



## History of China's steelyard

By Nan Nan

The steelyard, or balance scale, is a Chinese invention. As early as 200 BC, China was already making steelyards big enough to measure weights of over 100 kilograms.

The steelyard consists of the following parts: an arm, a hook, a lifting cord and a weight, or *chengtuo*.

It is more convenient than the platform scale, can be carried around easily, and does not require a cumbersome set of weights. To determine the weight of any object, the lifting cord is positioned at different graduation marks along the arm.

Steelyards may be made in varying sizes to handle different weight ranges, with the large ones used to weigh bulk food-grains and pigs or sheep or their carcasses, and medium-sized ones for smaller transactions. The arms can range from over a metre in length to only a few centimetres. The smallest sizes, used to weigh medical herbs and silver or gold, first appeared about 1,000 years ago.

For people who might be interested in collecting steelyards, there are some key points to watch in judging their value.

■ Shape and appearance

The shape of the *chengtuo* varied in different dynasties but they fall into three basic categories – tower-shaped, hammer-shaped or animal-shaped, although other shapes such as the hexagon, calabash, plum and pomegranate are sometimes seen. The more unique and rare the shape is, the more expensive the *chengtuo* will be.

■ Production time

The inscription carved on the surface of a *chengtuo* is also important, as it should clearly record production time and purpose. Shape can also be a factor in judging production time. Steamed-bun-shaped *chengtuo* were popular from the Warring States Period (475-221BC) to the Eastern Han Dynasty (AD 25-220). In the Southern and Northern Dynasties (420-581), the multi-edge shape became widely used.

■ Materials

*Chengtuo* can be made of copper, steel, lead, porcelain, jade, silver and gold. The last two materials are the most expensive and rare antique forms of these weights.

PHOTOS BY JIANG DONG

# Charmed by *chengtuo*

By Yu Nan

An old Chinese saying says "in the eye of the lover, his beloved is a beauty," which is the perfect description for Zheng Haisheng's frenzy over hundreds of dark lumps made of steel, copper, stone or porcelain.

All appear to be nothing but a pile of worthless junk to most people at their first glance.

However, the homely lumps, called *chengtuo* (the sliding weight used in a steelyard), are not only important for studying China's economic history, but have also become a new kind of collectable which is gaining popularity among antique collectors, said Zheng.

"Although not shining like ancient porcelain vases or as precious as other antiques, they are the most interesting and beautiful things," said Zheng, 48.

So far, Zheng has collected more than 1,000 various *chengtuo* from ancient times, ranging from the Western Jin Dynasty (AD 265-316) to the Qing Dynasty (1644-1911).

"Some of them are rare to see and have important research value," said Jia Wenzhong, a noted antique aficionado, who was invited to examine Zheng's collections recently at Zheng's small stand in the Baoguosi flea market. The market is a well-known place for exchanging old books and small antiques near the southern Second-Ring Road in Beijing.

According to Jia, the steelyard consists of a beam, a hook, lifting cord and a weight, among which, the weight – *chengtuo* – is the most important part for a fair weighting and was also called a *quan* (scale) in ancient days.

Once the only measurement tools in trade, steelyards have already been widely replaced by electronic scales in super markets in China. "The traditional-style steelyard can only be found in a few markets for farm produce," said Jia.



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Beijing collector of *chengtuo*

"But as antiques, steelyards, especially the *chengtuo*,

offer a unique angle to study the change of weights and measures as well as economic development in different dynasties of China," Jia said.

The most precious one in Zheng's collection is a 70-kilogram weight made of steel.

It was used as an official scale for weighing sugar in Fulan County of Northeast China's Heilongjiang Province during the reign of Emperor Guangxu (875-1908) of the Qing Dynasty, according to Jia.

"Both its shape and the inscriptions carved on the two sides deserve study. It could weigh 1,000 kilograms of sugar at one time," added Jia.

The steel-made treasure was found by a friend of Zheng's in Shenyang, Northeast China's Liaoning Province last year. It was owned by a welder who used it as a heavy lump to hold down other materials.

Zheng bought it without hesitation after seeing its pictures for 2,000 yuan (US\$243).

Zheng used to be a worker at an ironworks and retired in the mid 1990s, when he began a small business selling ancient coins and souvenir badges in the Baoguosi flea market.

All the money he earned by selling the small antiques has been invested in all kinds of *chengtuo* over the years, altogether around 10,000 yuan (US\$1,215), said Zheng.

"People think I am crazy to buy so much 'crap'," he said. "But I think it is worth while just because I

love it. It's kind of an addiction that is hard to get rid of."

Not all the precious *chengtuo* were bought by him. Sometimes, Zheng was lucky enough to simply find them – a 75-kilogram stone *chengtuo* made in the Qing Dynasty, for example.

It is one of the largest stone *chengtuo* so far found in Beijing. It was once used in Tongxian County, an ancient dock in eastern Beijing, to weigh goods shipped to the capital through the Beijing-Hangzhou Grand Canal, according to Shi Shuqing, a renowned antique collector. It's worth at least 5,000 yuan (US\$608) on the antique market.

Shi, an expert in research of China's ancient weights and measures, also gave the small stand Zheng owns at the Baoguosi flea market the elegant name "Gu Quan Zhai" (Ancient Weights Room). It denotes Zhang's large and comprehensive personal collection of a long-time forgotten antique.

"Although the steelyard has faded out of people's daily lives,

the important meaning – honesty and justice – that the steelyard bears has been deeply rooted in people's minds," Zheng said.

"I am very happy to see the figure of steelyard being often used in large advertisement posters, which is to demonstrate a message of 'fair play'."

Zheng's latest work is to sort the *chengtuo* by their history, shape and materials and do some basic research, he said.

As more and more media have reported the stories of Zheng and his ancient *chengtuo*, visitors and buyers at his small Gu Quan Zhai in Baoguosi have greatly increased.

However, the home for the treasured *chengtuo* is still shabby

and over-crowded – they are stuffed in a 4-square-metre stand with a shabby cover, on the table, floor, beside the door and some are even hung up.

Zheng said his dream in 2004 is to find a bigger storage space for them, so that more people can share their homely beauty with him.

