

BRIDGE WORLD

# 桥梁世界——邮品博览

A Wide Exhibition of Stamps

编著 苏松源

Su Songyuan



学林出版社

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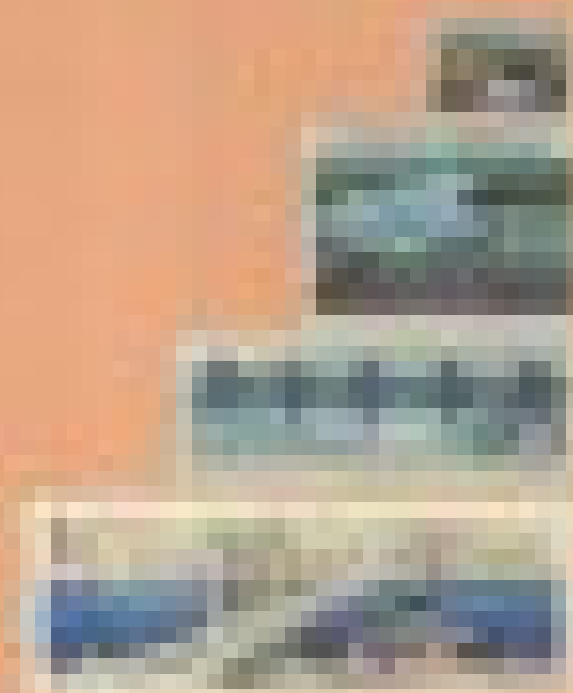
# 桥梁世界——知识博览

A FINE COLLECTION OF BRIDGES

主编 李长庚

总编 李长庚

中国出版集团



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## 桥梁世界—邮品博览

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责任编辑：张建一

出 版：学 林 出 版 社

(上海钦州南路81号楼)

电 话：64515005 传真：64515005

发 行：新华书店上海发行所

学林图书发行部（文庙路120号）

电话：63779027

传真：63768540

印 刷：上海市印刷七厂

开 本：889×1194 1/16

印 张：12.25

字 数：100000

插 页：4

版 次：1998 年11月第1版第1次印刷

印 数：5500

书 号：ISBN7-80616-609-2/G·165

定 价：168.00元



den 12. Sept. 1997

Dear Mr. Su Songyuan!

I send this letter with my best wishes  
for your stamp collection and with  
greetings to your famous Tongji-  
University.

Best regards

Fritz Leonhardt

尊敬的苏松源先生：

对你的桥梁邮品收集表示我最好的祝  
愿，并向著名的同济大学致敬。

弗里茨·莱昂哈特

1997.9.12

弗里茨·莱昂哈特 德国知名教授，国际桥梁界最著名的桥梁专家。

鉴赏桥梁邮票  
博览桥梁发展

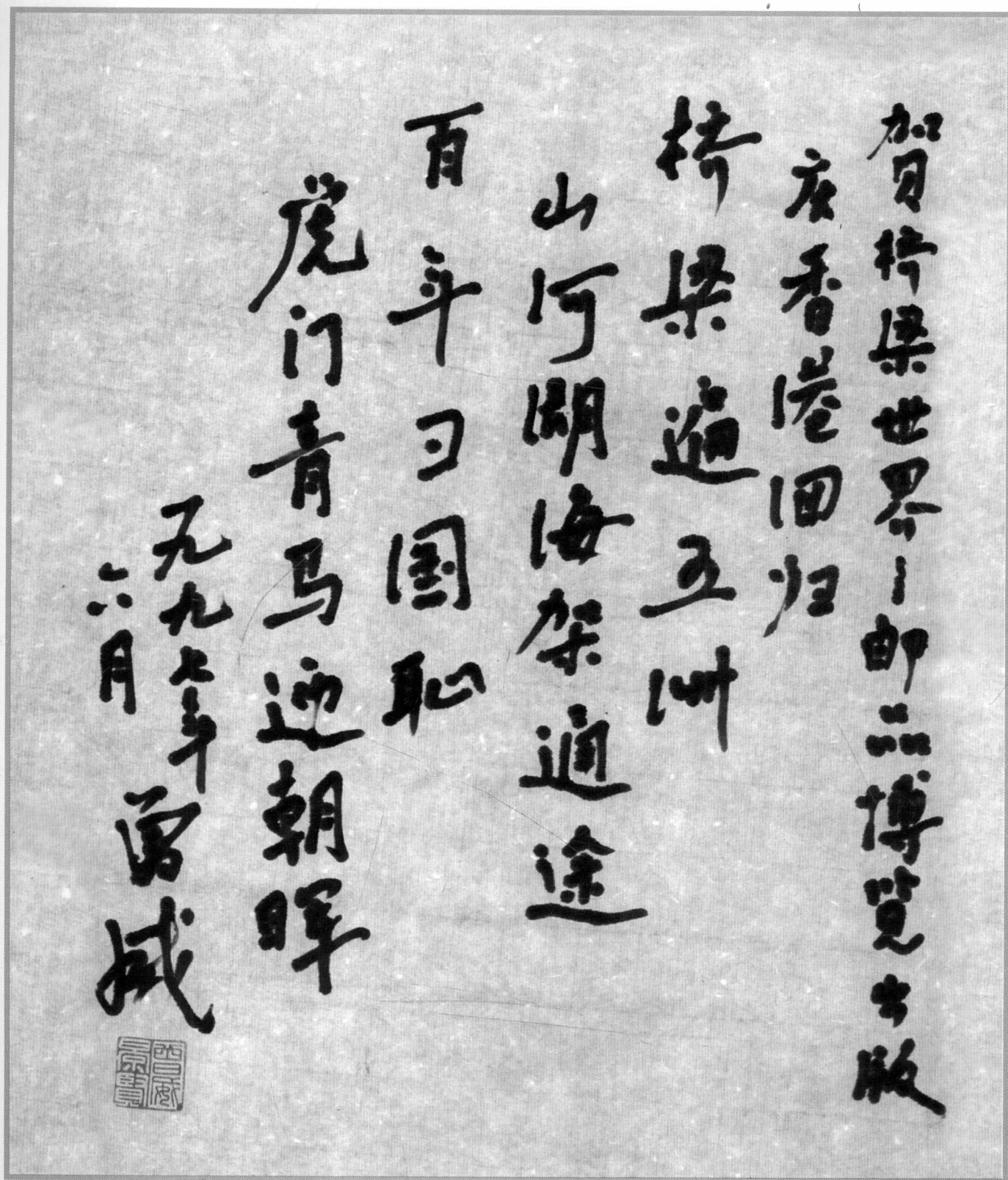
李国豪



一九九七年六月

Appreciating bridge stamps, extensively reading development of bridges. by Li Guohao ,June, 1997

李国豪 中国科学院、工程院院士，著名桥梁专家，同济大学名誉校长  
Li GuoHao: Famous expert in bridge engineering, honorary president of Tongji  
University, academician of both the Chinese Academy of Sciences and the  
Chinese Academy of Engineering



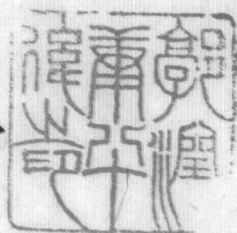
Congratulations on Publication of Bridge World-A Wide Exhibition of Stamps, celebrating Hong Kong 's return. Bridges over five continent 's Thoroughfares on vast lands. Wiping out a national humiliation after a hundred years, appearing Humen and Tsing Ma Bridges.by Zeng Wei June, 1997

曾 威 交通部科学研究院一级研究员，著名桥梁专家  
Zeng Wei: Famous expert in bridge engineering and first class research  
fellow of the Scientific Research Institute, Ministry of Communications.



桥梁在世界  
人类创造

郭润康



The Bridges World, The creation of mankind. by Guo Runkang

郭润康 著名邮学家，全国集邮联合会常务理事

Guo Runkang: Famous philatelist, managing director of Whole China Philately Association.



松源日誌集郵社著出版志賀

橋梁知識  
知識橋梁

劉廣實題



九七午五月

Congratulations on the publication of the new philatelic work by comrade Su songyuan.

Knowledge of bridges,

Bridges for Learning

by Liu Guangshi, May, 1997

刘广实 著名邮学家，国际邮展评审员

Liu Guangshi: Famous philatelist, appraiser of International Philatelic Exhibitions

# 序

苏松源同志是一位桥梁高级工程师，原任江苏省无锡桥梁工程公司总经理。他从事桥梁建设工作几十年，积累了较丰富的实践经验。60年代，他首创了双曲拱桥，为发展我国的桥梁事业做出了贡献。退休后，在原单位发挥余热之余，他又爱上了集邮，并持之以恒，以此为乐，搜集欣赏，陶冶情操。

经过几年的努力，他收集到各种有关桥的邮品700多件，时间跨度超过百年，地域包括161个国家和地区，其中有1894年比属刚果发行的世界上最早的桥梁邮票等一批精品，可谓桥梁邮品之大观。这些邮品上多姿多彩的桥梁美景，令人大饱眼福。

这本邮品画册，按桥梁结构分类编排，并附有简要文字说明，有一定的学术价值，更是一本生动形象的桥梁美学教材，值得桥梁工作者收藏。对广大集邮爱好者来说，这是专题集邮精品，也有其收藏与鉴赏价值。

苏松源同志对桥情有独钟，过去用自己的聪明才智和辛勤的劳动，在祖国的江河上架桥，为民造福；今天又在邮海中寻桥，为丰富桥文化贡献力量，编印了这本很好的画册，这种敬业精神，是十分令人钦佩的。我相信这本《桥梁世界——邮品博览》，一定会受到桥梁界和集邮界的喜爱。

王展意  
一九九七年六月一日

王展意：原交通部副部长，中国公路学会理事长

## Preface

Mr. Su songyuan is a senior engineer of bridge engineering and was former general manager of Wuxi City Bridge Engineering Co., Jiangsu Province. He has been engaged in bridge construction for decades and has accumulated a wealth of experience in his work. During the sixties, he originated the two-way curved arch bridge, making a notable contribution to the development of bridge building in our country. After his retirement, besides keeping service with his remaining energy in original unit he has also become interested in stamp collecting. He perseveres in that and takes pleasure in that. He enjoys himself in stamp collecting and his temperament and sentiment are thus being moulded.

After making efforts for many years he has collected more than seven hundred stamps of different sorts relating To bridges. The span of the time when the stamps were issued surpasses a hundren years and the regions where the stamps were published include 161 countries and districts. Among them there are such treasures of bridge stamps as those published in the Belgian Congo in 1894, the earliest bridge stamps in the world. It may be said that the collection is a magnificent spectacle. One can feast one's eyes on the colourful scenery of bridges on those stamps.

This album of stamps has been arranged according to the classification of bridge structures and attached with written notes, thus having certain academic value and, even more, being a vivid textbook on bridge aesthetics. It is therefore worth reading for bridge workers. For the vast numbers of enthusiasts for stamp collection, this album is a fine work of philately on special subject, and it is also of great value for collecting and storing and for appreciation.

Mr. Su feels speciae affection towards bridges. In the past he built bridges across rivers and valleys on motherland with his own intelligence and wisdom and painstaking labour to benefit people. Today, searching bridges in the sea of stamps he has compiled this very good album to contribute to the enrichment of the bridge culture. This kind of conscientiousness towards profession really Commands admiration. I believe that the book 《Bridge World-A Wide Exhibition of Stamps》 will surely be attractive to both bridge engineering and philately circles.

Wang Zhanyi

1997-06-01

Wang Zhanyi: Former Vice-Administer of Communications and chairman of the boad of ditectors of Highway Institute of China.

# 前言

什么叫桥梁，就是供铁路、道路、渠道、行人等跨越河流、山谷或其他交通线路时使用的建筑物。桥梁与人类的关系，自古以来就非常密切。人类从原始的大自然的造化中获得启迪，运用自己的聪明与智慧，创造了各式各样的桥梁。在最基本的三种桥式中，拱桥起源于模仿石灰岩溶洞所形成的“天生桥”而建成的石拱桥，演变为木拱桥和铸铁拱桥；梁式桥起源于模仿倒伏在溪沟上的树木而建成的独木桥，由此演变为木梁桥、石梁桥，直至19世纪的桁架梁桥；悬索桥起源于模仿天然生长的跨越深沟而可资攀援的藤条而建成的竹索桥，演变为铁索桥、柔式悬索桥，直至有加劲梁的悬索桥。近来由于高强度材料和先进施工工艺的出现，又有了预应力混凝土桥和斜拉(张)桥。

桥梁的分类，有多种不同的方法，要看从什么角度去区分，一般有如下的分类方法：

按主要承重结构体系分，有拱桥、梁式桥、悬索桥、刚架桥、斜拉桥和组合体系桥。

按桥梁上部结构的建筑材料分，有木桥、石桥、混凝土桥、钢桥和结合梁桥。

按跨越的障碍分，有跨河桥、跨谷桥、跨线桥和高架线路桥。

按桥面位置分，有上承式桥、中承式桥、下承式桥和双层桥。

按桥梁平面的形状分，有正交桥、斜桥和弯桥。

按桥梁长度分，有特大桥、大桥、中桥、小桥和涵洞。

按使用期限分，有临时性桥、永久性桥和半永久性桥。

按制造方法分，混凝土桥分就地灌注桥和装配式桥。

此外，还有一些特殊桥梁，如活动桥(又称开启桥)、军用桥、浮桥、漫水桥等。

这本《桥梁世界——邮品博览》汇集了从有桥梁邮票以来161个国家和地区的700多件票、封、片、戳等多种邮品。其中中国的邮票齐全，外国邮品约占88%；并选用了1894年比属刚果的桥票于1896年的实寄封；1896年匈牙利邮资明信片；1898年的美国第一枚桥梁邮票；南斯拉夫的铁托拱桥；英国的亨伯悬索桥；法国的诺曼底斜拉桥等世界名桥邮票；以及样张样票等，还有国际上享有声誉的桥梁专家的实寄封。

本册邮品按主要承重结构体系分类进行编排，因有些邮品无法找到确切的资料，从邮品上也无法看出“庐山真正面目”，所以编排不妥之处在所难免，请读者原谅。书末以展望建造洲际跨海大桥，实现全球通的宏伟蓝图而结束。



# Introduction

What is a bridge? It is a structure that spans an obstacle such as a river, valley, or other traffic lines to provide a roadway for railway, road, viaduct, pipeline, or pedestrian traffic. From the ancient time there has been very close relations between the bridge and mankind. Mankind, inspired by the primitive Creation of Nature, and using own ingenuity and wisdom, has created bridges of different types. Among the three most basic types of bridge, arch bridge, originated from imitation of "natural bridge" formed as limestone cave, was first constructed as stone arch bridge, and then timber arch bridge and cast iron arch bridge were developed. Beam bridge originated from imitation of single-plank bridge formed by a log lying across a stream and then timber beam bridge, stone beam bridge and, till 19th century, truss girder bridge were evolved. Suspension bridge, originated from imitation of naturally grown climbable vines creeping across a deep ditch, was first constructed as bamboo suspension bridge. and then iron suspension bridge, flexible suspension bridge and even suspension bridges with stiffened girders were developed. Recently, prestressed concrete bridge and cable-stayed bridge have appeared due to the advent of high-strength materials and highly efficient construction technology.

Bridges can be broadly classified as follows:

According to the difference of the main load-bearing structural systems, there are arch bridge, beam bridge, suspension bridge, frame bridge, cable-stayed bridge and combined system bridge, as shown in the following figures.

According to the difference of the materials for superstructures, there are timber, stone, concrete, steel and composite girder bridges.

According to obstacles spanned by the bridge, there may be bridges across rivers, gorges, traffic lines and elevated line bridge.

According to the levels of bridge floors there may be top-road type, half-through type, through type bridges and double-deck bridge.

According to the figures in plan, there can be square, skew and curved bridges

According to span lengths of bridges there can be extra-long span, long span, medium span and short span bridges and culverts.

According to the life time of bridges there are temporary, permanent and semi-permanent bridges.

According to construction methods, concrete bridges may be classified as cast-in-place and precast ones.

Besides, there are special bridges such as movable bridge, military bridge, floating bridge and submersible bridge, etc.

This book contains 726 pieces of stamps, envelopes and postcards with postmarks from 161 countries and regions where there were bridge stamps first appearing. Among them, there are complete set of bridge stamps from China, and 88% of foreign stamps including a really posted (in 1896) envelope with bridge stamps issued (in 1894) in the Belgian Congo, a Hungarian postcard of 1896, and such famous stamps as the first bridge stamp of the United States in 1898, the Tito Arch Bridge stamp of Yugoslavia, the Humber suspension bridge stamp of England, the Normandie Bridge stamp of France and other sample stamps. There are really posted envelopes from internationally well-known bridge experts also included in the book. The arrangement of pictures in this book is in terms of the main load-bearing structural system of bridges. It is unavoidable that there are some places inappropriate in the arrangement due to a lack of definite data or difficulty in reading stamps. That is what asked to be forgiven by readers. Finally, the book ends with an intercontinental ocean bridge in prospect, hoping to carry out a magnificent blueprint of global thoroughfares.

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拱桥是指用拱圈或拱肋为主要承重结构的桥梁。拱桥在铅垂向荷载作用下,其拱圈主要受压,支承拱圈的墩台不仅承受竖直力,而且还要承受水平力,称为推力式拱桥;如果在拱圈两端间连一拉杆以承受拱的水平推力而墩台只承受竖直力时,则称为无推力式拱桥,习称系杆拱桥。

拱桥为桥梁的基本体系之一,建筑历史悠久,外形优美,古今中外名桥遍布各地,在桥梁建筑中占有重要地位,它适用于大、中、小跨公路或铁路桥,尤宜跨越峡谷,又因造型美观,也常用于城市、风景区桥梁建筑。

拱桥的类型,按拱圈(肋)材料可分为石拱桥、钢拱桥、混凝土拱桥和钢管混凝土拱桥;按拱圈(肋)的静力图式可分为无铰拱桥、双铰拱桥和三铰拱桥;按桥面所在的位置可分为上承式拱桥、中承式拱桥和下承式拱桥;按拱圈(肋)截面形式可分为实体拱、箱形拱、双曲拱、桁架拱等。

世界上最大跨度的拱桥要数美国新河钢拱桥,其跨度达580m。

# 拱 桥

## Arch bridge



Arch bridge is a kind of bridge that uses arch ring or arch ribs as its main load-bearing structure. Under vertical loads the arch ring of an arch bridge is mainly subjected to compression. When the piers and abutments of the bridge are not only subjected to vertical forces but also horizontal forces the bridge is called a thrust-type arch bridge. If there is a tie bar linking the two ends of each arch rib to resist horizontal thrusts of the arch, the bridge will then be a without-thrust type arch bridge, usually termed tied-arch bridge.

Arch bridge is one of the basic systems of bridges. It has a long history of construction. Its outward appearance is graceful. It has been constructed all over places at home and abroad from ancient time to present. It is suitable to be built as a long, medium or short span highway or railway bridge. It is especially suitable to be built to span gorges or valleys. It is also often used in bridge building in cities and at scenic spots for being beautifully shaped.

Arch bridge may be of different types in terms of different aspects. According to materials used for the arch ring (or ribs), there are stone, steel, concrete and steel pipe concrete arch bridges. According to mechanical systems, there are non-hinged, two-hinged and three-hinged arch bridges. According to the positions of bridge decks, there are top-road type, half-through type and through type arch bridges. According to the shapes of cross-sections of the arch ring (or ribs), the bridge can be classified as solid arch, box arch, two-way curved arch, trussed arch, etc.

The arch bridge with a longest span in the world is the New River steel arch bridge in U.S.A. Its main span length is 580m.





马恩 岩洞桥。  
Isle of Man, rock  
bridge

泰国 岩洞桥。  
1997年票  
Thailand, rock  
bridge, 1997



安德烈斯 岩洞桥  
Antilles, rock bridge

瑞士 拉维特估  
岩拱桥  
Switzerland, rock  
arch bridge



阿根廷 天然桥。  
Argentina, natural bridge





法国 阿尔代什峡谷天然岩洞桥。

France, natural rock bridge



智利 天然石桥，航空邮筒实寄。  
Chile, natural stone bridge



安济桥，又称赵州桥，位于河北省赵县。公元595 - 605年由匠师李春主持建造，跨径37.02m，宽9m，为空腹式石拱桥。是中国保存完好且最古老的石拱桥，1991年被列为世界文化遗产。

Anji Bridge, or Zhaozhou Bridge, at Zhaoxian County, Hebei Province, built by master Li Chun in 595 - 605 A. D. Span 37.02m. Width 9m. Open spandrel arch bridge. The well preserved existing ancient stone arch bridge in China. Ranked a cultural heritage of the world.







宝带桥，位于江苏省吴县，53孔，桥长317m，始建于唐(公元806年)，历经重建，是中国保存完好的最长石拱桥。  
Baodai Bridge, at Wuxian County, Jiangsu Province. Whole length 317m, 53 spans. First built in 806 A. D. and rebuilt several times since then.



井冈山耒石桥，1928年4月28日在此成立中国工农红军。  
Longshi Bridge on Jinggangshan Mountain, where the Chinese Worker-Peasant Red Army founded on 28 April, 1928



北海陡山桥，又称永安桥，5孔石拱桥，是燕京八景之一。  
Doushan Bridge, or Yong'an Bridge, at Beihai Park, Beijing, China, 5 span stone arch bridge. One of the Eight Sights of Beijing.



芦沟桥，始建于1188年，11孔石拱桥，为燕京八景之一，是新中国发行的第一枚桥梁邮票。  
Lugou Bridge, first built in 1188, 11 span stone arch bridge, one of the Eight Sights of Beijing, the first bridge stamp of new China.

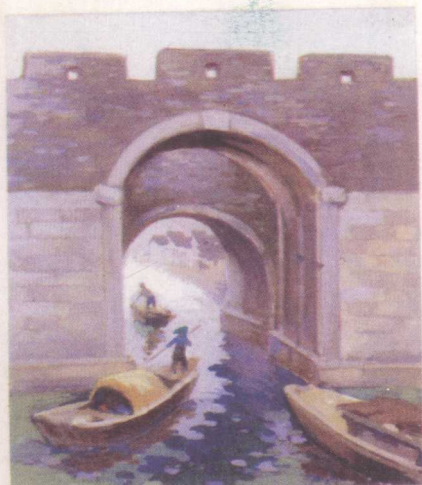


龙源石拱桥，有井冈山门户之称。  
Longyuan stone arch bridge, called the gate of Jinggangshan Mountain.



成渝铁路煤窑桥。  
Coal-Pit Bridge on Chengdu-Chongqing Railway, China

## 苏州建城二千五百年 The 2500th Anniversary of the Founding of Suzhou City



中华人民共和国邮电部发行  
Released by the Ministry of Posts and Telecommunications of the People's Republic of China

## 中国人民邮政明信片 Postcard The People's Republic of China



苏州城墙水门桥，建在穿过城墙的河道上，设有闸门，平时可通航，战时放下闸门可阻敌入侵。  
The well preserved existing stone arch bridge in China. City Wall Shuimen (Water Gate) Bridge in Suzhou City. Built along the ancient town wall over a river course, provided with sluice gates used to prevent invasion from enemies.

JP9(1-1) 1986