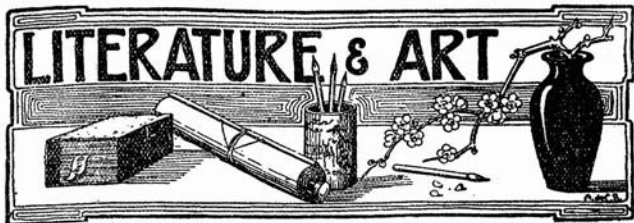




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TRANSPORTATION IN EARLY CHINA

BY

JOHN C. FERGUSON

The earliest reference in Chinese literature to methods of transportation is in connection with the conservancy scheme of Yü the Great and is found in the Book of History in the first part of the chapter called I Chi. In replying to the question of Kao Yao as to how he accomplished his great work Yü said that he made use of four methods of transportation (四載). These four methods have been explained in the Historical Records (史記) of Ssü-ma Ch'ien as the use of carts for transportation on land, of boats for water, of sledges for transportation over mud stretches and of hob-nailed boots for carrying over hills.* These two latter objects, namely, sledges and boots, were mentioned only in connection with the special conservancy work of Yü and were not ordinary methods of transportation. The two articles in common use were boats and carts.

BOATS

In the Book of Odes (詩經) there are references to boats made of cypress wood, of pine and of willow. There are also two references to bridges made of boats. In the Book of History there is a reference to a boat with oars, *chou chi* (舟楫). The only mention of a boat in the Confucian Analects is in the flattering question of Nan Kung Kuo concerning the ability of an ancient hero to move a boat on land; and there is no mention of a boat by Mencius. This is easily understood when it is remembered that these two sages lived in Shantung where transportation was wholly on land. The references in the Books of Odes and of History were to be expected, because the people of whom they made mention lived on the banks of the Yellow, Lo and Wei Rivers. There is no suggestion as to the size of these ancient boats or as to their shapes in these classical allusions. They were known as *chou* (舟), the term

* 陸行乘車, 水行乘船, 泥行乘橇, 山行乘轆.

ch'uan (船) not having come into common use in the meaning of a boat until the Han Dynasty.

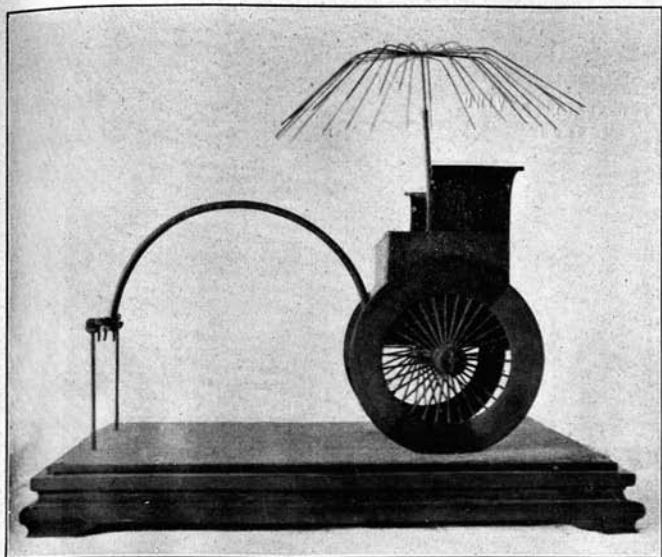
Ship-building must have been in an advanced stage of development in the 3rd Century B. C., when, it is recorded, the Emperor Shih Huang of the Ch'in Dynasty sent three thousand youths and maidens on an expedition over the Gulf of Pehihli in search of "The Three Isles of the Blest." Boats in large numbers also were used in the battle at Ch'ih Pi, the modern Chia Yü Hsien, about fifty miles west of Hankow on the Yangtze River, at the beginning of the period of the Three Kingdoms, 220 A.D. In spite of these known facts as to the use of boats in the earliest periods of Chinese life we have no descriptions of their size or shapes in classical literature and no illustrations of them in ancient archaeological or artistic remains. The earliest traces of them are found in landscape painting, where they are first shown as small flat-bottomed, square-ended fishing boats similar to our punts, *hua ch'uan* (筏船).

The earliest illustrations of boats with which I am familiar are contained in the *San Ts'ai T'u Hui* (三才圖會) written by Wang Ch'i of Shanghai, who lived during the first half of the 16th Century. His illustrations are based, he claims, on those found in earlier books, so that among Chinese scholars the *San Ts'ai T'u Hui* has a good standing for reliability. This book in Chapter IV introduces the subject of boats by a quotation from the *Shih I Chi* of the 4th Century A.D., in which it is said that rafts made of poles or bamboos with the ends bent up originated before the time of Huang Ti, the legendary ruler who is stated to have lived in the 26th Century B. C. The earliest type of raft is seen in the accompanying illustration. These developed into many types used for varying purposes. There were official boats called *chan ch'uan* for carrying government officers on official errands. There were many types of fighting boats. The largest were called *kuang ch'uan* (廣船) and the next *fu ch'uan* (福船). These were propelled by oars, had stations in the masts for firing arrows and protected the fighting sailors with shields made of wood, bamboo or leather stretched on wood and reinforced with metal strips or large-headed spikes. There were double-ended boats for steering from both ends and boats with battlements. For use in shallow rapids there were skin boats which were kept in shape by a framework of wood or more often of bamboo. These are said to have been used by Chu-ko Liang for scouting purposes in his southern expedition.

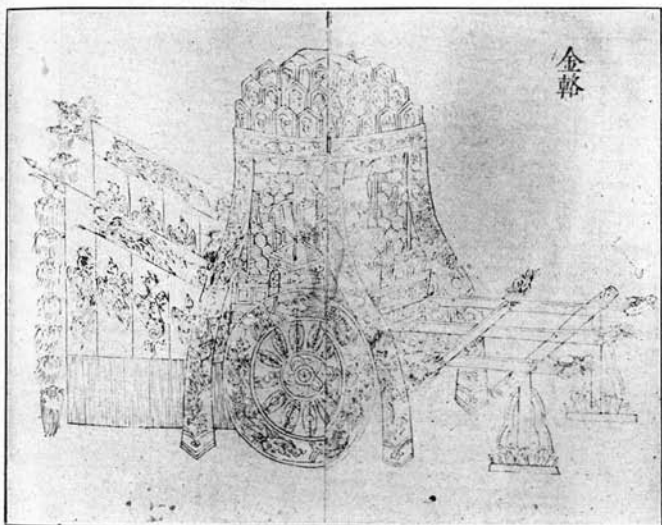
At the present time there is an endless variety of types in the boats used on the coast and in the inland waters of China, and these have been well described and illustrated by Donnelly in his "Chinese Junks and Other Native Craft" (Kelly and Walsh).

CARTS

As to carts, we have full descriptions of them in the earliest records. The *K'ao Kung Chi* section of the *Chow Li* gives such a detailed description of the size and shapes of ancient carts that it has been possible for the Historical Museum, Peking, to reconstruct a model of one. This is on view in the Museum, and is of great interest (See Illustration). This

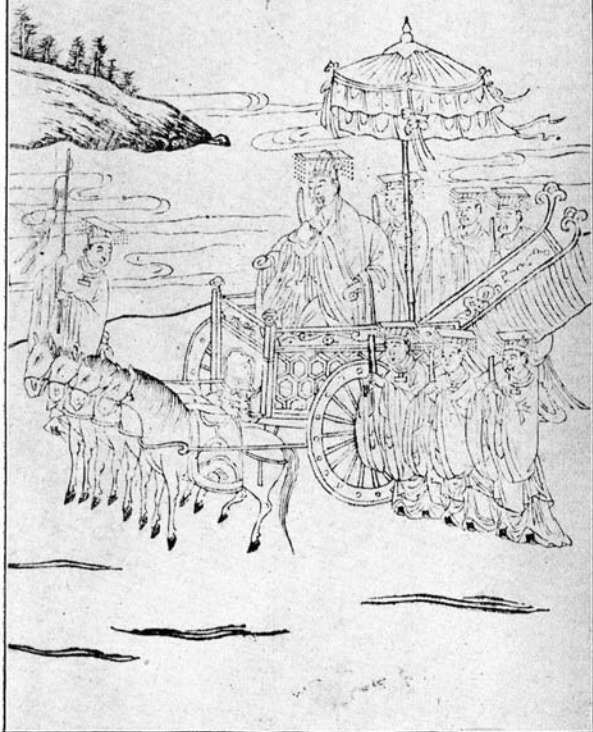


Model of an Ancient Chinese Chariot in the Historical Museum at Peking.

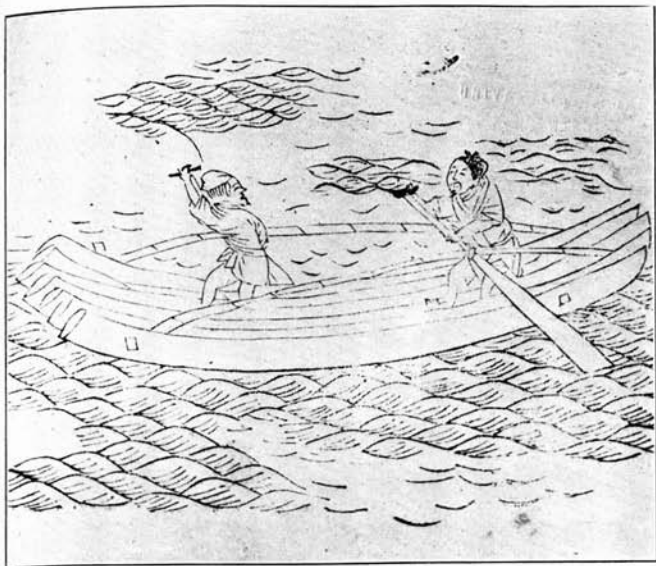


A Drawing of an Ancient State Chariot decorated with Bronze from the San Ts'ai T'u Hui.

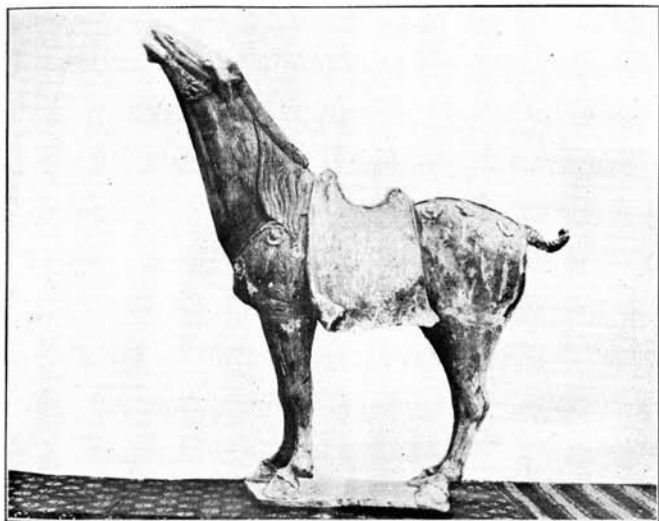
大輅圖



A drawing of an Ancient Chariot from the San Ts'ai T'u Hui. Note the four Horses abreast and compare with the Text Figures of Roman Chariots.



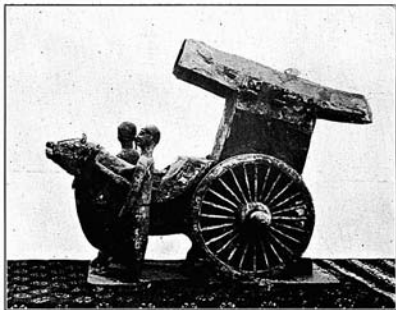
Drawing of an Ancient Chinese Raft from the San Ts'ai T'u Hui.



A Glazed Pottery Figure of a Horse, T'ang Dynasty.
(From the W. Bos Collection).



Carved Wooden Figure mounted on a Fabulous Chinese Lion.



Side View of an unglazed Pottery Tomb Figure of a Bullock Cart with Attendants, T'ang Dynasty.

(From the W. Bos Collection).



Front View of Same.



乾坤儲駿
集

A Painting of Sixteen Horses attributed to Chiao Meng-fu, A.D. 1254 to 1322.



A Chinese Landscape Painting showing Pack Mules or Donkeys on a Road



Photo by the Young Photo Co., Shanghai.

The Marble Boat built for the late Empress Dowager on the Lake at the Summer Palace,
Peking.

section of the Chow Li was critically examined by the famous archæologist and scholar Yüan Yüan, A.D. 1764-1849, in an essay which is reproduced in Books 1055-6 of the cyclopedia Huang Ch'ing Ching Chieh (皇清經解). This essay is illustrated with drawings of the wheels, frame-work, poles and other details of carts. It also shows the way in which the yokes of a pair of horses were fastened to the pole. It contains a complete list of names for all parts of a cart, and explains these terms more clearly than I have ever met with in any other place. It is interesting to note in connection with names of the parts of carts that the term "wooden oxen" and "moving horses" (木牛流馬) are only names respectively for the pole in front of a wheelbarrow and for the handles for pushing it.

The Book of Odes has many references to carts as used in the various districts in which the odes were produced. There were the "carriages of the King's daughter" in the odes of Shao and the South, the "returning chariot" in the odes of P'i, the "great carriage" in the odes of the royal domain and the "barrows" and "wagons" of the Tu Jên Ssü. In the San Hu section of the Odes reference is made to "state carriages," *lu ch'ê* (路車). Of these the emperor had five classes, namely, those decorated with jade, metal work, ivory, hides and wood. I have seen many bronze ornaments used on early chariots including a bell for the end of the carriage pole (See Illustration). The empress also had five classes, decorated with different grades of feathers. The Book of Odes further mentions "war chariots" (戎車), of which there were five kinds, a large cart or "wagon" (大車), "service" carts (棧車) and "barrows" (輦).

There were open chariots in which the occupants stood. These were called standing carts, *li ch'ê* (立車) or *kao ch'ê* (高車). Carts in which the occupants sat on the bottom were called *an ch'ê* (安車). The



A Roman Triumphal Chariot from a Marble Slab.



A Roman Triumphal Chariot from the Reverse Face of a Coin.

standing carts were usually open and the sitting carts were covered, either with a canopy or a frame-work body covered with cloth or skin.

The carts usually had two wheels, but the San Ts'ai T'u Hui has an illustration of an *an ch'ê* which has four small wheels and resembles our type of vehicle known as brougham. Carts were drawn by one horse, ox or mule, by a pair of animals or by four animals abreast (See Illustration). The open chariots drawn by four horses closely resemble the quadriga used in triumphal processions in ancient Rome (See Illustration).

In the early bas-reliefs of Wu Liang Tz'ü and of Hsiao T'ang Shan in Shantung there are representations of scenes in which chariots are found. One of these is the meeting of Confucius with Laotze and another is the visit of King Mu to Hsi Wang Mu. In one scene at Hsiao T'ang Shan there is a state carriage with four persons in it drawn by two horses and another drawn by four horses. These resemble in general outline the illustrations found in San Ts'ai T'u Hui. They are also similar to the carts seen in the Ku K'ai-chih scroll in the British Museum. In the landscape painting of the Northern Sung Dynasty carts are often seen, especially in the work of Kuo Hsi. These are of the same type as those now used in northern China.

The Peking cart of the present day differs little if at all from the carts described in the K'ao Kung Chi section of the Chow Li. There have been no substantial improvements in type for more than twenty-five hundred years. The reason for this may be found in the lack of good roads.
