

The Art of Weaving



A plain gauze gown unearthed in a tomb of Western Han (206 B.C.-24 A.D.) in Ma-wangtui, Changsha City, Hunan Province.



Pale yellow open silk with embroidered design discovered in the same tomb.

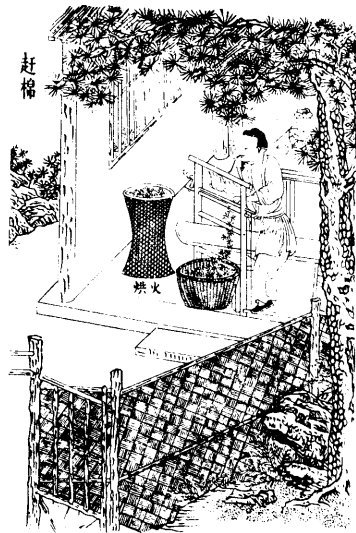


Textile looms on a Han Dynasty stone rubbing.



Brocade with flower and bird pattern unearthed in Astana, Turfan, Sinkiang.

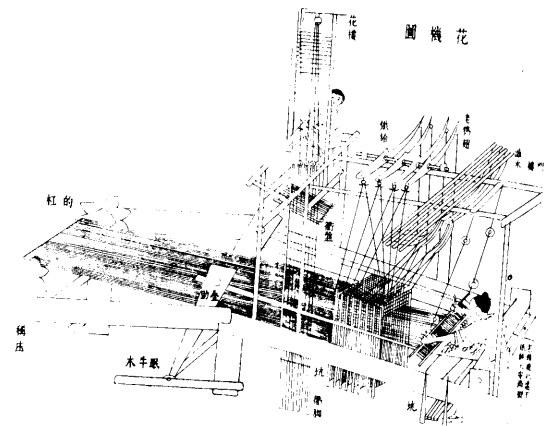
"The Cotton Gin", an illustration in the book *Tien Kung Kai Wu* written by the Ming Dynasty scientist Sung Ying-hsing.



Huang Tao-po, innovator of cotton textile technique.



Gathering mulberry leaves and making cloth, a reproduction from *The Book of Agriculture* by the Yuan Dynasty (1271-1368) agronomist Wang Chen.



"The jacquard loom" illustrated in *Tien Kung Kai Wu*.

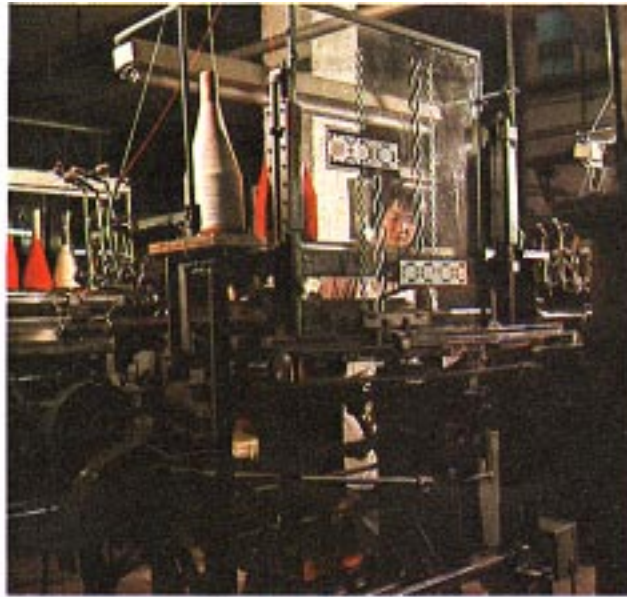
By Kuo Yung-fang
SILK reeling and weaving is one of the great inventions of the ancient Chinese labouring people. China was called "Seres" because of her beautiful silk fabrics. A Roman writer of the third century wrote, "The Seres (the silk people) make precious figured garments, resembling in colour the flowers of the field, and rivaling in fineness the work of spiders."

Silk culture began in the Shang (16th-11th century B.C.) and Chou (11th century B.C.-771 B.C.) and with it appeared the gorgeous shadow flower silk and colourful embroidery. These were followed by gauze and brocade. Among the bone and shell scripts of the Shang Dynasty are characters like "mulberry", "silk", "cloth" and "silkworm". On the bronze vessels of Shang Dynasty unearthed in Anyang, Honan, are traces of silk fabrics of gauze and plain weaves embroidered with rhombic patterns. A greater variety of silk fabrics was noted in Chou Dynasty documents. On a Chou Dynasty jade knife in the Peking Palace Museum collection are traces of jacquard gauze weave. This proves that the Chinese people had mastered the jacquard technique 2,500 years ago. It represented a great advance in silk manufacture.

Government-run silk handicrafts were in operation during the Shang and Chou period. A special department was set up in the Chou Dynasty for checking the quality of silk fabrics



Ming Dynasty golden twinkled brocade with yellowish ground.



Above: A China-made photo-electric jacquard loom in a Shanghai knitwear mill.

Above right: The automated chair, a fruit of technical innovation, greatly reduces labour intensity.

Right: The Lintze Woollen Mill in Tibet built after Liberation.



and administering the storage and issuance of raw materials. The "East Weaving Hall" and the "West Weaving Hall" established by the Han government in Changan and the silk workshops in present-day Suihsien, Honan, and Lintzu, Shantung, each had several thousand workers. The weaves and designs of the silk fabrics, especially the brocade, of the Tang Dynasty (618-907) and the tapestry of the Sung Dynasty (960-1279) were unusually novel and diversified. The Ming (1368-1644) and Ching (1644-1911) Dynasties saw a great expansion of private silk undertakings. Large workshops in silk manufacturing centres such as Soochow, Nanking, Hangchow, Chiahsing, Luanchow (present-day Changchih, Shansi), Chengtu, Kwangchow and Foochow each possessed as many as a hundred looms.

As early as the neolithic age, a bamboo wheel was used in spinning hempen thread and a "waist" loom in weaving hempen cloth. Later, the invention of the bone shuttle and the pottery wheel furnished the prototype of the textile machine. The pointed and hollowed shuttle appeared first in the Chou Dynasty. With the introduction of the pedal in the loom in the Han Dynasty, the operator's hands were freed for throwing the shuttle and this raised efficiency. The creation of the flying shuttle and the pedal represented an epochal achievement in textile technique.

During the reign of Hungchih of the Ming Dynasty (1488-1505), Lin Hung, a silk weaver of Fukien, invented a machine which used four layers of warp yarn instead of five. The outcome was a thinner and more durable silk textile with identical weave on the reverse and obverse but with different ground patterns. Such fabrics were used as dress materials as well as furnishings and were very popular.

Before the Sung Dynasty, people were clad in silk or linen. In 1959, silk, cotton and woollen fabrics of the Southern and Northern Dynasties (420-589) were discovered in the ancient city in Reriya, Sinkiang, on the old "silk road". The woollen and cotton fabrics were printed with batik technique. Cotton cloth was traditional in China's northwest and southwest. Following the raising of cotton in central China in the Southern Sung (1127-1279), cotton textiles gradually spread. Between the end of the Sung Dynasty and the beginning of the Yuan Dynasty, a woman weaver named Huang Tao-po (a native of present-day Huaching Town, Shanghai) created a ginning machine to replace hand operation. She also raised the efficiency of fluffing by re-making the smaller cane bow into a larger rope-strung bow. She improved too on the foot-pedalled three-spindle loom. Huang Tao-po selflessly passed on her skill to more than 1,000 learners. In early Ching Dynasty, a Shanghai woman weaver named Ting Niang made ex-

tremely soft and fine cloth. Shanghai was then China's leading cotton textile centre.

The textile industry, which had an early development in China, inched along after the imperialist invasion, especially during the Kuomintang reactionary rule. Before Liberation there were only five million spindles all over the country, and a few wool, linen and silk mills. Most of these were concentrated in a few coastal cities. All of their equipment and more than half of the cotton were imported.

After the founding of New China, under the guidance of Chairman Mao's revolutionary line, the textile industry has been developing at a rapid pace. Modern textile mills have been established all over the country, even in far-away Sinkiang and Tibet. Modern techniques such as electronics and automatic controls are used extensively in weaving, dyeing, printing and knitting. New products of all types of material — wool, linen, silk, cotton and synthetic fibre — are coming off the looms in a bewildering variety and design. Shanghai, Tientsin and Kiangsu, for instance, are turning out 3,000 to 4,000 new designs each year. The cotton cloth exported annually is equal to the output of the whole country in the early Liberation period. Whole sets of China-made textile machinery are also being exported.