

# East and West

By Yoshito HARADA

## I. The Currency of Coins

### (I)

In trade between East and West in ancient times, for silk fabrics from the East the West had to offer woolen goods, spices, glass-ware, horses, etc. It goes without saying that this was done on the barter system. However, besides silk fabrics the East also used such weighable currency as gold coins. We should not overlook this practice. To cite a few instances, the *Shih-chi* 史記, under Ta-yüan-chuan 大宛傳, says that in the 2nd century B. C. Emperor Wu-ti 武帝 of the Former Han Dynasty yearned after the horses in Ta-yüan-kuo 大宛國 (Ferghâna) and, sending an envoy with gold and a gold horse (a gold figure of a horse), made him try to obtain an excellent horse. A passage under Huang-chih-kuo 黃支國 in the *Ti-li-shih* 地理志 of the *Chien-han-shu* 前漢書 says that, from the time of Emperor Wu-ti of the Former Han Dynasty, it was customary in China to carry gold and miscellaneous silk fabrics to Huang-chih-kuo, (though this place is not located definitely, it is commonly understood to refer to the India area) in order to bring back from Huang-chih-kuo Ming-yüeh-chu 明月珠 (large-sized pearls), Pi-liu-li 流離 (probably the so-called Yeh-kuang-pi 夜光璧 made of glass),<sup>(1)</sup> rare stones, and curious articles. It would be proper to consider gold and gold articles as weighable currency rather than as mere barter items. At the same time, gold and silver coins from the West were no doubt welcomed by the Chinese. It is supposed that Chinese copper coins such as *pan-liang* 半兩 (half-liang), *wu-shu* 五銖 (five-shu), and *huo-ch'üan* 貨泉 pieces, were used among the Western traders. One of the wooden fragments<sup>(2)</sup> discovered in the desert to the north of P'u-ch'ang-hai 蒲昌海 (Lob Nor) in Central Asia gives the exchange prices of the silk fabrics and woolen fabrics of the West in the Latter Han Dynasty, namely, the 1st century A. D. According to the list, one bolt (四丈六尺 10.5m. wide and 一丈一尺 2.5m. long) of *ching-chan* 青旃 (woolen fabric) material and one *huang-chan-hsi* 黃旃褶 (a coat of yellow woolen fabric reaching the knees), were exchanged for three *p'i* 匹 of the Chinese *t'sai* 綵 (nothing is known about the actual material, but we may

(1) Yoshito Harada: "The Yeh-kuang-pi (夜光璧), a Study on Chinese Glass Discs of the Han and Pre-Han Dynasties", *Kōhogaku Zasshi* (The Journal of the Archaeological Society, Tokyo), Vol. XXVI, No. 7 (July 1936), pp. 385-394.

(2) Lo Chên-yu 羅振玉: *Liu-sha chui-chien* 流沙鑿簡.

consider it a silk fabric somewhat more expensive than a plainly-woven white silk fabric). Furthermore, if we compare this with the fragments of the document on *po* 帛 (silk) discovered from the desert to the north of Tun-huang 敦煌 in Kan-su Province 甘肅省<sup>(3)</sup>, we find that one *p'i* of *chien* 縑 (white plainly-woven silk) 二丈二尺 5m. wide and 四丈 9.2m. long, and weighing 25 *liang* 兩, was equivalent to 618 Chinese coins (five-*shu* 五銖 pieces?). At any rate, the fact that the price of one *p'i* of a plain silk fabric was evaluated in Chinese coins suggests that the Chinese currency value was thoroughly understood among the Western peoples. Furthermore, some fragments of the letter which Pan-ku 班固 of the Latter Han Dynasty wrote to his younger brother Pan-ch'ao 班超, quoted in other books, still exist<sup>(4)</sup>. One of them says that General Tou-hsien 竇憲, master of Pan-ku, bought horses, *su-ho-hsiang* 蘇合香 (storax), and woolen fabrics from Yüeh-shih 月氏 (the Kushan kingdom) with 700 *p'i* of *tsa-ts'ai* 雜綵 (miscellaneous silk fabrics) and 300 *p'i* of *pai-su* 白素 (white plain-silk fabric), while another fragment records that Tou-hsien through the medium of some other persons bought with 800,000 *ch'ien* 錢 coins more than ten *chang* 張 of *tsa-chi* 雜罽 (miscellaneous woolen fabrics). It may be inferred that such Chinese copper coins as *wu-shu* were circulated at least among the Western traders. The fact that Sir Aurel Stein and other explorers succeeded in collecting in Central Asia a large number of Chinese copper coins of various kinds, in addition to the coins of Western countries, certainly supports these written records. Among Chinese merchants it was not only the gold and silver coins but also the copper coins of the Western countries that were circulated. I once wrote a paper entitled "Of Pan-ku's Letter to his Brother Pan-ch'ao", in which I referred to the so-called Sino-Karoṣṭhī coins (Plate 9) discovered in Khotan in Central Asia. Accepting Dr. de Morgan's decipherment of the Karoṣṭhī inscriptions on those coins and taking them to be those coined by Hermaeus, King of Kabul (Kao-fu-kuo 高附國 in the books of the Han period), I supposed that the purpose for adopting Chinese scripts which indicated their weights on those coins was to show the Chinese traders their values.<sup>(5)</sup> In a recent year, Dr. Kazuo Enoki 榎一雄 published his minute and accurate research of such coins and, referring to the decipherment of the Karoṣṭhī scripts of some other scholars, he pointed out some inaccuracy in Dr. de Morgan's decipherment. Dr. Enoki thought those coins were the result of the extreme prosperity which the Gurga Royal Family (of the Iranian origin, the so-called Saka tribe) during the reign of Emperor Wu-ti of the Former Han Dynasty, or even some time before, enjoyed because of the international market of Khotan.<sup>(6)</sup> I am no expert in

(3) *Ibid.*

(4) Yoshito Harada: "Of Pan-ku (班固)'s Letter to his Brother Pan-ch'ao (班超)", *The Tōhō Gakuhō* (Journal of Oriental Studies, Tokyo), No. 11, Part 1, (March 1940), pp. 34-38.

(5) *Ibid.*

(6) Kazuo Enoki: "On the So-called Sino-Kharoṣṭhī Coins", *The Tōyō Gakuhō* (Reports

decipherment of the Karoṣṭhī scripts, therefore I do not hesitate to revise my former conclusions, but I do wish to leave it as an example of the circulation among the Chinese traders of such Western coins with Chinese inscription indicating their weights.

Among the ancient peoples in East Asia, bartering, or probably the so-called tribute trading, took place between the Chinese, the Koreans and the ancient Japanese (Wo-jên 倭人), and it may be supposed that Chinese copper coins were known among the Koreans and the Japanese and were at least valued as precious treasures.

In addition to describing the circulation of coins between East and West, I shall next say something about the circulation of coins in East Asia.

## (2)

The fact that, in the trade between East and West during the Han Dynasty, Parthia (An-hsi 安息 in the books of the Han period), which occupied the important spots on the Silk Road and monopolized tremendous profits, interrupted direct communication between the Han Dynasty China and the East Roman territory, is given in the An-hsi-chuan 安息傳 and the Ta-ch'in-chuan 大秦傳 of the *Hou-han-shu* 後漢書. However, after Parthia's Seleucia on the Tigris was destroyed by the Romans in 165 A. D. and Dura-Europos, the silk-trade market on the Syrian boundary, was occupied, their power was checked for a time. Probably on this account, as is told by the Ta-ch'in-chuan of the *Hou-han-shu*, in the 9th year of Yen-hsi 延熹 of Emperor Huan-ti 桓帝 of the Latter Han Dynasty (166 A. D.), An-tun 安敦, (King of Ta-ch'in=Emperor Marcus Aurelius Antoninus), sent an envoy who landed at a spot beyond the border of Po-nan 白南 (a country in the south of Indo-China), and, offering ivory, rhinoceros tusks, and tortoise-shells, succeeded in opening a way of direct communication between the Han Dynasty and Rome. For a long time, this was only known through the Chinese source. The Oc-èò relics at the extreme southern end of Indo-China, excavated and investigated in 1941 by the French scholars Prof. L. Malleret, Prof. G. Coedès, and others, contained, in addition to the fragments of the K'uei-fêng mirror 夔鳳鏡 (Plate 10) made in the Latter Han Dynasty, gold medals minted by Antoninus Pius, the Roman Emperor who reigned for 138–161 A.D. (Plate No. 1), and those minted by Marcus Aurelius (161–180 A. D.)<sup>(7)</sup>. These articles, it is safe to say, can certainly endorse the accuracy

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of the Oriental Society), Vol. XLII, No. 3 (December 1959), pp. 1–56.

(7) See G. Coedès: "Fouilles en Cochinchine: Le Site go Oc-èò, Ancient Port Royaume de Founan", *Artibus Asiae* Vol. X/3, (Ascona, 1947). For Plates Nos. 1 & 10, the present author is grateful to Dr. Hirosato Iwai for his courtesy. For the relics discovered at Oc-èò, see Takashi Okazaki: "Ancient Southern Sea Trade as Seen from the Exchange of Tortoise-Shell", *Essays in Celebration of the 25th Anniversary of the Research Institute for Humanistic Studies, Kyoto University*.

of the account contained in the *Hou-han-shu*. Though we cannot say to what extent maritime trade was practised between China and Rome of that time, we are sure that this served to open a way of direct trade between the two countries.

As a matter of fact, Emperor Justin II (565–578 A. D.) of the East Roman Empire, regretting that trade with the East at that time was exclusively controlled by Persia under the Sassanid Dynasty and desiring to destroy it, sent an envoy in 568 A. D. to the court of the west Turk Khaghan 西突厥可汗 located east of the Aral Sea, and established friendly relations. Prior to this, during the reign of Emperor Justinian I, two Persian priests who went to China learned the art of making brocade and secretly brought some silk-worm eggs to Constantinople, where afterwards the Byzantine brocade was developed.

It is said that in this way a large number of gold coins of the East Roman Empire were circulated extensively in various eastern countries during the 6th century A. D. It is no accident, therefore, that many gold coins of the East Roman Empire as well as some Persian silver coins of the Sassanid Dynasty have been discovered in the tombs in Turfan in Central Asia. The gold coins of the East Roman Empire also penetrated into the interior of China. One of such coins was discovered in 1953 in a Sui tomb in Ti-chang-wan 底張灣, Hsien-yang 咸陽, Shan-hsi Province 陝西省. The inscriptions on the tomb stone (Plate 11) shows that it is the tomb of Tu-ku-lo 獨孤羅, the eldest brother of Queen Tu-ku 獨孤, who was the wife of Emperor Wên-ti 文帝 of the Sui Dynasty. Tu-ku-lo was the Governor-General and Governor of Liang-chou 涼州總督軍事·涼州刺史. The gold coin was minted by Emperor Justin II only a few dozen years after the 19th year of the Kai-huang 開皇 era—the year in which Tu-ku-lo died. As he had formerly served at Liang-chou in the neighbourhood of Tun-huang in Kan-su Province, it is certain that he had obtained the gold piece while serving at the office there and preserved it as a rare treasure.

One gold coin (an imitation) of the East Roman Empire was excavated in 1956 from a T'ang tomb in T'u-mên Village 土門村, in the western suburb of Hsi-an 西安 in Shan-hsi Province. Judging from the form of the tomb and the costumes of the waiting women in the mural painting, we may take it as contemporaneous with Emperor Kao-tsung 高宗 of the T'ang Dynasty, or Empress Tsê-t'ien-wu-hou 則天武后.<sup>(8)</sup> In this connection, let me mention how enthusiastically the Chinese of the Sui Dynasty admired the magnificent palace in Constantinople (Byzantium, the present Istanbul), the capital of the East Roman Empire.

According to the P'ei-chü-chuan of the *Sui-shu* 隋書裴矩傳, P'ei-chü was stationed at Chang-yeh 張掖 in Kan-su Province about the 1st year of Ta-yeh

(8) See Hsia Nai 夏鼐: "A Byzantine Gold Coin Discovered from a Sui Dynasty Tomb near Sian, Shensi", *Studies in Chinese Archaeology* 「咸陽底張灣隋墓出土的東羅馬金幣」考古學論文集收錄 (The Institute of Archaeology, Academia Sinica ed.), (Peking, 1961), pp. 135–142.

大業 (at the beginning of the 7th century) under the reign of Emperor Yang-ti 煬帝 of the Sui Dynasty and was in charge of the trade with the Western people. He wrote down what he heard from the traders, and compiled the *Hsi-yü-t'u-shuo* 西域圖說. This book is now scattered and out of our reach, but the P'ei-chü-chuan fortunately preserves the preface, which describes the roads leading to Fu-lin 拂林, that is, Constantinople. Both the old and the new *T'ang-shu* and the *T'ang-hui-yao* 唐會要 give the history of Fu-lin-kuo 拂林國. Fu-lin is a phonetic transcription of Frum; while *f* is a prefix only to help the pronunciation of the succeeding sound, *rum* is the stem. Thus Fu-lin is explained to represent Rome. The accounts in the *T'ang-shu* and the *T'ang-hui-yao* read somewhat like the following:

‘Fu-lin, sometimes called Ta-ch'in 大秦, is situated to the north of the big sea (=the Mediterranean). It adjoins Po-ssü 波斯 (of the Sassanid Dynasty) on the southeast; the district is 10,000 *li* 里 square; the houses stand contiguous to one another; the houses, numbering over 10,000, face the sea. A gigantic gate in the southeastern part of the palace is over 200 feet in height. As you enter the King's rooms, you will see them adorned with gold and all connected with great three-fold gates. On the upper story of the second gate is hung a gold weighing beam with twelve gold balls at one end. There is also a metal man (a bronze statue) constructed. Its size is that of a human being, and it stands next to the weighing beam. As the hour comes round, a gold ball falls with a sharp sound; the metal man, responding to the sound, tells the hour; he never makes a mistake. The palace has turquoise pillars, gold floors, ivory doors, and spice-wood beams. The roof has no tiles, but is painted with powder from white stone, and looks like gems; when summer comes round, water is run over the roof; a spectator no sooner hears the sound of the running water than drops of water rush down like so many waterfalls from the eaves on the four sides and cause a cool breeze. This is how skillfully the equipment was wrought.’

These accounts are, of course, based on the gossip of the traders who visited Constantinople and must contain a great deal of both fact and fiction, indiscriminately. However, as far as the magnificence and grandeur of the palace is concerned, when we compare this with the gold-painted interior pillars and walls of such extant cathedrals as St. Sophia and St. Irene, St. Vitale and St. Apollinare in Classe in Ravenna, Italy, which still reflect their age's glory, and with the dazzling Byzantine architecture full of variegated marble and mosaic decorations, it can be said that the descriptions in Chinese documents are only too modest to express the reality. However, in regard to the existence of the mechanical equipment on the upper story for sounding the hour, I hope some readers can enlighten me on the subject. The story of the roof in summer, since the event took place in the Roman period, in which the aqueduct system

was fully developed, and since there still exists the device of a fountain in one of the residences in the Pompeian ruins, cannot be called a fictional story.

It is probable that through the frequent traffics with the West during the Sui and T'ang dynasties the cultural establishments of the East Roman Empire and Persia of the Sassanid Dynasty caught the attention of Chinese merchants and aroused their astonishment, until a number of fictional stories were introduced to China. Emperor Yang-ti of the Sui Dynasty attempted to open trades between China and Frum, but his efforts failed. The excavation from the tomb of Tu-ku-lo of a gold coin minted by Emperor Justin II of the East Roman Empire makes an exceedingly interesting story which reflects the trade between the two countries.

Central Asia was situated at the key point of East and West trade, and the Iranian tribes held the position of leadership since ancient times. Parthia's occupation of the Iran Plateau in the Han period and their interference with direct trade between China and Rome have been already discussed above. The Arsaces Dynasty of Parthia contributed considerably to furthering trade between East and West, and one king after another minted coins and made a coin economy his realm's policy. Sir Stein's discovery in Kargalik of a silver coin minted by the Parthian king, Mithradetes I<sup>(9)</sup>, explains why a silver coin appeared in such a remote locality in the eastern part of the Pamirs.

At the time when the Parthians were active, their markets were limited in the Iranian area, but their successors, the Persians of the Sassanid Dynasty, gradually extended their trade markets eastward and finally the Persian silver coins penetrated into Central Asia. Consequently, the silver coins of the Sassanid Dynasty discovered in China are quite numerous. In 1956, during the construction of a dam in Liu-chia-ch'u 劉家渠 in Hui-hsing-chên 會興鎮, Shan County 陝縣, Ho-nan Province 河南省, a tomb of the Sui Dynasty was excavated. It was a tomb where Liu-i 劉偉 and his wife were buried together with dates given as the 4th year of the Pao-ting 保定 era (561 A. D.) and the 3rd year of the Kai-huang 開皇 era (583 A.D.). In this tomb were found two silver coins of Khusrō I (531-579 A.D.). (Plates Nos. 3-4). In 1955, on the outskirts of Hsi-an 西安, a silver coin of Khusrō II (Plate No. 5) was found with a piece of the K'ai-yüan-t'ung-pao 開元通寶 and a three-colored ceramic ware. Since the Sassanid Dynasty from Khusrō I down developed its foreign trade to a considerable extent, coins were minted often; therefore it is not surprising that Persian coins were discovered in such an eastern locality. In 1957, from Chang-chia-p'o 張家坡, Li-hsi 濃西 in Hsi-an, a silver coin of Pērōz (457-483 A. D.) and a ceramic ware which is thought to be from the 6th century were excavated; in 1955, a silver coin of Pērōz was discovered in a T'ang tomb on the northern outskirts of Lo-yang 洛陽.

(9) A. Stein: *Serindia*, Detailed Report of Explorations in Central Asia and Westernmost China, (London, 1921), Plate CXL, 11.

Besides the foregoing, two silver coins of the Sassanid Dynasty along with grave bricks dated the 4th year of the Chien-wu 建武 era (497 A. D.) were discovered in 1960 in a tomb of the South Chi 南齊 Dynasty in Ying-t'e 英德 County, Kuang-tung Province 廣東省, and these coins were also those minted by Pērōs. The discovery of these silver coins is worth special attention as material for determining the maritime communication of that period.<sup>(10)</sup>

## (3)

In conclusion, I shall discuss a little on the coins in East Asia. It is well-known that during the Chan-kuo 戰國 period in China, *ming-tao* 明刀 coins and several other coins shaped like swords were current. Such coins of the Chan-kuo period were probably circulated for some time, along with *pan-liang* and *wu-shu* coins, even after the unification by the Ch'in Dynasty. That among the sword-shaped coins the *ming-tao* coins were from the country of Yen 燕 is evidently known from the fact that they are not only distributed in Ho-nan Province 河南省, which was the center of Yen, but also in Liao-tung 遼東 and North Korea. In both of these places, they are often found in clusters of several dozens or several hundreds stored together in pots or in boxes. Whether the men who buried them underground were Yen people or the aliens controlled by Yen power, that fact shows that the *ming-tao* coins were widely circulated as coins. As the range of discovery of the *ming-tao* coins was limited to the north of the P'in-an-nan-tao (P'yōng-an-nam-do 平安南道) in Korea, it is known that Yen power failed to extend further south than that. Therefore, the fact that a *ming-tao* coin (Plate No. 6) was found as far away as the shell-mound of Gushiku-dake 城ヶ岳 on the outskirts of Naha City, Okinawa, caused considerable interest among us. When in September 1923 Mr. Suketaka Kabayama 樺山資隆, who was then a student in Naha Commercial School, Mr. Masaru Usuku 宇宿捷, his cousin and student of history of Keio University, and others excavated the shell-mound of Gushiku-dake, they found several stone-arrowheads and one *ming-tao* coin. This coin was presented by Mr. Usuku to Tokyo University, and is at present in the possession of the Department of Archaeology.<sup>(11)</sup>

What route did the *ming-tao* coin take in reaching the Stone Age Loochooans so far away from the Chinese Continent? There is no literature for studying the subject. Therefore, I wish to indulge in speculation and imagine the circumstances. According to the Fêng-ch'en-shu 封禪書 in the

(10) See Hsia Nai: "Persian Sassanian Coins Recently Discovered in China", in *Studies in Chinese Archaeology*, 「中国最近發現的波斯薩珊朝銀幣」考古學論文集収録 pp. 117-128.

(11) See Archaeological Seminary, University of Tokyo, ed.: *Kōko-zuen*, 考古圖編 (Select Specimens of Antiquities), No. 9, Pl. 9; Masukichi Hashimoto: "On the *Ming-tao* Coin Excavated from the Shell-mound at Gushiku-dake in the Outskirts of Naha City, Okinawa", *Shigaku* Vol. 7, No. 1, (March 1928), pp. 135-140.

connection. However, the discovery of a *huo-ch'üan* coin in our Yayoi-type remains of this period is certainly important historical material for graphically elucidating cultural relations between the two nations.

I mentioned before that, because *wu-shu* coins were minted frequently during the two Han dynasties, it is difficult to decide the exact dates of these coins. However, more than a dozen years ago, the Kashihara Archaeological Research Institute investigated Kogane-zuka in Nobuta-mura, Senpoku County, Osaka, and discovered a *wu-shu* coin stuck fast by rust to an iron knife. This *wu-shu* coin had an inscription of *ch'ien-wên-wu-shu* 錢文五朱. Now, coins with the inscription were the *wu-shu* coins of a much later time and are considered to be from about the Chin 晉 Dynasty. Consequently, this became the basis for determining the date of the ancient tomb in which this *ch'ien-wên-wu-shu* coin was found as from about the middle of the 4th century A. D. This coin was buried as a tomb utensil, and one finds it stuck fast by rust to an iron knife which is covered with more than nine sheets of silk fabric, and it is treated like some treasure.<sup>(17)</sup> It is only natural that, in an age when our country had no coins at all, it should have been so valued as a rare foreign article.

It came as no surprise when *Wadō-kaichin* 和同開珎 (珍) coins minted in the first year of the Wadō era (708 A. D.) in Japan were discovered in the ruins of the Heijō-kyū and in the remains of the Nara period. However, when in June 1934, a second excavation was made in the ruins of Lung-ch'üan-fu 龍泉府, Shang-ching 上京, P'o-hai-kuo 渤海國, which was the old site of the Tung-ching-ch'êng 東京城, in the upper reaches of the Mu-tan-ho River 牡丹江 in North Manchuria, a Japanese *Wadō-kaichin* coin (Plate No. 8) was found on the north side of the west room of the Palace. Unlike the other palaces constructed on earth-mounds, this palace was built on low ground, and the cornerstones and floors were buried underground; for this reason the ruins were preserved in a fine state. The palace was roughly divided into three sections: two adjoining rooms, narrow and small, extended north and south; on both sides of the small rooms, two large square rooms (4.5m. each way), extended east and west. The *Wadō* coin was discovered plastered to the floor of the north side of the west room. As P'o-hai-kuo had been subjugated and controlled by the T'ang Dynasty, one naturally expected to find T'ang coins, such as the *Kai-yüan-t'ung-pao* 開元通寶 coins. To discover a Japanese *Wadō* coin there was a great surprise. That P'o-hai-kuo and Japan had, since the 4th year of the Jinki 神龜 era under the reign of Emperor Shōmu 聖武, enjoyed friendly relations and exchanged envoys is definitely stated in the *Shoku-nihongi* 續日本紀, the *Nihon-kōki* 日本後紀, the *Sandai-jitsuroku* 三代實錄, and the *Ruiju-kokushi* 類聚國史. It would be unnecessary to emphasize here that the nation made tremendous profits by trade with Japan. Although trade between

(17) *Ibid.*, pp. 70-71; p. 129, Note 1.



the two nations in those days was carried on chiefly in the form of offerings and gifts, or the sending of tributes to each other, it cannot be said that there was no circulation of coins at the same time. The discovery of the *Wadō* coin there, especially in the inner chamber of the palace, means that an article which had been treasured as a rare foreign article was, after a thousand years, accidentally exposed to the sun once again by a Japanese.<sup>(18)</sup>

## 2. The Origin of Candles\*

### (1)

Modern candles made of such material as the fatty acids or paraffin wax are a product dated after the nineteenth century. It had undergone a number of changes before this. In Japan, during the Sengoku period (15–16th centuries) and the Edo period (17–19th centuries), the so-called *warō* 和蠟 candle produced from the seeds of *haze* trees (黄蘆 *Rhus succedanea*) was used in common. The one in vogue during the Muromachi period (14–16th centuries) was *matsuyani-rō* 松脂蠟 or pine rosin candles. They were made by wrapping pine rosin with bamboo leaves around the wick of corn floss. During the Fujiwara period (10–11th centuries), *shi-shoku* 紙燭 or paper candle was used. They were made by scraping pine wood into slender pieces, with a length of about 50 cm., and binding them into a bundle of a convenient size, one end coated with rosin and the other end wrapped with paper. These various types of candles above-mentioned were all invented in Japan, after the import of candles from China had been interrupted in the middle of the Heian period (8–12th centuries). Prior to that, from the Nara period (8th century), regular candles produced from beeswax were imported from China and were used in the Court and in the Buddhist temples in Japan. In the *Daian-ji-garan-engi narabini ruki-shizaichō* 大安寺伽藍縁起并流記資財帳, which was composed on the eleventh day of the second month of the nineteenth year of the Tenpyō era (747 A.D.), it is stated as follows: “. . . together with forty *kin* and eight *ryō* of *rō-soku*. . . . Those are granted by the Emperor who rules the country from the city of the Heijō, on the seventh day of the twelfth month of the

(18) The Tōa-kōko Gakkwai (or the Far-Eastern Archaeological Society): *Tung-ching-ch'êng* 東京城, *Report of the Excavation of the Site of the Capital of P'o-hai*, Archaeologia Orientalis, Series A, Vol. V, (Tokyo, 1939).

\* At a joint meeting of the eight Japanese academic societies in 1949, “Fire” was assigned as a common topic for discussion. On that occasion I delivered a lecture on “the origin of candles”, the outlines of which appeared in *Jinrui-kagaku* 人類科学 Vol. II (Tokyo, November 1950). My conclusion given there, it seems, has since been generally accepted as an established theory. However, as my description in that article was too brief and was accompanied by no illustration, I would like to supplement it, in the present paper, with what I have reexamined and discovered on the subject thenceforth.

sixth year of Yōrō era. 合藟蠟肆拾斤捌兩 (中略) 右平城宮御宇天皇以養老六年歲次壬戌十二月七日納賜者.’’ It goes without saying that *rō-soku* 藟蠟 in the above-quoted paragraph is a clerical mistake for *rō-soku* 藟燭. The sixth year of the Yōrō era under the reign of Empress Genshō 元正 (722 A.D.) corresponds to the fourth year of K'ai-yüan 開元 under Emperor Yüan-tsung 玄宗 of the T'ang dynasty in China. Again, in the rules for the Office of Household (Tonomoryō, 主殿寮) of the *Taihō-ritsuryō* 大宝律令 (Chapter of Shikiin-ryō 職員令), the duties assigned to the officers (Tonomo-no-tsukasa 主殿頭) are enumerated. Among them for those who served in the Court (Kugo 供御), the daily works of lighting candles and making fire with pine-twigs and charcoal 燈燭松柴炭燎 were mentioned. As a duty for the Tonomo-no-tsukasa office of the Imperial Harem 後宮殿司, it mentions the matters concerning illuminating-oil, candles and fuels 燈油火燭薪炭之事. Again, a duty of the Tonomo-no-tsukasa officers of the Crown Prince Office 東宮主殿署 contains the item for *tō-shoku* 燈燭. The *Ryō-no-gige* 令義解 explains this *tō-shoku* as follows: ‘‘Oil-light is called *tō*, and candle-light is called *shoku*.’’ This definitely proves the use of candles in the Japanese Court at that time. The Japanese government offices under the *Taihō-ryō* were a copy of the T'ang system. In the *T'ang-liu-tien* 唐六典 (Bk. XII: Chapter of the Interior Officers 內官, Item of bedding, *shang-chin* 尚寢), light officer (*ssü-téng* 司燈) is put in charge of candles, lights, and tallow fires 燈燭膏火. It may be inferred that candles and tallow lights served as the most important means of illumination in the Chinese Court around the time corresponding to the Nara period in Japan.

What was the shape of the candles in those days? The *Samaya-gyō* 三昧耶形 style of the *Kongō-kai-mandara* (金剛界曼荼羅 *Vajradhātu-maṇḍala*) gives as the symbol of the *Kongōtō-bosatsu* (金剛燈菩薩 *Vajrālokā*), a picture of a candle burning on a candlestick in the shape of a lotus leaf or a lotus flower.<sup>(1)</sup> The form of the candle thus illustrated is not so different from that of later periods. The *Maṇḍala* of the *Samaya-gyō* style in Japan could be traced to the earliest stage of the Heian period; the *Maṇḍala* preserved in the Jingo-ji temple 神護寺 is considered as the oldest of the kind found in Japan. As the *Maṇḍala* of the *Samaya-gyō* style is understood to have been invented in the middle of the T'ang dynasty in China, from the illustration in the *Samaya-gyō* style *Maṇḍala*, we can tell the actual form of the candles used in East Asia in the eighth and ninth centuries. Even as late as the last part of the Fujiwara period, the *Heihan-ki* 兵範記 by Taira-no-Nobunori 平信範, an autographic copy of which is now in the possession of Kyōto University, describing the function of the *Kikōten* 乞巧奠 (the Feast of the Star Vega) held on the seventh day of the seventh month of the first year of the Chōshō era (1132 A.D.), says, ‘‘Nine lights stand on the spreads in three lines of left, right

(1) *Samaya-gyō* is a style of *Maṇḍala* symbolizing Bodhisattvas by their usual attributes. See *Taishō Shinshū Daizō-kyō* (Tokyo, 1933), Iconography Vol. 1.

and center. 立燈九本三行亦之有打敷''. The candlesticks shown in this illustration were slender in shape and the candles on them were just the same as the modern ones. Beeswax candles, as stated above, had to be imported from China in those days, so that the prices of candles in Japan must have been considerably high. In the following section, I am going to examine the development of the Chinese candles in which the Japanese candles have their origin.

## (2)

Ch'êng Ta-ch'ang 程大昌 of the Sung dynasty in his book, *Yen-fan-lu* 演繁露, Bk. II, commenting on the sentences, "Taking a big light in the garden", and, "Making a big light outside of the gate", in Yen-li 燕禮 (etiquette of treating guests) of the *I-li* 儀禮, says, "In ancient times, they did not know about the use of wax; they simply used firewood. Burning firewood, they made light, or peeling the bark of a birch-tree, they burnt it to get light." In other part, however, commenting on a passage in the *Ch'ü-li* 曲禮 of the *Li-chi* 禮記 which reads, "Candle never reveals *po* 跋", the same author takes *po* to mean embers of a candle and says that this passage may be taken as a proof for the *Ch'ü-li* writer witnessing a candle. Thus, Ch'êng Ta-ch'ang sees a possibility of the use of candles in the Chou period. Ch'ên-hao 陳澧 of the Yüan dynasty, on the other hand, explains the above-quoted passage of the *Ch'ü-li* in the *Li-chi*, in his *Li-chi-chi-shuo* 禮記集說 and says, "*Po* means the end 本. In ancient times, there were no candles. Instead, torches were used at night to get light. Just when a torch was about to die down, the host hid the end (embers) of the torch for fear that his guests, observing it, might wish to go home because the night was so advanced." Thus, Ch'ên-hao took *po* to mean the embers of a torch. Although it sounds more reasonable to me to take *po* as the embers of a torch, the question as to whether candles existed in China under the Chou dynasty is one which could not be determined by such books as the *I-li* or the *Ch'ü-li* alone. Now, so far as the antiquities of the candlesticks, which are inseparable from candles, are concerned, at least upto the present we cannot find any genuine candlesticks of the Yin or the Chou dynasties. Those which can definitely prove their actual existence are of the period between the last part of the Chou dynasty (approximately, the third century B.C.) and the Former Han dynasty. According to the order of the illustrations given in the Plates, I shall explain some of the candlesticks of those antiquities.

1) A ceramic *ming-chi* candlestick (Plate No. 13)

It is 13.6 cm in height. It was excavated from a Han tomb in Liao-yang 遼陽, in the northeast China (former South Manchuria). This is a so-called *ming-chi* 明器 (grave utensil)<sup>(2)</sup>, an imitation in bronze for

(2) Kazuchika Komai, ed.: "The Han Tombs Discovered at Lo-yang", *Kōhogaku Kenkyū* (The Journal of the Archaeological Studies), Vol. I (Tokyo, 1950), pp. 1-30.

production is naturally located. Chang-hua 張華 of the Chin 晉 dynasty in the third century in his book called the *Po-wu-chih* 博物志 describes the method of collecting beeswax as follows:

“In various places of extremely remote mountain regions, beeswax is produced. They keep bees in the tubs, collect wax once a year. . . . In the beeswax-producing regions in the remote mountains, they construct the wooden cases provided with many small holes, and plaster the cases with beeswax all over both on the inside and outside. In the months of spring, when the bees are ready to multiply, they catch some bees and keep them in the case. The bees fly away, and come back with the mates. Day after day they increase in number. At last they go home with the case.”

This is the way of collecting beeswax in ancient China, and shows the district of production was usually in the remote mountain region. T'ao Hung-ching 陶弘景 of the Liang 梁 dynasty (the fifth century) in his book *Ming-i-pei-u* 名醫別錄 mentions the valley in the mountains of Wu-tu 武都 as the district of beeswax production. Wu-tu is situated in the western area of Ch'êng County 成縣, Kan-su Province. In the T'ang dynasty, beeswax was utilized in making medicine, molds, and candles. The demand for the beeswax must have considerably increased since the name of the producing areas, together with the accounts of presentation of beeswax to the Court, were often mentioned in literature. According to the *T'ang-liu-tien* 唐六典 and the *Tu-shih-t'ung-tien* 杜氏通典, the area of producing beeswax is distributed among the mountains of the provinces comprising the present Shan-hsi 山西, An-hui 安徽, Ssü-ch'uan 四川, Hu-pei 湖北, Hu-nan 湖南, Shan-hsi 陝西, Kuei-chou 貴州, and Fu-chien 福建; and a large quantity of beeswax was presented from these areas to the Court. The *T'ang-liu-tien* tells the areas where candles were actually manufactured and presented to the Court: Fêng-chou 鳳州 of Shan-nan-tao 山南道 (Fêng County 鳳縣, Shan-hsi 陝西 Province), Chêng-chou 成州 of Lung-yu-tao 隴右道 (Chêng County 成縣, Kan-su Province) and Wu-chou 武州 (Wu-tu 武都, Kan-su Province). Among them only Wu-tu was mentioned already by T'ao Hung-ching of the Liang dynasty as the place of beeswax production; it must have been well-known since old times as the district of manufacturing candles. Now, for the study of the homeland of candles, we should remember the story given in the *Hsi-ching-tsa-chi* 西京雜記, Bk. IV. It reads as follows:

“The King of Ming-yüeh 閩越王 offered to Emperor Kao-ti 高帝 five *hu* 斛 of honey-wax 石蜜, two hundred honey-wax candles 蜜燭, a pair of white pheasants 白鷓, and a pair of black pheasants 黑鷓. Kao-ti, exceedingly satisfied, sent his envoy with a fine return-present.”

There is room for doubt as to how accurately the *Hsi-ching-tsa-chih* records the facts of the Han dynasty. If we accepted this story as genuine, it is not difficult to imagine the delight and satisfaction of Emperor Kao-tsu in receiving such exotic offerings. Ming-yüeh was situated in the present-day Fu-chien

Province and their king Wu-chu 於諸 was a man of Yüeh origin, appointed as the King of Ming-yüeh by Emperor Kao-tsu. It was a uncivilized tribe in the Chinese frontiers, as is said so in the Tung-yüeh-chuan 東越傳 of the *Shih-chi* 史記. The honey-wax and candles presented from such a remote frontier region must have been extremely rare and valuable for the Chinese in those days. It is true that in the T'ang dynasty Fu-chien Province was regarded as one of the beeswax producing areas, but it is doubtful whether it was true also in the Han dynasty. Later, in the fifth century, Emperor Chien-wên-ti 簡文帝 of the Liang dynasty, in his *Lieh-têng-fu* 列燈賦 says: "Oil from the south is abundant; varnish 漆 from the west burns well; *su* 蘇 is collected from An-hsi 安息; and *la* 蠟 wax is produced in Lung-ch'uan 龍川." *Su* is *tzü-su* 紫蘇, *perilla* plant, from which oil is obtained. An-hsi was Parthia of the Han dynasty. Since Parthia had already perished in the Liang period, most probably this name here refers to the Persian area in general. *La* in this poem naturally means candle. Lung-ch'uan is the name of a place in Kuang-tung Province 廣東省.

It seems that in ancient China the areas which produced candles were those near the western frontier such as Kan-su and Shan-hsi provinces and the maritime regions, facing the South Sea such as Kuang-tung and Fu-chien provinces; and somehow I suspect that the art of candle-making was, not originated in China, but imported from some other countries.

## (4)

Almost simultaneously with the last stage of the Chan-kuo period and the earliest period of the Han dynasty in China, candles appeared among the Greeks and the Romans in the West. In the fifth century B.C., when Greece was at the zenith of her prosperity, as in the case of China, torches composed of tree-barks, grape vines, and wooden pieces, coated with beeswax or tallow were in use. In some cases they had candlestick-like receptacle to support the torches.

- 8) Picture of a wedding procession painted on a ceramic dressing-case (Plate No. 20)

It is a piece of work produced at the most prosperous period of Greece, in the possession of the British Museum. It shows the bride and bridegroom being led to the altar. In this picture there is drawn a girl who, holding a torch, is leading them.<sup>(10)</sup>

- 9) Picture of racers drawn on a ceramic pot (Plate No. 21)

This is a work produced at the most prosperous period of Greece. The torch that each racer holds in the hand is provided with a disc cup to catch the dripping wax.<sup>(11)</sup>

(10) See British Museum ed.: *Greek and Roman Life* (London, 1920).

(11) See W. Zschielzschmann: *Hellas und Rom* (Tübingen, 1959).

Thus, in the fifth century B.C., at the most prosperous period of Greece, only the torches were in the use and the genuine beeswax candles were not produced. It was in the third century B.C. and later that the beeswax candles were indisputably in existence.

- 10) Picture of a banquet in the mural paintings of the tombs in Orvieto, Italy (Plate No. 22)

There are many mural paintings of the ancient daily-life in the tombs of the Etruscans in Etruria, Italy. One of them is a picture of the banquet; in front and behind a table on which various table-wares are arranged, tall candlesticks are placed. On the top of each candlestick, there are three arms in the shape of bills, each of which securely seizing a candle. The stands similar to this mural painting have been actually excavated from the Pompeian ruins. This picture shows that these stands were used, not to hang down the lamps with them, but used as candlesticks. The mural pictures in Orvieto were made in the third century B.C.; and since the Etruscans were the recipients of the Greek culture, it is most probable that the Greeks by that time came to know the use of candles.<sup>(12)</sup>

- 11) Pipe-form candlesticks made of bronze (Plate No. 23)

This stand, now in the possession of the British Museum, was excavated in Syria and may be a work of the Roman age.<sup>(13)</sup> Though the Romans used candles, it was only for religious purposes and not for the daily use in common houses, according to Plinius.<sup>(14)</sup> Among the Pompeian ruins, candlesticks, though few in number, were excavated along with lamp-stands.

- 12) Two candlesticks made of bronze (Plates Nos. 24 & 25)

The one (Plate 24) measures 288 cm in height; the bottom is supported by three sphinxes; the middle part is decorated with three cranes. It has a column in the center; on the column is engraved an arabesque of grape vine; on its top is provided a flower-like cup with a projection at its center for receiving a candle. It is in the possession of the Neapolitan Museum, and is an extremely luxurious article. The other one (Plate 25) stands 199 cm; on the bottom are engraved three women; the column is decorated with many elegant flowers; the top is provided with a cup in flower-form. This is in the possession of the Louvre Museum.<sup>(15)</sup>

Beeswax was known quite early even among the ancient Egyptians. With it, they made offerings to their deities and mummies. The Greeks also pro-

(12) This Etruscan mural painting is introduced in several books. The present writer owes this illustration to R. Engelmann: *Griechen und Romer* (Berlin, 1893).

(13) British Museum, ed., *op. cit.*

(14) *Encyclopaedia Britannica*, Vol. XVI, p. 265 (London, 1926).

(15) R. Engelmann: *op. cit.*

duced out of beeswax the small images of their deities and toy-dolls. The Roman aristocrats made death-masks of their ancestors to be preserved in their homes. Since beeswax was so expensive that it could not be easily obtained. It was just impossible to use it in abundance for making candles. It was only in the fifteenth century that common people began to use candles and it was possible simply because the price of candles became cheaper.

## (5)

Beeswax was so precious to the ancient people that they had considerable difficulty in obtaining it. Therefore, although a candle was an epoch-making invention of the human beings which contributed greatly to the advancement of culture, still it was used as a wonder light only among the limited class of people in the beginning. If the above-mentioned processes of development of candles were followed, then were they invented approximately in the third century B.C., simultaneously and independently, in Greece or Rome in the West and in China in the East? The fact that even at this early time, there was some exchange of cultures, even if indirect, between the East and the West, is evident from what I have examined in my papers.<sup>(16)</sup> As to the origin of candles, at present we have yet to refrain from determining which among the East or the West was the original inventor. Besides inferring the direct relations between China and Greece, we can think of the existence of a third intermediate people who spread candles to the East and the West. As a similar example, we can mention dice used in a gambling game such as backgammon. The die with the numbers from 1 to 6 marked on each surface of a regular hexahedron was much used by the Greeks and Romans, and many of them have been excavated from the ancient remains. Herodotus, a Greek historian, traces the origin of the die to the Lydians. He seems to have good reasons since many ancient dice have been found in the western Asia. In China, die is called *shai-tzũ* 骰子, the homeland of which is assigned to *ho-kuo* 胡國. The date of its introduction to China is said to be in the Pei-wei 北魏 period in the fifth century. It is said to have been introduced together with the game of backgammon. In their idea, *ho-kuo* referred to Central Asia or India vaguely. Dice were favoured by the Indians from the ancient times. The die has its origin in a very remote past as it had been already mentioned in the *R̥g-Veda*. Sir Aurel Stein discovered some Chinese dice of the T'ang period made of bone and stone in Mirān and elsewhere in Central Asia. In the Shōsō-in Treasury, we have a die made of tusk. Probably the dice of Greece and China had the common origin in India and from India they were introduced, one in the East and the other in the West.<sup>(17)</sup>

(16) See Y. Harada: "The Jade Road", *Seishin Studies*, Vol. XVIII, (Tokyo, March 1962), pp. 5-16.

(17) See Y. Harada: "Cultural Relations between East and West as Seen from the Treasures

Another similar example is polo, a game with stick and ball. Polo, which is the national game of Persia since ancient times, was played as early as at the time of Achaemenes of the sixth century B.C. Then, polo, starting from the homeland, was spread west into Europe and served as the source of other games like hockey, cricket and golf; now in Scotland they play polo as the national game. In the east, polo travelled to Tibet, China, Korea, and Japan.<sup>(18)</sup>

There have been several other cases of the cultural elements, having the place of origin in between the East and the West, and then travelling both in east and west.

In conclusion, I feel rather reluctant to accept the independent origins of candles coincidentally in the East and in the West. In the present paper, however, I have only dealt with the facts concerning the history of candles both in the East and the West. As to their interrelations, I wish to investigate further in the future.

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in the Possession of the Shōsō-in'', Shigaku-kai, ed.: *Tōzai Kōshō-shiron* 東西交渉史論 (Studies on the Relations between East and West), (Tokyo, 1939); Y. Harada: *Tōa-kobunka-kenkyū* 東亞古文化研究, (Tokyo 1940), pp. 81-106.

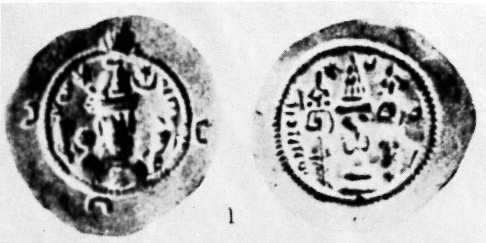
(18) See Y. Harada: "Some International Games around the Eighth Century", *Rekishi Kyōiku* 歴史教育 Vol. III, No. 6, pp. 13-18 (Tokyo, 1955); Y. Harada: *Tōa-kobunka-ronkō* 東亞古文化論考.



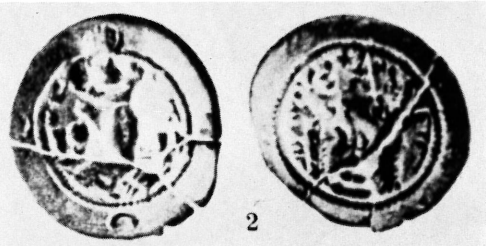


Pl. 2

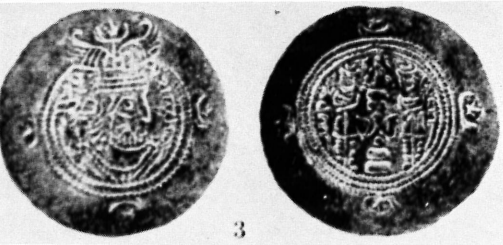
Pl. 1



Pl. 3



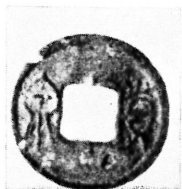
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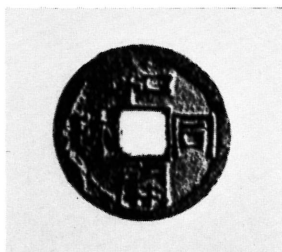
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Pl. 6



Pl. 7



Pl. 8



Pl. 9



Pl. 10

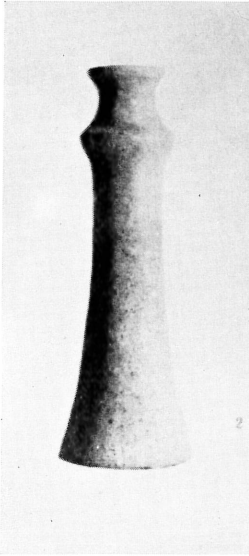
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 邁於十令從王輪於七姓公靈根惠葉遠青華宗猶費郵之出機究若蓋曹之  
 居豐沛大父太尉恭公逸氣標舉高情磊落公才天授魏齊天國濟時實有魏之  
 信太師上柱國趙國景公假總目天略不世出兼文柱武匡國濟時實有魏之  
 棟楚生民之龜鏡公即景公之元子今 皇后之長兄也駁骨天挺幼有絕電  
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 捐家奉國東誠衛主公遂揣越兩河派離三魏而神劬雖隱氣恒存實開自  
 沈黃雲不城周平東夏區宇一統今悲之鳥重集於桓山韓盛之華更茂於  
 樹大泉元季授楚安郡守德亦禮吏靜民和象二季秋八月除儀同大將  
 軍 皇隋上叶五精光臨四海繁製禮義躋成開皇元年三月除儀同大將  
 上開府儀同大將軍尋除領左右大將軍太子右衛軍將軍丹墀尊同就日履  
 趙國公邑一萬戶十二月拜大將軍太子右衛軍將軍丹墀尊同就日履  
 鑰義比前星公官成二官名重百辟文武並運賢實庶舉十三年除使持節  
 管涼州瓜州三州諸軍事涼州刺史十八年食益州陽安縣封一千戶此蕃路出  
 玉門山逸棹嶺地多關塞俗雜華戎秋月滿而胡騎嘶朔風動而邊路咽公威  
 能制寇道足庇民布政宣風遠懷迎服而朝光夕照未息於銅壺却死還香空  
 傳於金寬春秋六十有六以十九年二月六日寢疾薨於位沙崗府見哀結於  
 擬官輟膳興嗟悼深於舖履穿甘辛歲次庚申二月庚申十四日癸酉厝於  
 葬州涇陽縣洪濟原奉賢鄉靜民里王人吊祭謚曰德公禮也惟公善風儀有  
 若虛在於如如大可知道著於生前遺直遺愛聲傳於後而龍松百尺如  
 色於摧殘華表千辛終歸於矣爐乃為銘曰  
 逝矣崇基猗猗連系馬奔軒冕連胤裔於穆景公英威冠世濡足授手嗣王  
 及帝圖魄降靈方祇薦祉以茲開駭譽為成里惟公挺秀淵淳岳峙履明時戴  
 龍朝終時運登 聖運厲惟新丹陛堅衛紫宸補衣朱戟暢叙文茵  
 威振遠樹德臨民千月未窮一生涯畢哀輝夜動靈輿曉出雀淩黃腸勝銘曰  
 曰今來古往飛聲標實

Pl. 11

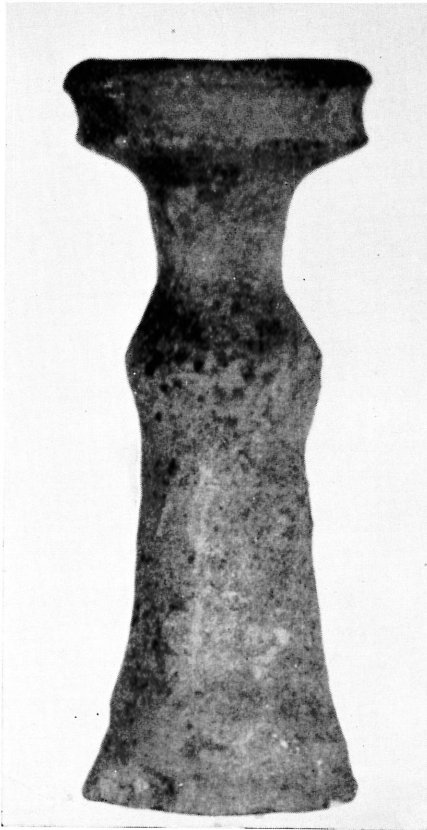
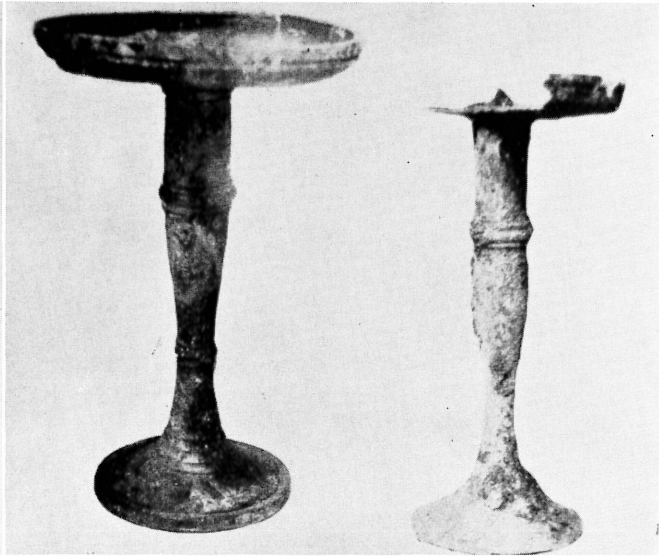


Pl. 12

Pl. 13



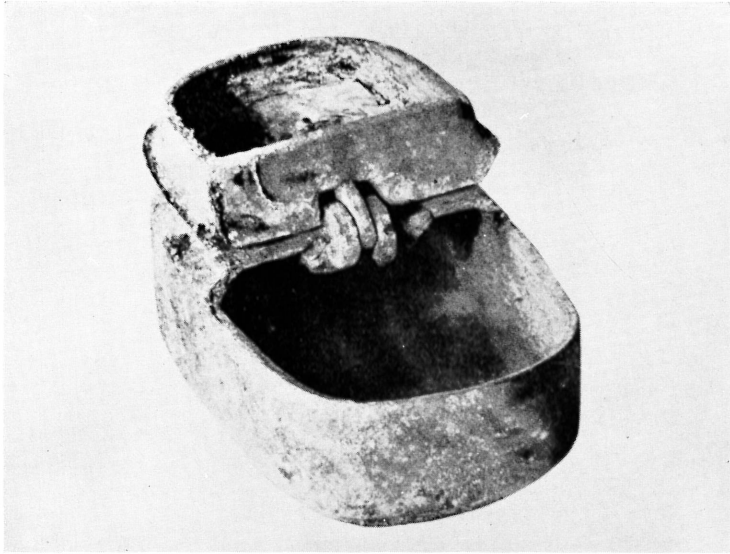
Pl. 14



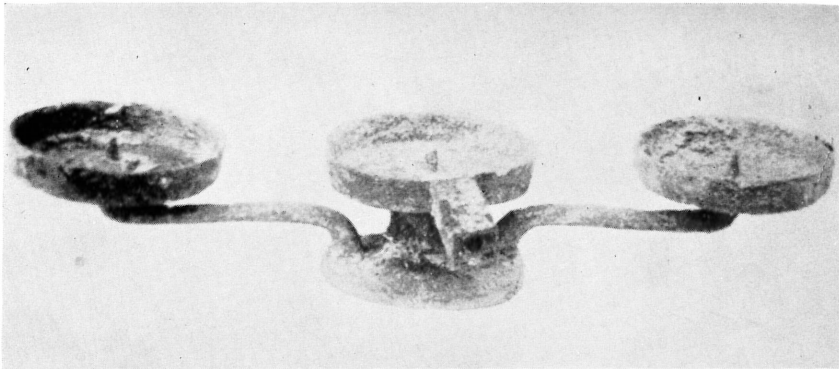
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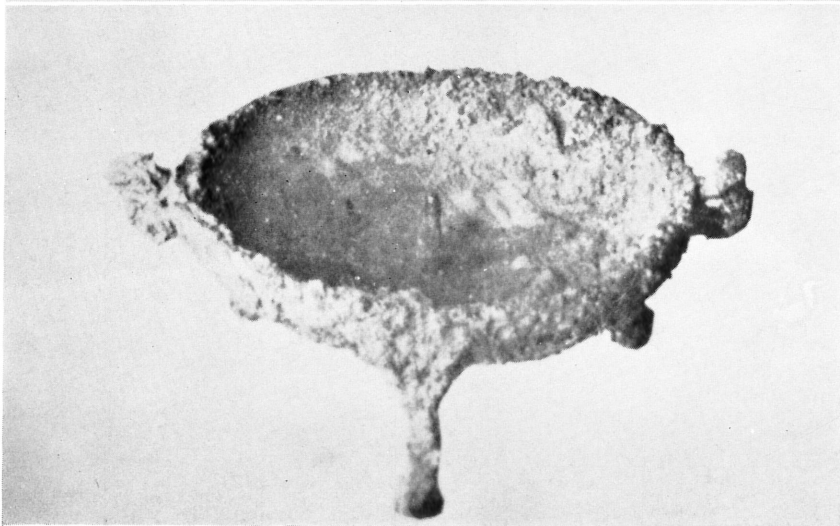
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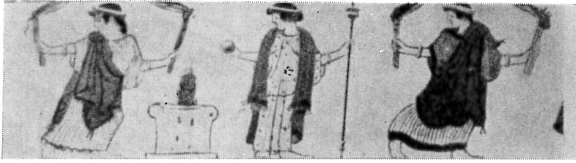
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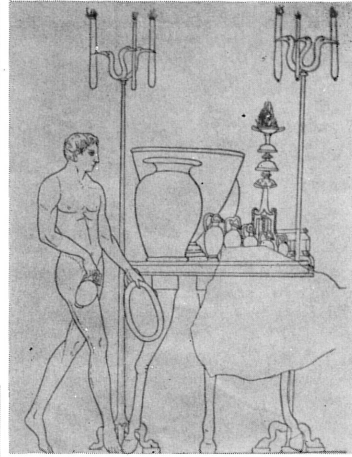
Pl. 18



Pl. 19



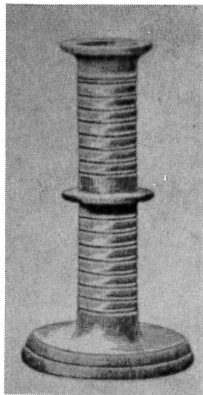
Pl. 20



Pl. 22



Pl. 21



Pl. 23



Pl. 24



Pl. 25

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