave home without his abacus than the middle class American would leave behind his major credit card(s).

During the mid-nineteenth century when thousands of Chinese immigrated to America in quest of California gold, Nevada silver, and as laborers to build the Central Pacific portion of the Transcontinental Railroad, and the hundreds of miles of river levies in the San Joaquin/Sacramento Delta, very few of them looked to become shopkeepers; hence, few soon poons were seen. Nevertheless, those who did set up shop as laundrymen, herbalists, general merchandisers, etc. most certainly relied on their traditional and dependable soon poons (Cantonese for abacus) to reckon accounts.

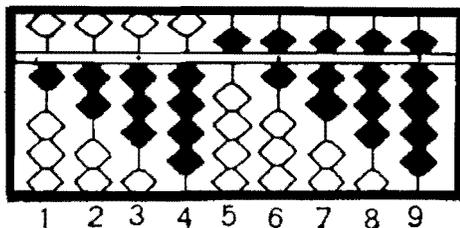
According to Dr. Coke Wood's text, "California History," "Up until about 1850, there were only about 46 Chinese living in the United States. That number increased by about 4000 a year in the

early 1860's. At the time, the Central Pacific Railroad began to bring coolies directly from China at the rate of 15,000 a year." Sylvia Minnick in her book "Samfow" states, ".Chum Ming, a Chinese merchant who arrived in San Francisco in 1847, became the first of his race to join the gold rush. By 1849, 323 Chinese arrived to capitalize on the fortune to be had. The next year 450 other countrymen followed." How many of these men brought along soon poons can not be reckoned. But, Sylvia M. continues, "Chinese merchants in nearby mining towns played a major role in the gold seekers' lives. Aside from providing the necessary supplies and food, the storekeeper was a vital link in the Chinese network. Oftentimes a shareholder in the nearest Chinese dig-gins, the merchant held the group's yield in safekeeping until it could be safely transported to San Francisco. At times, he financed the miners' needs and kept an account of their debts." ..abacus-ed them, of course. So it was, America's introduction to the abacus occurred 'way out West by way of the Far East' during the heady days of the Gold Rush.

On the West Coast during the late 19th and early 20th centuries, both Chinese and Japanese shopkeepers could be seen tallying accounts with their respective abacuses. In the illustration following, note the different configuration between Chinese soon poon and the Japanese soroban.



Chinese Soon Poon



Japanese Soroban

The Japanese immigration began during the late 19th century after the gold and silver boom-times. Dr. R.C. Wood stated that by 1880 about 200 Japanese lived in the U.S., most of them in California. By 1920, the number of Japanese in California exceeded 72,000. Shops and services meant calculations; the trusted and familiar soroban was their instrument of choice.

The abacus is not difficult to learn in principal but to develop speed requires hundreds of hours practice. In this regard, it is not unlike learning shorthand, typing, piano, or any other musical instrument. We marvel at a secretary's typing 130 words a minute or a pianist's skilled performance of a Mozart sonata. Likewise, we are amazed by a sorobanist's outperforming an operator of an electronic calculator in elaborate addition and subtraction exercises.

The soroban is a beautiful instrument. Many users experience something of a soothing feeling while working an abacus. Watching the beads slide up and down, a child gets a good idea of what arithmetic is all about, and how numbers correspond to the real world. Its sensory charms--changing visual patterns, the pleasant click, and the tactile sensation keep us in touch with our math roots. It teaches place value and the concepts of "carrying and borrowing" clearly. If the electronic calculator is okay or good for the classroom, the abacus is better.

Some of us can recall seeing Chinese or Japanese shopkeepers in Stockton tallying accounts on abacuses. Among them were/are Vincent Yim, proprietor of The Temple Bell Gift Shop, East Market St.; Kiichi Kubota of Tenkatsu Restaurant on West Washington St.; John Toy at The Sam Lung Laundry,

Main St. near Stanislaus; Lee Yuen, sundry store at Washington and El Dorado; Wong Sai Chun, proprietor of On Lock Sam Restaurant; Kwong Wah Yuen, general merchandiser; and others. Kyoshi Arakawa, manager of Union Bank on South El Dorado St., is a skilled sorobanist who will demonstrate for you when there's sufficient interest. Kenji Takeuchi, former operator of Charter Way Florist; Duke Yoshimura, landscape architect, and Marino Berbano, Director of Purchasing at UOP are four known skilled abacists. Undoubtedly, there are numerous others in Stockton today who have learned and enjoyed abacus. However, in Stockton, in this day 1991, of the 40-plus Chinese and five Japanese restaurants, not a single Chinese or Japanese abacus can be seen in use. All are replaced by cash registers.

Among my hobbies and collections is an abacus group. In addition to a classroom set of 36 sorobans and an eleven-digit oversized demonstrator, there is half of a class set of soon pons, and two prized 21-digit demonstrators. One demonstrator was a gift from the Principal of Commercial High School in Shimizu, Japan, and the other a gift from the Director of the Foshan Municipal Educational Committee, Foshan, China. The Chinese demonstrator was available because their school district up-graded its math technology by replacing the 7-bead soon pon with the 5-bead soroban. They recognize the merits of the abacus as a teaching tool, even as numerous educators in Southern California are discovering. Both abaci demonstrators were received during visits with the Stockton Sister City Association's 25th and 30th anniversary tours to the Orient.

Also, I husband 53 other individually different abacuses varying in size, shape, and bead-count from jewelry and key chains to a most prized one made by my son Tom; baked with salt-flour dough and straightened paper clips to accommodate the baked-dough beads. Several of the abaci are antiques as is one soon pon from Chinese Camp. My most up-to-date abacus, made by the Sharp Co., Japan, consists of both an

electronic calculator and soroban combined in a single frame. The older generation Japanese use the soroban to check the electronic tallies whereas the younger folks reverse the procedure; they use the electronic calculator to check the soroban reading. Then there is the soroban for the blind made in Lexington, KY. Also, there is a beginner's soroban, incorporating a peek-a-boo lever that when pulled displays a numeral reading of the bead configurations.

If I have led you to believe the abacus is a Chinese invention, consider that J. Pullan in his book "The History of the Abacus" reports that the abacus first appeared in Greece and Italy during the 5th century B.C. but not in China until the 13th century A.D., and in Japan at the beginning of the 17th century A.D. The word abacus is Latin, meaning a smooth flat-surfaced stone slab. Such slabs initially were part of the capital atop the marble columns supporting Greek and Roman temples. The abacus slabs used for calculating were incised with vertical lines or grooves and labeled for ones, tens, hundreds, thousands, etc. Pebbles flattened on their undersides (bun-like) were used to indicate numbers to be computed. The pebbles, one-half to three-quarter inch in diameter, were made from a chalk-like stone of high calcium content. They were called *calculi* (singular, *calculus*); hence, our words: calculator, calculus, etc. From these early abacuses were developed more elaborate counting or casting boards using jetons, metal coin-like pieces for placing (casting) on the vertical place-valued lines. Some of the boards were marked in grid or checkered design; thus, the finance-word *exchequer*. Archeologists have discovered five bronze hand-held abacuses designed with attached buttons fashioned to slide in the vertical grooves; their "copyright" dates are not known. Three of these small devices are in national museums at London, Paris, and Rome.

According to Pullan, it is likely that Roman traders introduced the abacus to China, Persia, and Russia. But it was the Arabic traders who introduced the

Hindu numeral system including the zero to the Europeans during the 12th century A.D. Whereas the Hindu-Arabic numeral system enabled calculation without the counting board or abacus, it was nearly 400 years before Hindu numerals were in general use throughout Europe.

It may come as a surprise that Roman numerals could not be used for calculating with pen, pencil, brush, or stylus on paper. All calculations were reckoned on the abacus or counting board. The end result (sum, difference, product, or quotient) was written in Roman numerals on paper (parchment, silk, rag, etc.). Widespread use of pen-reckoning was not possible until the advent of Hindu-Arabic numerals, until paper became readily available, and until the moveable-type printing press was invented to print Arabic math texts. Until those three conditions came together, paper-making and book printing remained laboriously slow and expensive. Europeans were "in the dark" regarding the advanced paper-making process established in Baghdad during the 790's A.D. The Hindu-Arabic numeral system was also popular there in the 800's. If it were not for the Crusades (1100-1300 A.D.), Europeans would have remained dependent on the Roman numerals and been without the improved papermaking process for a much longer period of time. Following translation of the Persian scholar's (Al Knowarizni) mathematics text into Latin (9th century), Gutenberg's invention of the moveable-type printing press (mid-1440's) and adoption of the Chinese-Arabic papermaking process, mathematics books gained popularity throughout Europe.

However, winning Europeans over to the new numeral system (hence pen-reckoning), away from the familiar and comfortable abacus and Roman numerals 'chewed up' four centuries. Such change was accomplished well before the Spanish and English colonies were established in The New World. (In a modern-day related matter, we might wonder how much longer the USA will waver before "shelving" the English System of Measures and fully

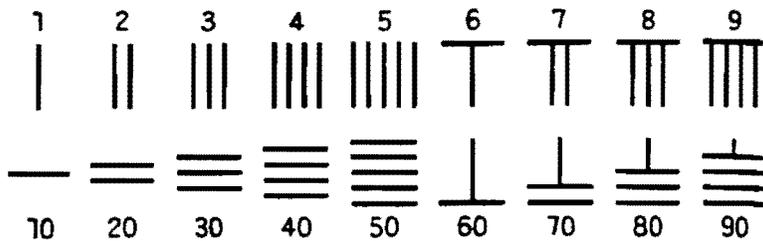


Fig. 207 *Sangi* numerals made up of sticks (or strokes) in two directions, vertical and horizontal. Within a given number the orientations alternate; the units are always arranged parallel to each other. Note the 5-groups.

Japanese Counting Sticks

implementing the simple and convenient 1790's Metric System.) The Asians' resistance to change also "hangs tough." Clinging to their bead calculators now spans 390 years for the Japanese, 600-700 years for the Chinese, somewhere between 400 and 600 for the Russians and Koreans.

Because the Chinese and other ancient cultures were doing complex computations as early as the Romans and Greeks, you might wonder what methods were employed before the abacus' arrival. The Chinese and Japanese used bamboo "toothpicks" in a series of varied configurations; see illustration above. With the invention of the cash register at Dayton, Ohio, in 1879, the fate of the abacus among Oriental merchants seemed clearly forecast. While the abacus has made a "slow-fade" from the international commercial scene, it is unlikely that it will entirely vanish from the educational horizon...in the foreseeable future. Not unlike the piano that made way for the player-piano, the synthesizing chord organ, phonograph, tape recorder, etc., yet retained its niche for the self-expressing person, so stands the abacus amidst a maze of calculating devices.

Perhaps you would like to "draw a

bead" on the ancient abacus before it vanishes into the horizon. In Stockton, Chinese abacuses are available for purchase at Sun Wong Kee general merchandise store, Hunter and Sonora Streets, northwest corner. Japanese abacuses, sorogan, are available in San Francisco's Japan Town gift shops.

Bill Hathorn

was born and reared with his four brothers and four sisters on the family farm in Stanley in the Finger Lakes Region of New York State. With his wife Martha and two children, 90 horses hauling their "covered wagon" (house trailer), they became 20th Century '49ers. Settling in Eagle Rock, California, (Pasadena/Glendale area), Bill worked as a machinist until 1956 when the family moved to Stockton to escape the smog and concrete of the L.A. basin. After graduation from UOP School of Education in 1959, he taught elementary grades in Stockton and S.J. County schools until retiring in 1984. His retirement includes teaching math to learning-disabled students at Delta College, volunteer classroom abacus teaching, studying California history, making Joaquin Stix (walking stiks), collecting bookmatch covers, place-named bricks, doing some gardening, and traveling. Two of their four children were born in Stockton, where three still live; the fourth recently moved to Tacoma, Washington.

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Editorial Comment

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