

中国早期的活字印迹

The Early Imprints of Movable Type in China

中国印刷博物馆

China Printing Museum

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早期活字的印迹

The Early Imprints of Movable Type

- 1.印章的活字特征
seal's movable type characteristics
- 2.批量复制的小印品——封泥
Batch of small prints - FengNi (clay-sealing)
- 3.活字范铸——秦公簋
Gui bronze vessel of Qin — moulds of composed types.
- 4.陈曼簋上的活字痕迹
The imprints of types on Chen Man Fu (bronze vessel)
- 5.活字拼版——秦陶量
Pottery measuring vessel of Qin - typesetting
- 6.早期的钱币印文
Characters pressed on early coin

一、印章的活字特征

I . Stamping-seal's Movable Type Characteristics

中国学者普遍认为，印章是雕版印刷术的技术先导。
Chinese scholars generally agree to that, stamping with seal is the leading techniques of woodblock printing.

印章即是最早的活字形式。

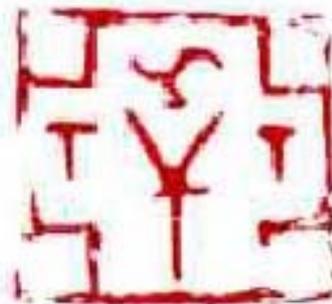
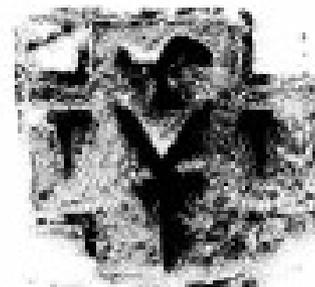
Seal is the earliest form of type printing.

“印”字在甲骨文中就有，自先秦以来就是指印章。
The Chinese character “Print(印)” has existed in oracle bone inscription in 1500BC, it indicated to seal since Pre-Qin (before 221BC).

子亘□□商代（公元前**1324**～前**1259**年）铜质玺，出土于安阳殷墟遗址，藏于台北故宫博物院。
Bronze seal (1324-1259 BC), unearthed in Anyang Yinxu Site, collected in Taipei National Palace Museum.

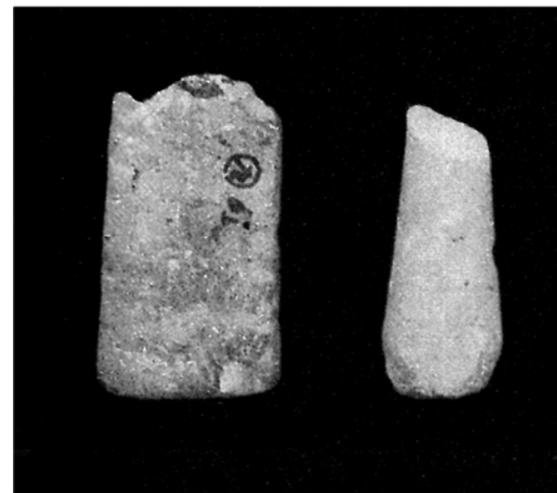


亚禽氏商代（约公元前**1324**～前**1259**年）铜质玺，出土于安阳殷墟遗址，藏于台北故宫博物院。
Bronze seal (1324-1259 BC), unearthed in Anyang Yinxu Site, collected in Taipei National Palace Museum.



商末周初时期（约3100年前）的陶印章印体正视、印面视及印文，长阳香炉石遗址出土。这两枚陶印无疑呈现出了典型的活字造型。

Body face, seal surface view and inscriptions of the pottery seal, about 3100 years ago, unearthed at Chang Yang Xianglushi ruins in Hu Bei province. This two pottery seals reveal a typical modeling of type printing.



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- 已出土的战国时期齐国的陶器上多有阳文陶器印迹。2002年山东新泰一次便出土了100多件印文保存完好的陶片。其上的文字用阴文印章压印而成。可能的情况是，殷商时期已使用玺印压印于陶器之上了。
 - Unearthed potteries of the warring states period have some relief imprints. In 2002, Shandong Xintai once unearthed more than 100 pieces of potteries imprinted with well-preserved characters. Those characters were stamped by seal in intaglio. More likely, in Shang Periods seal had been used in printing pottery.
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公豆陶量，山东临淄出土，战国时齐国（公元前475-前221年）量器。壁上有印文两处。一处阳文“公豆”二字，另一处阴文，字迹不清。

Gong Dou pottery measuring vessel of Warring States(475-221BC), unearthed from Linzi of Shandong province. There are two imprints on it, one is relief Gong Dou, the other one is unclear intaglio character.



公区陶量，山东临淄出土，战国时齐国（公元前475-前221年）量器。壁上有戳印铭文两处。一处阳文“公区”，另一处阴文“里人”。

Gong Ou pottery measuring vessel of Warring States(475-221BC), unearthed from Linzi of Shandong province. There are two imprints on it: one is relief Gong ou, the other one is intaglio Li Ren.

二、批量复制的小印品——封泥

II .Batch of small prints - FengNi (clay-sealing)

- 封泥无疑就是最早的印品。在纸张没有发明之前，泥土是最好的文字载体，就像5000多年前苏美尔人刻写的泥版书。

Clay-sealing undoubtedly is the earliest prints. Clay was the best carrier of characters before the invention of paper, just like clay tablets written by Sumerians more than 5000 years before.

- 就封泥本身而言，它承载了图文的信息，它可以由同一个印章批量复制，具有标准和批量的印品特性。

On the clay-sealing itself, it carries information of the graphic and text. It can be batch processed to copies by the same seal. So it has two prints's characteristics, namely, standard and batch.

- 封泥的使用在秦、汉时期达到高峰，东汉以后随着纸张的普及而逐渐减少。

The use of clay-sealing between Qin and Han reached a peak period. Along with the popularity of the paper after East-Han, it gradually reduced in use.

战国（公元前475-前221年）封泥东安平丞三枚，上海博物馆藏，由同一枚印章压印而成。

Three clay-sealings of "Dong An Ping Cheng" from Warring States (475-221BC), collected by Shanghai Museum. They were imprinted by the same seal.





战国三晋时期（公元前376-前221年）私玺封泥，此枚封泥由同一印章压印文六处，上海博物馆藏。

A personal clay-sealing of Sanjin (475-221BC). The six imprints were all imprinted by the same seal, collected by Shanghai Museum.

三、活字范铸——秦公簋

III. "Qin" Bronze Gui —Its Moulds was Arranged with Types

- 中国的铸造技术发端于新石器时代，早期的青铜器基本上都是采用传统范铸法生产的。
- Chinese foundry technology was originated from the New Stone Age. The early bronzes were basically produced with the traditional Model casting method.
- 一般情况下是先用泥料塑造或者复制成型，经阴干、焙烧成为有相当强度及硬度的陶范。
- In general, the first step was to mould or duplicate with clay, and then dried, baked. Finally, it had become pottery mould with quite strength and hardness.
- 模范关系是简单的复制关系。
- The relationship between model and mold is a kind of simply reproduction.

秦公簋是春秋秦景公时期（公元前576-537年）盛食器，共计104字，现藏中国国家博物馆。

“Qin” bronze Gui, Spring and Autumn Period (576-537 BC), with totally 104 inscriptions, collected by China National Museum.

秦公簋铭文制作使用了方块活字印模法。

“Qin” bronze Gui’s inscriptions were made with movable impression method.

著名考古学家马衡曰：“秦公簋是用戳子印字在土范之上，这真是活字的创作了”。

Famous archaeologist Ma Heng said: “Gui of Qin’s inscriptions were made by ceramic mold which was printed by seals. This was the creation of the type.”

考古学家郭宝均说：“这或者是受了图案的影响，推广到文字方面的尝试，应推为中国活字板之祖。”

Famous archaeologist Guo Baojun said: “This may be an attempt which promoted the pattern’s imprint method to the field of characters.

秦公簋，现藏中国国家博物馆。器内铭文104字是用一个个单字模打在陶范上而后铸出来的。

"Qin" bronze Gui, the all 104 inscriptions were casted by ceramic mold which was printed by individual type-seals. Collected by China National Museum.





The rubbing of "Qin"
bronze Gui

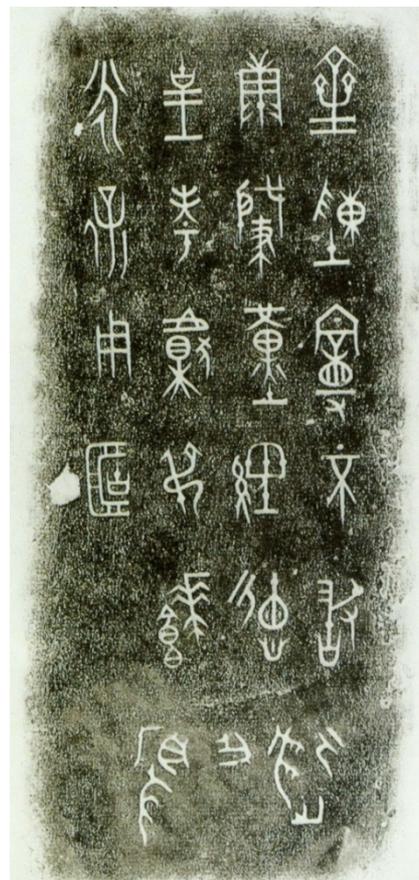
四、齐陈曼簋上的活字痕迹

IV .The Imprints of Types on Bronze Vessel-- Chen Man Fu

- 随着范铸技术的发展，春秋中期以后至战国时期又出现了单元纹饰拼对技术。
- Along with the development of mold casting technology, the segment mold technology appeared from the middle stage of the Spring and Autumn Period to the Warring states.
- 东周齐国（公元前488-前432年）的陈曼簋的铭文便带有活字印迹。它的制造结合了拼范技术与铸造技术，留下了活字排版的痕迹。
- There were some imprints of types on the Chen Man Fu of East-Zhou Period (488-432 BC). It was combined with pasteup and casting technique. It left some traces of typesetting.

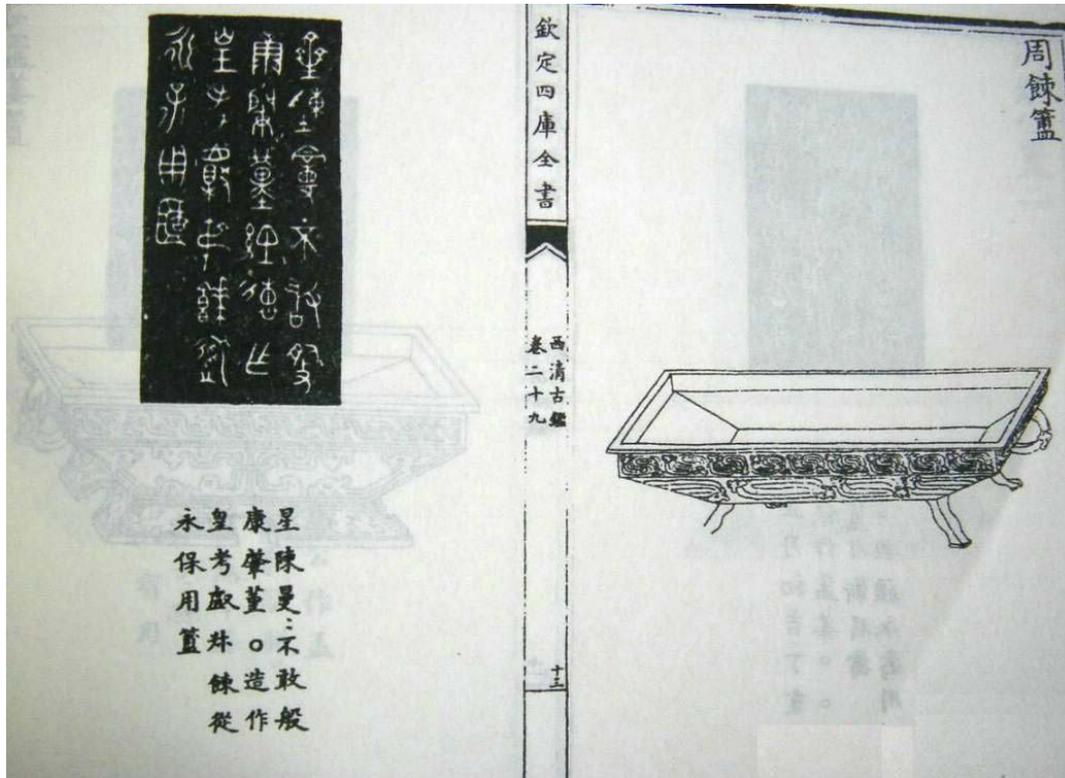
东周齐国（公元前488-前432年）的陈曼簠及其拓片，
现存上海博物馆。

Chen Man Fu of Qi in the East Zhou period and its rubbing,
held in Shanghai Museum.



武英殿刻本《四库全书》之《西清古鉴》收录的周陈簋。

Chen Fu of Zhou Dynasty in Xiqing Gujian which was collected in the Si Ku Quan Shu printed by Wu Ying Dian in Forbidden City.



五、活字拼版——秦陶量

V. Pottery Measuring Vessel with Typesetting

- 公元前221年，秦始皇统一了六国，为统一度量衡，向全国颁发了诏书。这篇诏书或在权、量上直接凿刻，或直接浇铸于权、量之上。

In 221 BC, Qin Shihuang unified the six countries. In order to unify weights and measures, he issued the imperial rescript to the whole nation. This rescript was directly carved or casted on the measuring vessel.

- 出土的秦代陶量上印有秦始皇诏书的全文，全文四十个字。每印四字，恰好用十个印排印完整个诏书。

Unearthed pottery measuring vessel printed the whole Qin Shihuang rescript, forty words in all. Each plate had four words, with just 10 plates printed the entire rescript.

山东邹县出土秦（公元前**221-前206年**）陶量，外周压印诏书，共十枚铭文印章，现藏山东省博物馆。

A pottery measuring vessel of the Qin Dynasty (221-206BC), unearthed in Zou county, Shandong Prov.. The imperial rescript was printed outside by a total of ten seal-plates, collected by Shandong Museum.



1950年山东邹县出土陶量，诏书的形式和内容及铭文位置與左图一致，现藏中国国家博物馆。

A pottery measuring vessel unearthed in Zou county, Shandong in 1950. The form and position of this rescript is the same as the left one, collected by China National Museum.



诏书的形式、内容和铭文位置与前面2图相同。但除诏书铭文外，在口沿还有“驪”的印章。现藏北京故宫博物院。

The form, content and position of this rescript are the same as the upper two. In addition, there is a "Zou" seal along the mouth of it, collected by the Beijing Palace Museum.



1963年山东邹县出土。外周铭印诏书全文。此外，在近口沿处印有一“驪”字，底部还有“驪”字二处，现藏山东省博物馆。

A pottery measuring vessel unearthed in Shandong in 1963. The imperial rescript was printed outside. In addition, on its mouth and bottom part each has a "Zou" seal, collected by Shandong Museum.



将这四件陶量其中的一个活字印放大对比，尽管活字印经历压印和烧制两道工序，而且此图片为墨拓片，它们仍然有着非常规范标准的印制特点。

Though those inscriptions underwent two processes of stamping and baking, and what we see are rubbings, through comparison of one types-plate of those four vessel, we clearly find that they all have the normative characteristics of the printing technique.



六、早期的钱币印文

VI. Characters Pressed on Early Coin

- 中国现存最早的压印货币为春秋晚期至战国时期的楚国爰金。
China's earliest existing stamping coin is the gold coin of "Yuan" made (by the Chu State) in the Warring States.
- 爰金的制作是用铜印将“郢爰”、“陈爰”等文字压印到浇制成型金版上形成阴文字样。
The method of gold coin of "Yuan" was to use copper seal to stamp the "Ying Yuan" and "Chen Yuan" on the cast gold plate, so as to form the intaglio words.
- 近年来出土的铜印模有两种类型，一种为棒状，一种为锥状，均便于施加压力。
The copper seals excavated in recent years have two shapes, one is the shape of the bar, another is the shape of cone, all easy to apply pressure.

郢爰铜印模，1969年安徽寿县出土，战国时期（公元前475-前221年）楚国铜质印模，中国国家博物馆藏。

Bronze "Ying Yuan" seals (excavated at Shouxian county, Anhui province, 1969) by Chu state in Warring States(475-221BC).
Collected by China National Museum.



2007年4月江苏省大丰市出土的21枚楚国“郢爰”金币，金币上的文字由前文图示印模压印而成。

21 gold "Yuan" coins, made by Chu State, excavated at Dafeng city, Jiangsu province, Apr., 2007. The words on it were printed by the seal like the picture above.



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- 由于钱币具有数量极大的特性，因此批量复制的需求特别突出。

One characteristic of coin production is its significant numbers, therefore the batch copy needs particularly prominent

- 为了实现批量和标准的要求，自秦代起，钱范就有采用祖范、母范、子范三范翻铸的方法，对应于近代铅活字印前技术中的字模、活字、纸型版浇铸铅版的工艺。

In order to realize the requirements of batch and standard, since the Qin Dynasty, coin maker used the three mould technique: ancestor-mould, mother-mould and mould. They corresponding to three technique in the modern prepress printing: types mould, types, and stereotype cast from paper matrix.



七、结论

VII. Conclusion

- 活字技术包括三项独特的工艺：**1.活字制作工艺（雕刻或铸造）；2.活字排版技术；3.印版制作工艺（纸型、浇铸）。**

Types technology includes three unique techniques: 1. type making technique(engraving or casting); 2.type setting technique; 3.stereotype making technique(paper matrix and casting).

- **随着雕刻技术的发展，铸造技术的普遍，纸墨等材料的齐备，雕版印刷术的普及，活字印刷术的发明就成为了历史的必然。**

Along with the development of the engraving technology, maturity of the casting technology, the entirety of the material such as paper, ink etc., and the popularity of engraving printing, the invention of the type printing became the inevitable history.

- 造成活字印刷术发展缓慢迂回现象的原因是多方面的，与中国社会的经济、文化、政治密切相关。

The reasons for the phenomenon that movable-type printing developed slowly and circuitously was many sided, closely related to Chinese social economy, culture and politics.

- 汉字本身的特点。

The characteristics of Chinese characters itself.

- 与雕版印刷术相比较，在整个工艺流程中对规范和标准的要求更为苛刻也是造成活字印刷术在手工业时代发展缓慢的重要原因。

Compared with the woodblock printing, the more demanding for the specification and standard in the whole process was also the cause for the slow developing of the movable-type printing in handicraft stage.

谢谢!

Thank You!



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