

MENDEL L. PETERSON
LARGE GREEN ALBUM

FRANCE

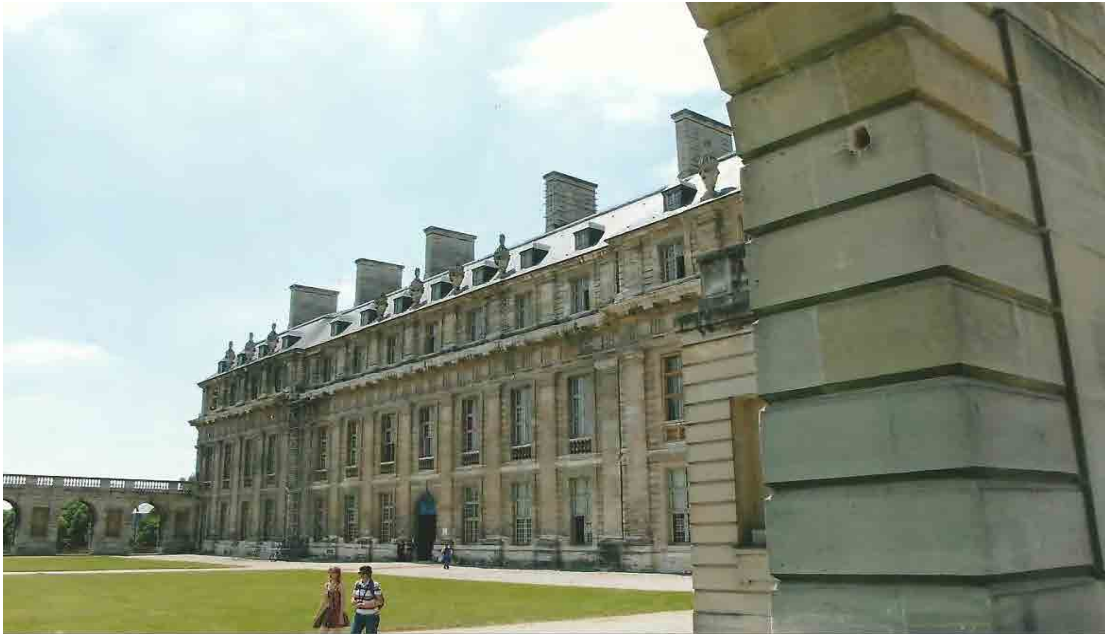
UPDATED WITH THE CORRESPONDING
EDITOR'S ALBUM

EDITOR'S ALBUM

ORDNANCE PIECES

VINCENNES (2013)

SERVICE HISTORIQUE DE LA DÉFENSE (DEFENCE HISTORY DEPARTMENT)



The origin of the Castle of Vincennes is to be found in a hunting lodge built by King Louis VII (1137-1180), who enjoyed hunting in the vast forest that at the time dominated the valley of the Marne. It was frequented by Philip Auguste, who built, then enlarged an early manor house and, from the reign of Saint Louis on (1226 – 1270) it became a frequent sojourn of the French kings.

The present day castle dates, in part of the 14th century. Along its long history, the fortress has been used as a manufacture, a prison, a military fort, and the traces of this varied history are still visible.

The present day “Service Historique de la Défense” has recently concentrated, in the Pavillon du Roy, next to the Donjon (the famous 52m. high dungeon), the different departments of the French Historical Service of the Defence: Army, Navy, Air Force and Gendarmerie. These four “Services Historiques” were previously housed in their own separate “pavillon” or wing of the huge fortress of Vincennes. The “Service” runs no museum but a small number of 19th century French pieces, complete with their original carriage are displayed on the ground floor and are accessible to the public.

Although it is not a museum, the “Etablissement principal” of the “Service Historique de la Marine” in the fortress of Vincennes, near Paris, keeps a small number of cannons on the ground floor, which have been photographed and commented on in the following pages.

The present day “Service Historique de la Défense” has recently concentrated in the Pavillon du Roy, next to the Donjon (the famous 52m. high dungeon), the different departments of the French Historical Service of the Defence, Army, Navy, Air Force and Gendarmerie, which were previously housed in their own wings of the huge fortress of Vincennes and were efficiently run by a sufficient number of highly competent archivists and librarians. Today (2013) with too little personnel, there are long delays in obtaining documents not a good representation of the French armed forces.

MENDEL L. PETERSON LGA

FRANCE

PARIS

**MUSEE DE L'ARMEE AT THE HOTEL DES INVALIDES
(FRENCH ARMY MUSEUM)**

within the same album:

MONACO

ARTILLERY AT THE PRINCE'S CASTLE

PARIS

LARGE GREEN ALBUM

ARMY MUSEUM AT THE “HOTEL DES INVALIDES”

INTRODUCTION

Mendel Peterson has left in his personal archives two unfinished LGAs that concern French collections: “Musée de l’Armée” in Paris, at the Invalides, “Musée de la Marine Nice” (no longer exists, the cannons in Toulon) and one for Monaco (see further on).

The LGA for “Les Invalides” is not one of the best organized or of the most complete. The reasons probably are that it is the earliest of his European LGAs, assembled at a time when his ideas on how exactly to organize the albums were not yet clear. The other reason is that the museum itself was disorganized. The museum is run by the French Army. It took the French Army a long time to recover from the trauma and disorganization of the defeat of 1940. Part of the collections, mostly German and Austrian cannons, had been taken as war booty by the Germans, in 1940. It is only from 1946 on that the “Commission des Réparations” began to tour Germany and organize the repatriation of the pieces that had been taken. Most of the photographs that MLP made in the museum and all the photographs taken in the “Cour d’Honneur” show cannons actually lying haphazardly on the pavement. The remarkable present day (2013) organization and careful presentation of the pieces was years to come. Obviously, the French Army had other priorities even as late as 1969-1970, when MLP first visited.

The fact that the museum is run by the military is on the other hand a blessing. The “Musée de l’Armée” in Paris owns one of the most important collections in the world, certainly one of the four richest ones. It is one of the very few museums where all the pieces that were photographed by MLP in the early 1970s are still there and on display. The French military take seriously their duty of curating the memory of the French armies sacrifices and glory over the centuries and showing to the public the main tool of their trade, artillery. Still, perennity here is not synonymous for outdated structures.

Generally speaking, the “Musée de l’Armée” displays its pieces of ordnances, which date from the very earliest “Veuglaires”, breech-loading iron bombards of the 14th century to the 19th century carronades, howitzers and rifled cannons in separate groups, in separate areas, all pieces favoured with a museographical approach that serves well the exhibited weapons and the visitor.

To return to the LGA itself, its reference system requires explanations. The numbers in green refer to the 1890 Catalogue of the “Musée de l’Armée”¹. The letters between quotation marks, which are used as reference in the later pages of the album only relate to his rolls of negatives. The four digits numbers are not understood. Furthermore, few of

¹ Robert L. (Colonel), *Catalogue des Collections composant le Musée de l’Armée en 1889*, Paris, 1890.

the field notes of MLP that relate to the “Musée de l’Armée” in Paris have been found in his papers, whereas his complete field notes about the guns of the Monaco Palace and of the “Tour des Ponchettes”, in Nice, were duly filed with his negatives and clearly cross-referenced.

One piece of paper that was bound with the Paris LGA consists of a list of figures from 1 to 36, which are each related to a reference number of three digits and, in some cases, to a brief description of the cannon in reference. That list appears to refer to a planned but never made first volume for the “Musée de l’Armée” LGA. It is to be noted that what appears to be MLP’s numeration in the existing volume begins at #42 (numeration from the 1890 catalogue) without explanation (the numeration is incomplete).

A possible explanation for the missing pages and photographs came to the mind of the Editor, when he discovered a series of rolls in one of the several MLP’s mixed boxes and envelopes containing negatives and photographs taken at the Invalides (many of them in quadruples). Several of these rolls were of no use, due to either X-ray damage or under exposition. From the under exposed, un-publishable rolls and prints, and from various other envelopes, the Editor has salvaged a small number of prints, which are presented hereafter, before the actual Mendel Peterson made LGA for the “Musée des Invalides”. The sub-title: “The Editor’s tentative reconstruction of a missing first part”.

Presumably, well aware of the unsatisfying state of his French Army Museum album, MLP, years after his retirement, returned to Paris, in the first half of the year 1980, to shoot 6 rolls of Kodakrome colour slides in the “Musée des Invalides”. For various reasons, these estranged and belatedly found colour slides (without detailed captions) have not been made into a “Paris-Invalides LGA n°3”.

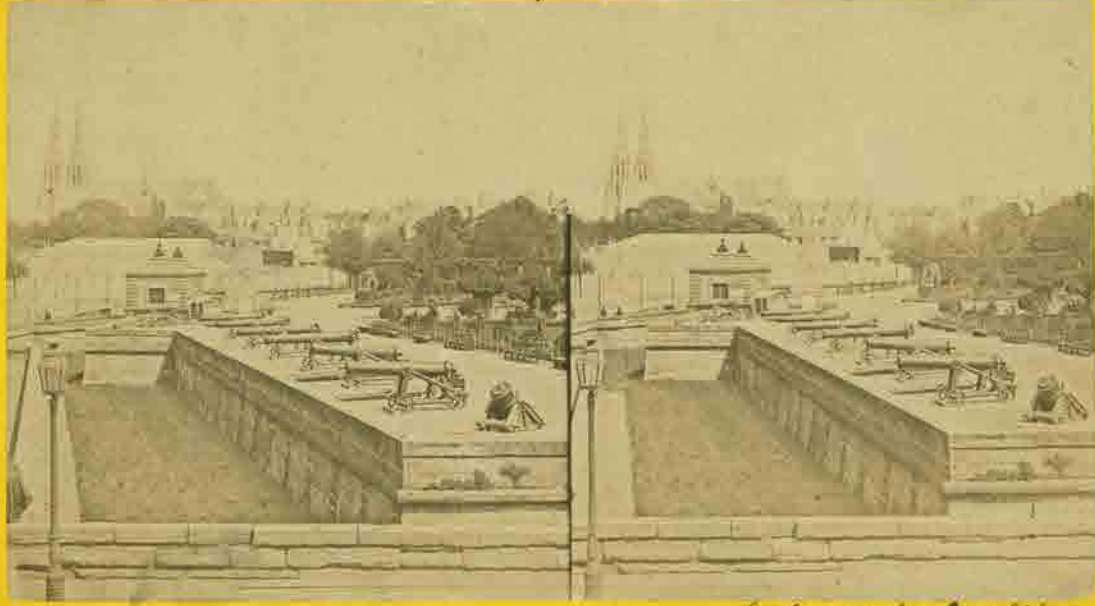
MENDEL L. PETERSON LGA

PARIS

**MUSEE DE L'ARMEE
(FRENCH ARMY MUSEUM)**

AT THE HOTEL DES INVALIDES

TOGRAPHIC COMPANY



170, RUE DE RIVOLI, 170, PARIS

Exposition des Beaux-Arts

THE ILLUSTRATED LONDON NEWS.

JAN. 10, 1852.]

I N A U G U R A T I O N O F L O U I S N A P O L E O N .



THE CANNON OF THE INVALIDES FIRING A SALUTE OF 70 GUNS.

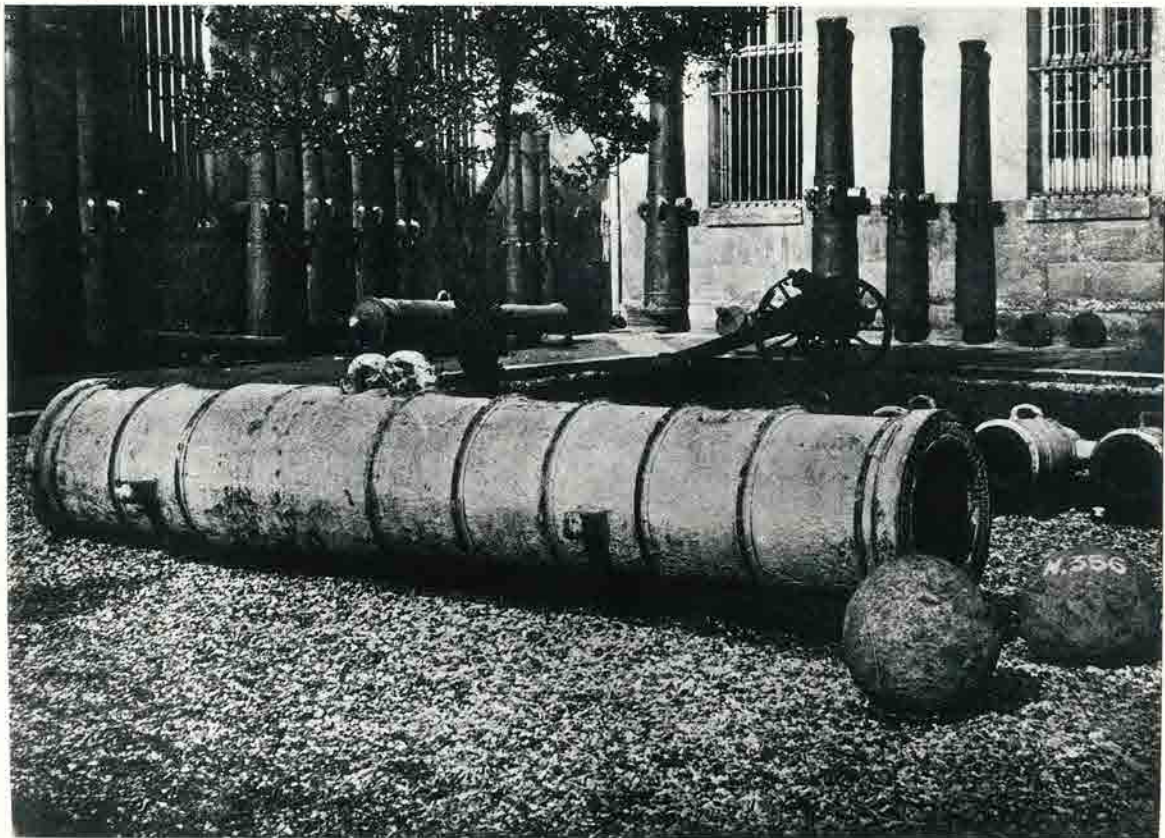
THE ILLUSTRATED LONDON NEWS.

JAN. 10, 1853.]

I N A U G U R A T I O N O F L O U I S N A P O L E O N .



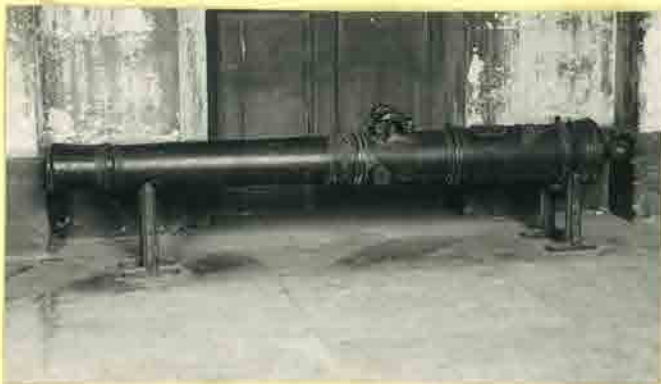
THE CANNON OF THE INVALIDES FIRING A SALUTE OF 70 GUNS.



DIE ENDERFERIN. A GERMAN BOMBARD DATED 1487, NOW IN THE MUSÉE DE L'ARMÉE, PARIS.

~~42~~ 243

DUTCH
"A. KOSTER"



N. 243. Trois canons hollandais. Sur la plate-bande de cu-
lasse on lit : *Assverus Koster me fecit Amstel redan.* Dates, 1628
pour le premier, et 1624 pour les deux autres.

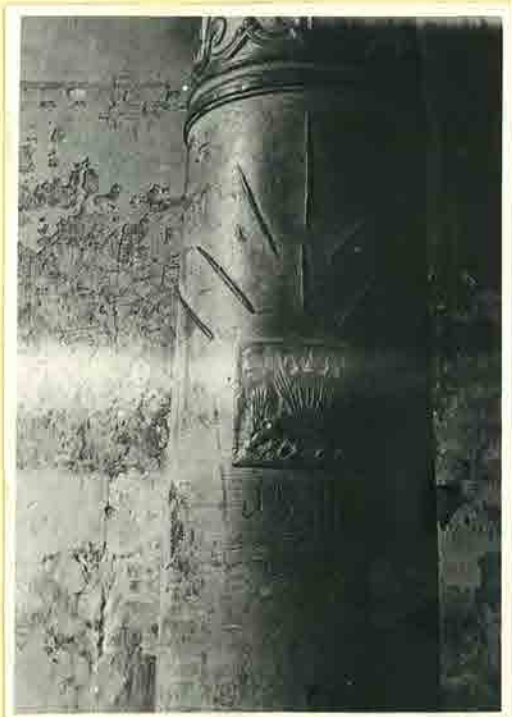


1907.4

N #53

FRENCH - Po. LOUIS XII

Culverine 17,7 Cm



6005.5

#54

FRENCH - 1507



1641-6

#55

FRENCH - LOUIS XII



N. 55. Canon français du règne de Louis XII. Premier renfort portant le porc-épic couronné, Touillons. Petit bouton de culasse taillé à pans. Volée semée de fleurs de lis. Calibre, 6 m. 172. — Pris à Alger en 1830.



6945. 7

#57



N. 57. Grande bouche à feu de la première moitié du xvi^e siècle. Elle porte deux renforts, les tourillons et cet appendice qui précéda le bouton de culasse. Elle est taillée à pans sur toute sa longueur, la volée recoupée par quatre cordons. Au premier renfort un écu écartelé, aux armes du grand maître et à celles de Villiers de l'Isle-Adam⁽¹⁾. L'écu entouré de deux



4995.8

#51

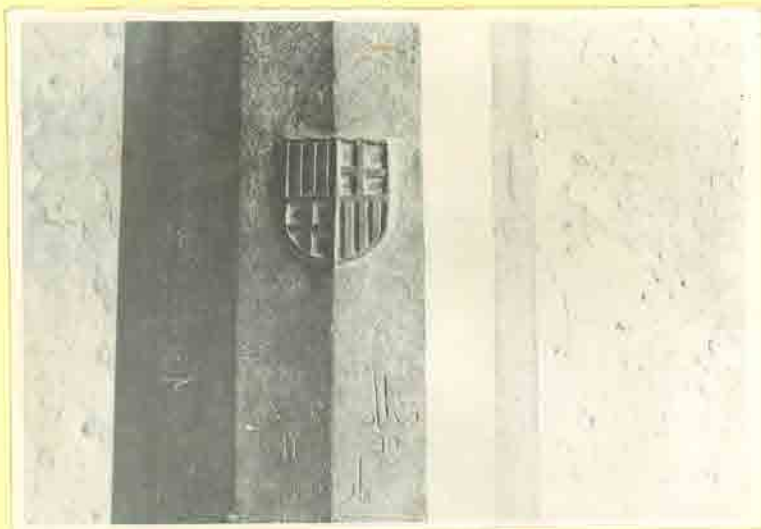


54

51

N. 51. Grande coulévrine du commencement du XVI^e siècle, divisée en trois parties taillées à pans. Elle porte un écu écartelé aux armes d'Émery d'Amboise et de l'ordre. Émery d'Amboise succéda, en 1503, à Pierre d'Aubusson, le ministre et l'ami de Louis XII. L'exécution remarquable de cette bouche à feu donne une idée de l'art du fondeur à cette époque. L'appendice qui se voit à la culasse est l'origine du bouton de culasse. Poids, 3,343 kilogrammes; calibre, 0 m. 165; longueur, 5 m. 40 (son projectile était un boulet de 24 à 30 livres). — Même provenance.

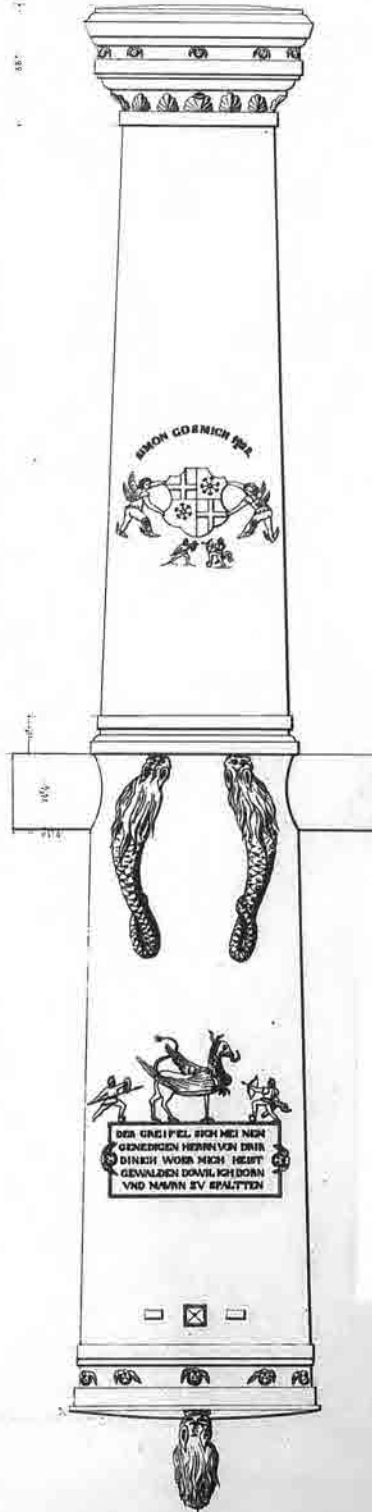
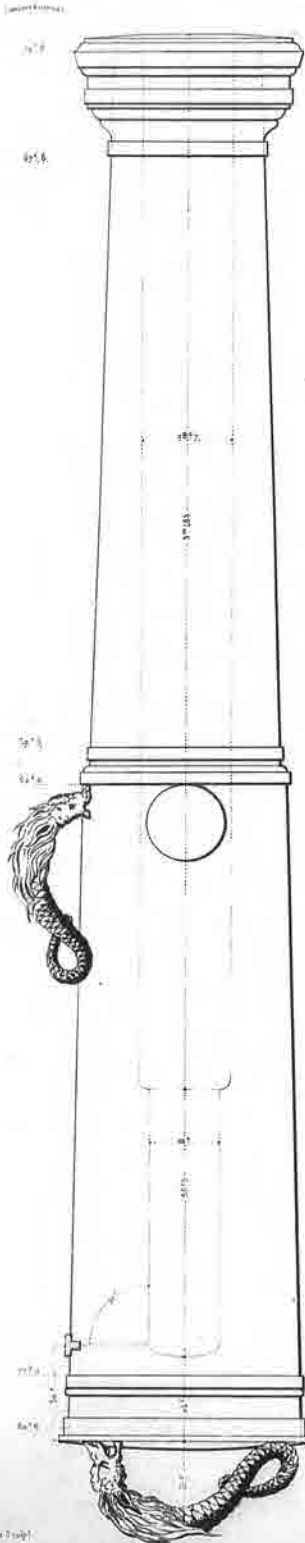
Donnée à Napoléon III par le sultan Abd-ul-Aziz.



1905, 4

Le Griffon

1666 à 1682

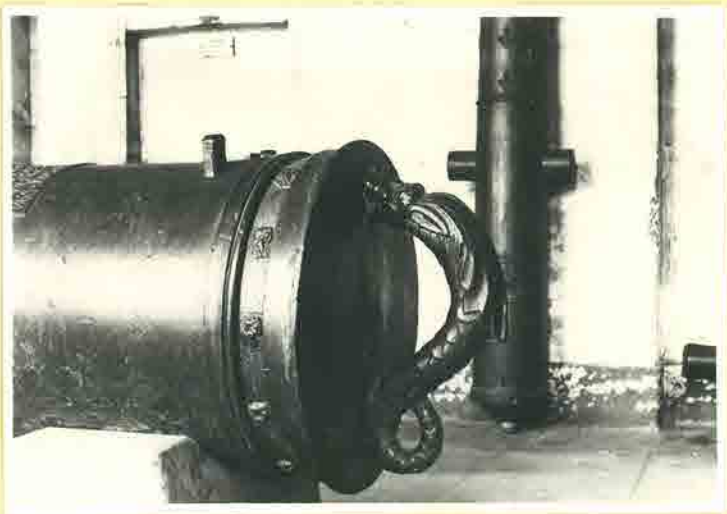
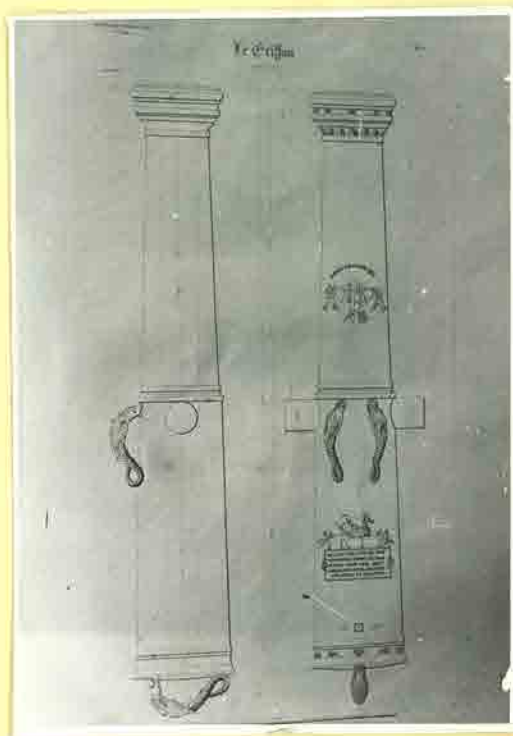
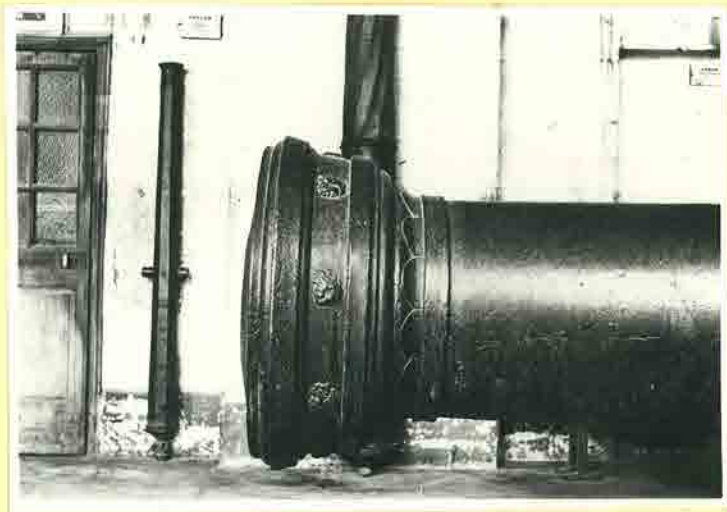


240

Germany ~~France~~ - 1528



N. 240. Le Griffon, bouche à feu célèbre et particulièrement connue sous le nom de Couleuvrine d'Ehrenbreitstein, elle fut coulée en 1528; elle était placée au château d'Ehrenbreitstein, en face de Coblenz sur la rive droite du Rhin, où résidaient les archevêques de Trèves. Le renfort porte en allemand l'inscription: *Je m'appelle le Griffon, je sers mon gracieux seigneur de Trèves, là où il m'ordonne d'agir par la force, je vais enfoncer portes et murailles.* Au-dessus de cette inscription est représenté le griffon attaqué par deux lansquenets. Sur la volée on remarque les armoiries de l'archevêque, et au-dessus: *Simon m'a fondé en 1528.* Elle fut prise par l'armée française avec 189 autres canons, le 28 janvier 1799, pendant le congrès de Rastadt. C'est une des pièces les plus remarquables du XVI^e siècle et un des plus beaux trophées qui nous restent des victoires de la République. Calibre, 0 m. 284; celui du boulet, 0 m. 27; longueur totale, 4 m. 685; poids, 12,589 kilogrammes. — Venu de l'arsenal de Metz en 1865.



1595. 12

#268

1741

N. 268. Canon italien richement orné de ciselures. Anses formées par deux lions. Un blason portant en abîme les armes de Savoie est ciselé sur le premier renfort. Longueur, 3 m. 20; calibre, 0 m. 012.



21 5097



#268, cont.

LGAF. 14

#298

N. 298. Canon autrichien de campagne, en bronze; fabrication de 1781. Calibre, 0 m. 095. — Pris à la bataille de Palestro.

AUSTRIAN - 1781
BORE 3 3/4"

"F. POITEUIM - WIEN
1781



1505-16

312

Algérie
1581

21,8 Cm Bore



N. 312. Canon algérien en bronze, le calibre est de 0 m. 218. Tourillons, bouton de culasse, premier renfort prononcé; toute la pièce, divisée en quinze parties égales par des cordons saillants parallèles, estornée de palmottes à son premier renfort et à la volée d'ornements composés. Elle porte trois inscriptions arabes. La traduction de la première inscription est : *Sous le règne puissant du Sultan, fils de sultan, sultan Solim Han, Dieu protège la puissance.* Celle de la seconde : *Fait par ordre du puissant Emir Djâzeruhlâh pacha, Dieu le protège. Commencement du mois de Ramazan 985 (avril 1581).* Celle de la troisième : *Fait par Djâfer, instructeur à Alger.* — Pris à Alger, en 1830.

1945.16

#317

Turkish
Early 16th Cent

17 Cm Bore



N. 317. Bouche à feu turque, imitation des canons français. Elle porte un cordon de fleurs de lis autour de la plate-bande de culasse; six fleurs de lis dans la longueur du premier et du second renfort, et sept sur la volée; sur le second renfort, un cartouche renferme une légende turque. Commencement du xvi^e siècle. Calibre, 0 m. 170. — Prise à Alger en 1830.



1947.17

#334

CHINESE

16cm Bore



N. 334. Canon chinois en cuivre jaune. Longueur, 3 m. 30; diamètre de l'âme, 0 m. 16. — Même provenance.

334



29 AF. 18

338

CHINESE



N. 338. Canon chinois en cuivre jaune, cul-de-lampe et
tranche des tourillons ciselés représentant des rinceaux en feuil-
lages et des animaux. Le premier renfort porte des caractères
chinois. Longueur totale, 3 m. 40; diamètre de l'âme, 0 m. 175.
— Même provenance.

26015 19

352



Japonaise
~~CHINESE~~
9cm. BORE

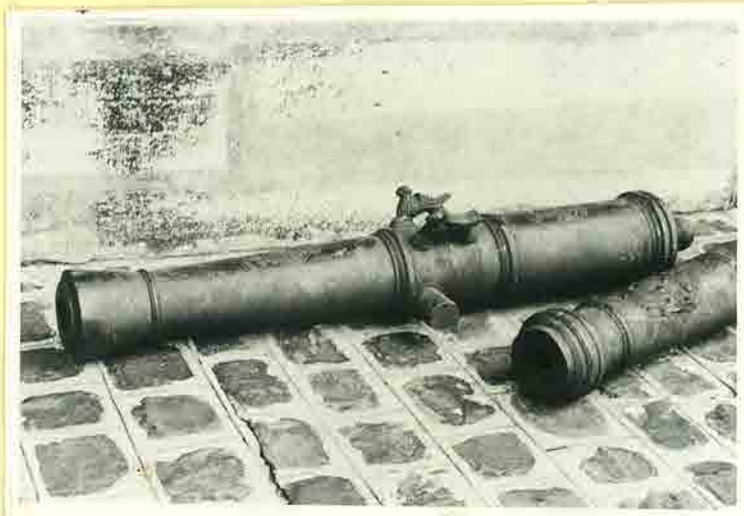
N. 352. Canon et affût japonais. Le canon est entièrement couvert de dessins en rinceaux; il porte à la culasse des caractères japonais. L'affût se compose de deux parties distinctes, celle qui porte la pièce glisse au moment du tir sur la partie fixe. Elle est ramenée ensuite en batterie au moyen d'un treuil placé en arrière de l'affût. Longueur du canon, 1 m. 65; calibre, 0 m. 087. — Pris au détroit Simonosoki.



L496.20

#3848

PRUSSIAN



BORE 8 cm.



CHASE



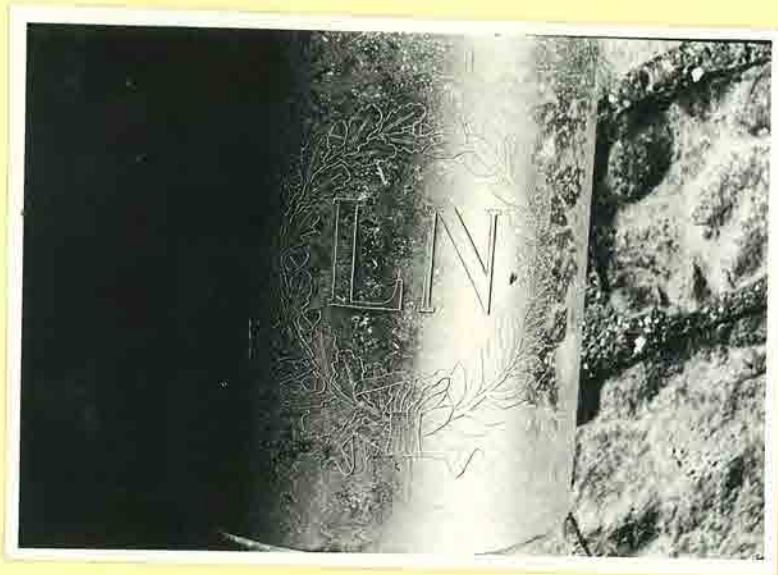
1ST REINFORCE

4906. 21

C -

6931

FRENCH-PERIOD OF
LOUIS NAPOLEON



26MF. 22

5955

-1706

24 Pos.



149F-23

252

N. 252. Canon espagnol, en bronze: porte au premier renfort les armes d'Espagne entourées du collier de la Toison d'or, surmontées de la couronne royale; sous les armes, on lit l'inscription: *Carolus III, Hispan. et Ind. rex.* Enfin sur la volée, la devise: *Violati fulmina regis.* — Pris à Saint-Jean-d'Ulloa, le 27 novembre 1838.



44AF.24

#617

FRENCH FOR ALGERIA-1775

"FRANÇOIS DUPONT FONDEUR
EN CHEF DU ROY FRANCE
DE

A ALGER L'AN 1775

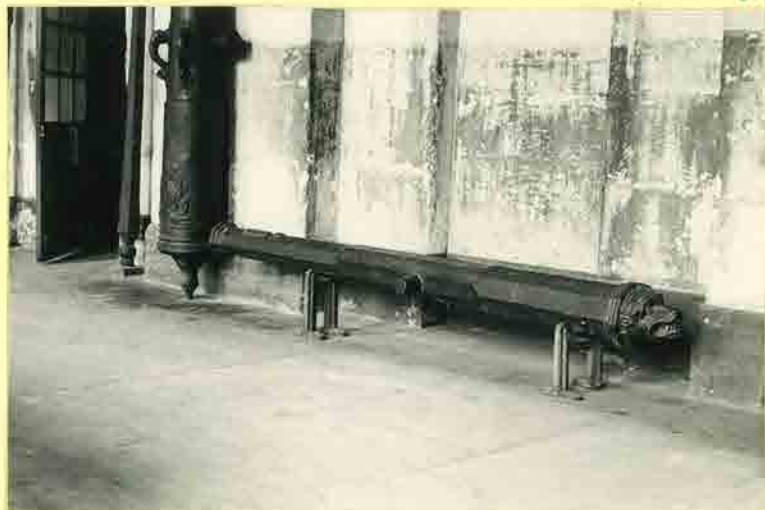


1945.85

"N" 246

SPANISH-EARLY 16th CENT.

9.25 BORE - BRONZE
UNSIGNED



N. 246. Canon espagnol, pris à Alger, 1830. Calibre, 0 m. 092 (du 6 moderne). — Il provient de l'expédition de Charles-Quint en Afrique, 1535, et porte à la volée les deux colonnes d'Hercule surmontées d'une couronne fermée; et la devise : *plus ultra*. Le bouton de culasse et le cul-de-lampe représentent la tête d'un animal fantastique.



PILLARS OF HERCULES
"PLUS ULTRA"

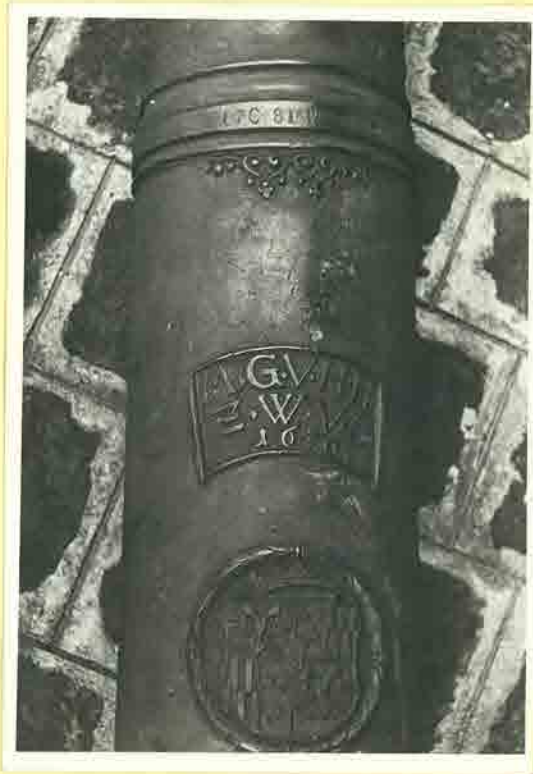
SCALLOP
LOCKING SHELL OF ST JAMES
OF COMPOSTELLA

1544-26

"RT" (72)



GERMAN 1636
9.15 CM BORE (9577)
BRONZE
UNSIGNED



4447

07433

FRENCH - 1746

16 CM BORE



4645.28

"U"

Before 1923
FRANCE - CA. ~~1700~~
SIGNED BERENGER
"DE FAUZE"
BORE 6"



4605.29

"X"

FRENCH - 1743
BRONZE
BORE 12.5 CM.
SIGNED
"JEAN MARITZ"



DEP. 54

FRENCH - 1737
BRONZE 12 PDR.
SIGNED - BERENGER
DVACI 1737"



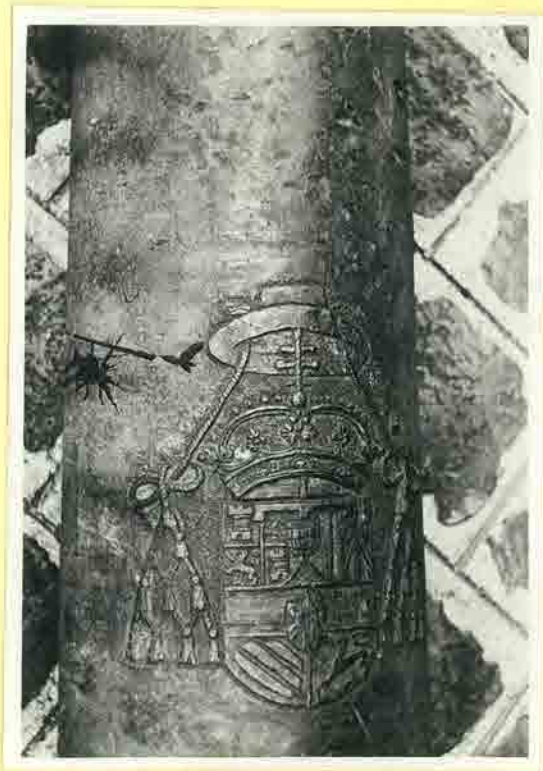
15445.31

"Q"

FRANCE 1638
BORE 12 CM
"OPVS IACOBI PERDRY
VALENCENIS" ON BASE



RING
"GLAUDE DE RYE
BARON DE BALANÇON"
ON CHASE



CHASE

1695.32

22



L. G. A. F. 38

"0"

PRUSSIAN
BRONZE
10 CM. BORE



CHASE



1ST REINFORCE

49 AF 34

"E"

CHINESE
BRONZE
15.5 CM BORE



24 Nov. 35

"C"



PRUSSIAN - 1708
BRONZE
15.5 CM BORE, 6"

ONE OF A SUITE OF
EIGHT WITH VARYING
DECORATION

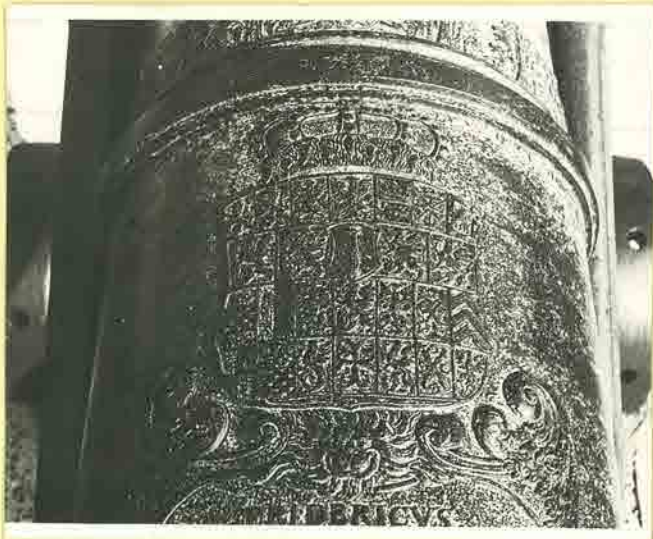


⁶³
Centner(?) = 110.2 lbs
⁹⁵
pfund - Zoll pound
1.1023 lb, av.

449F.36



FRED. WILL. 1620-1687



1694E 37

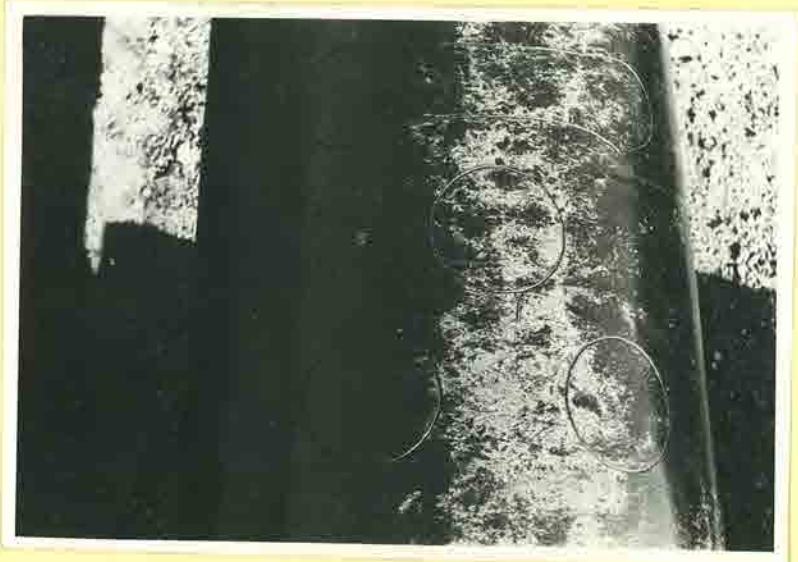
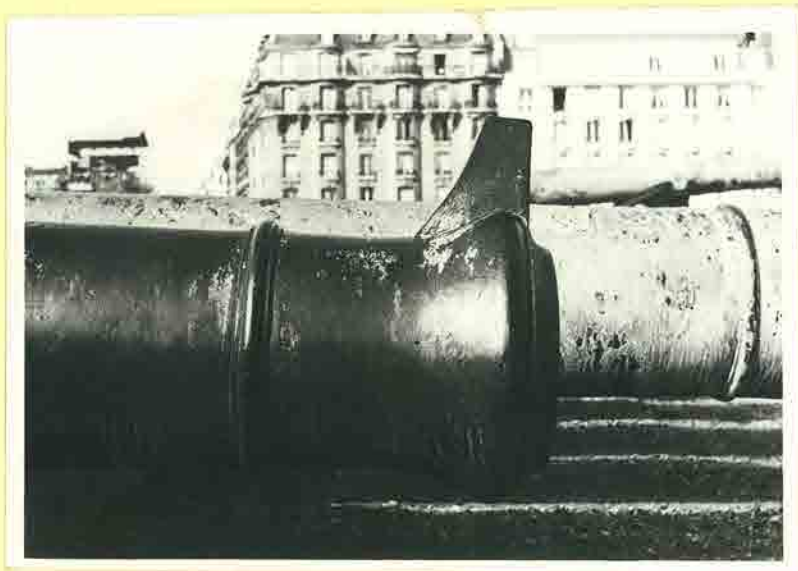
"D"

Japanese

~~CHINESE~~ - CA. 1850

BRONZE

13.75 CM BORE



24 AF 38

"A" 245

SPANISH - EARLY 16th CENT
BRONZE
18 CM BORE

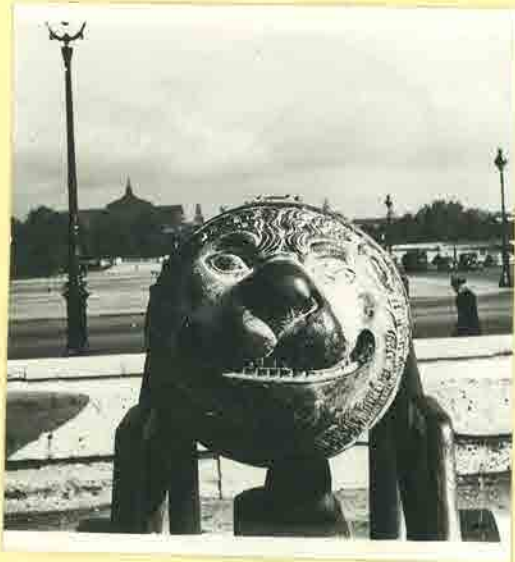


CHASE



CONTINUES →

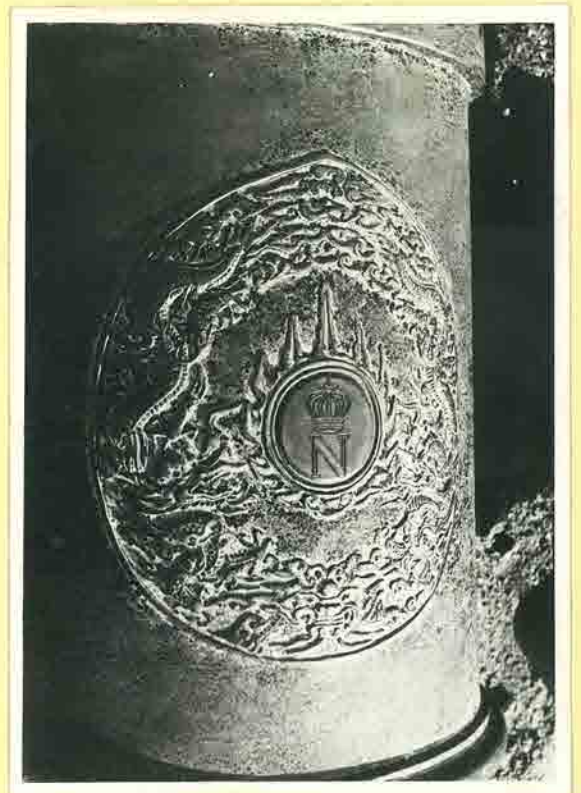
1905.39



140E.40

"G"

CHINESE
BRONZE
BORE - 18.5 CM



16915.41

"H"

AUSTRIAN-1580
BRONZE
BORE-16 CM.
SIGNED
MERTIN HILGER



CAROLVS VON GOTTES
GNADEN*ERTZ HERZOG
ZV OSTERREICH HER
ZOG ZV BURGUNDI
STEYR KARNTE
GRAF ZE GRA
VE ZV TIROL VD
GORTZ ZE F—

150F.42



WILDMEN IN COMBAT



CHASE



RIGHT TRUNNION



1st REINFORCE
←



LCRF. 43

#6 (9?)

IRON, WITH BRONZE
CASEABEL
BORE 3 7/8"



MUZZLE

L98F.44

"F"

AUSTRIAN - 1681
BRONZE
BORE - 19 CM
SIGNED - "GROSS.
MICH. BALTHASARINWIEN"



85 Centners
Centner = 110.3 pfunde
Uebers pfund = 560.06
gr.



169F.45

"P"

BRONZE
BORE 7.8 cm
SIGNED,
"BARTHOLOMEI
CAUTHALS"



1947.46

P (cont.)



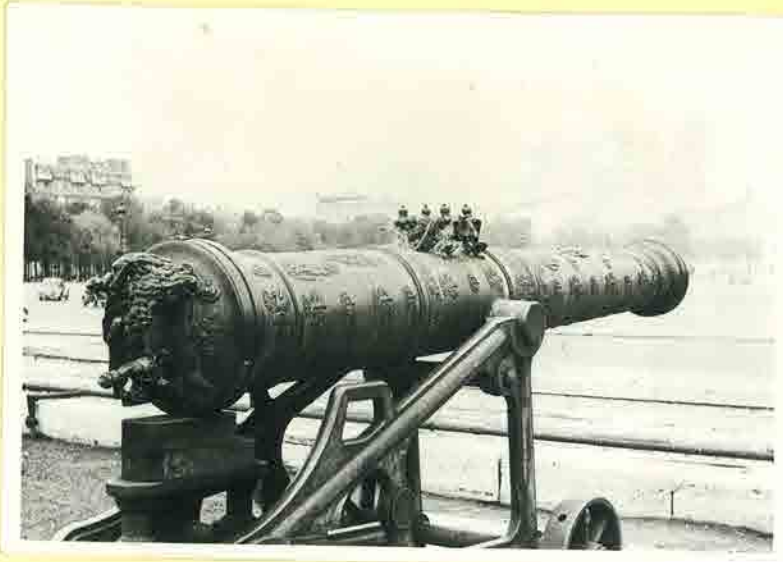
LAGAF. 47

"Z"

PRUSSIAN - 1708
BRONZE
BORE - 15 CM.

SIGNED "IOHANN
IACOBI"

(UNDATED, BUT ONE OF THE
SUITE OF EIGHT)



68 Centners
65 pfunds

1407.48

"W"

FRENCH - AN XI
1st REP.

BRONZE
BORE - 24 PDR.



L90F. 49

RUSSIAN-1835
BRONZE
BORE 20 CM.



RIGHT TRUNNION

L99F.80

"B"



DANISH-1708
BRONZE
BORE 17CM
SIGNED - "A"
ON BASE RING



CHASE



RE MANE ET NOR REGE PARTIM
ADVENIENTE FUSUM
PRIGIENAE PERFECTUM.
SAC
1811 MDCCXI

490 F. 071





WT. MK. - "P 3187K 8"
ON BASE RING

*Added after
metric system introduced
a Trophy wt mark*



"J"

Maltese

~~FRENCH (?)~~ - 1507

BRONZE

BORE 26CM

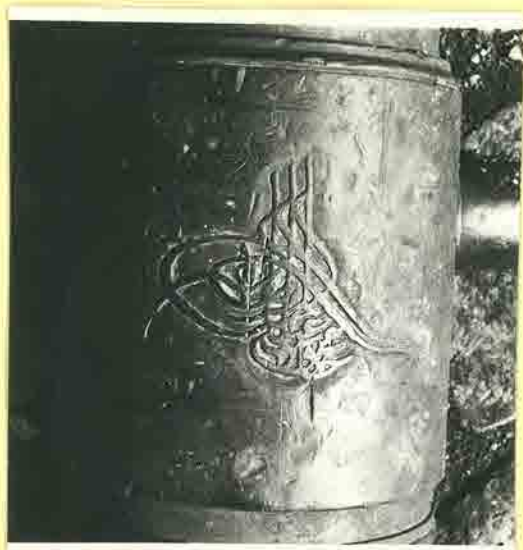


Maltese A.



L907.53

RUSSIAN
TURKISH
BRONZE
BORE-12CM.



TOUGHRA CHASED OVER
MONOGRAM OF TZAR

290F.54

FRENCH -1809
BRONZE MORTAR
SIGNED - "METZ LE
14 JUIN 1809 VALLETTE

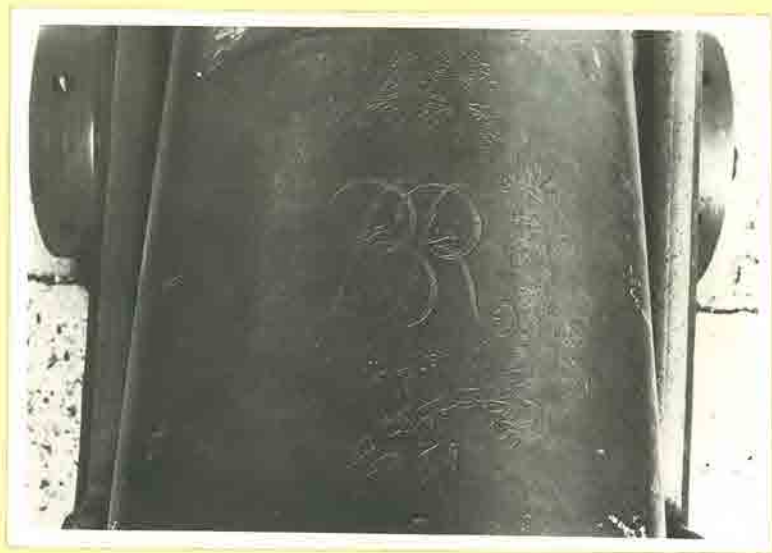


490F. 55

BATAVIAN REPUBLIC
-1800-

BRONZE HOWITZER
BORE 6"

SIGNED. "JON: MARITZ
FEC. HAGAE. A. 1800"



L9AF. 50

~~140~~

FRANCE - 1842
BRONZE
BORE - 10.5CM



4905.57

**Cannons in France
2013**



EDITOR'S ALBUM

PARIS

**MUSEE DE L'ARMEE
(FRENCH ARMY MUSEUM)**

AT THE HOTEL DES INVALIDES



**MUSEUM:
MUSÉE DE L'ARMÉE, PARIS
ARMY MUSEUM, PARIS**

Location: On the left bank. Occupies all the buildings, gardens, courtyards, etc., of the "Hôtel des Invalides", which is situated in the continuation of the vast "Esplanade des Invalides", in line with the "Pont Alexandre III" (Alexander III Bridge) on the Seine (Quai d'Orsay). Other access via Place Vauban.

Postal address: Musée de l'Armée — Hôtel National des Invalides — 129 rue de Grenelle — 75007 Paris — France

Telephone: ++33/ (0)810 11 33 99 or ++33/(0)144 42 38 77

Fax: ++33/ (0)144 42 37 64

Email: via web site

Website: www.musee-armee.fr or www.invalides.org

Curator: General de Division Christian Baptiste (Director)
M. David Guillet (Conservateur Général)
Mme Sylvie Leluc (Artillery Collections)

Contact person: Mme Sylvie Leluc (Artillery Collections)

Email contact person: artillerie@musee-armee.fr

Services offered: An important, specialized library (at present (2013), in the "Cour de 1 Victoires"), accessible on appointment (Mrs Mésange is the Librarian). A well, stocked specialized bookshop, but with more books on Army history in general than specifically on ancient artillery. There is an active "Army Museum Society ("Société des Amis du Musée de l'Armée", tel. ++33/ (0)144 42 40 69/ 33 75). Examples of their publications below.

Opening hours: From October 1 to March 31: 10h-17h.
From April 1 to September 30: 10h-18h.
Closed the first Monday of each month, January 1, May 1, November 1, December 25.

Recent publications on the artillery collections and catalogues include: Several free, interesting brochures available at reception.

Robert L. (Colonel), *Catalogue des Collections composant le Musée de l'Armée en 1889*, Paris, 1890; Wemaere, J. (Colonel), *Inventaire des bouches à feu du Musée de l'Armée classées dans la série N*, Paris, 1976, a bound, typed volume available in the museum's library, on appointment. Not published). This inventory has been carefully revised and corrected by Ingenieur-Général Decker; Jaouen, M., *Approche Archéologique de l'artillerie navale à l'époque moderne: étude de quarante-deux bouches à feu de la Cour de la Victoire au Musée de l'Armée* (Mémoire de DEA d'Archéologie des périodes historiques), Université de Paris 1 Panthéon-Sorbonne, 2001.

The "Société des Amis du Musée de l'Armée" occasionally publishes their *Cahiers d'Etude et de Recherche du Musée de*

l'Armée. All are well researched and presented. The following titles are just examples of some of the publications dealing particularly with artillery related matters: *Histoire de l'artillerie de Terre Française*, 2003, hors-série n°1; *Jean de Maritz (1711-1790), La fabrication des canons au 18ème siècle*, 2005, hors-série n°2, etc.

History of the building: Wanted by King Louis XIV, who laid the first stone of the Hôtel on November 30, 1670. The plans of the buildings are due to Liberal Bruand and J. H. Mansart, who completed the construction, respecting the plans of his late predecessor. It is Mansart however who added to the original plans the second church, the so-called “Dôme des Invalides”, the building of which started in 1675, to be finished in 1735 only. Architect Bruand, truly, “erected an imposing, understated and elegant masterpiece in the classical style” (Musée de l'Armée brochure).

The total surface of the hotel is a square of almost 127,000 square metres. From the Quay d'Orsay to the “Hôtel des Invalides” it is the “Esplanade”, of the same name. The purpose of this vast, un-built space, lined with only trees and gardens in staggered rows, was meant to give the monument itself an imposing effect, in which it fully succeeded. The main entrance opens towards the north. Above the “Entrée d'Honneur” is an equestrian statue of Louis XIV with, to his right and to his left, Mars and Minerva. The whole of the surface of the buildings plus their gardens is surrounded by wide moats on top of which have been laid, aiming at the Seine, part of the finest, bronze foreign cannons.

At the time of Louis XIV, no official institution existed to house and care for disabled ex-soldiers. From the beginning, it was the King's purpose to provide assistance for the soldiers that had lost a limb or eye sight at the service of France. The most deserving old soldiers and officers were received in the Hôtel, according to their personal needs and to their former rank. In the late 18th century the Hôtel housed up to 4,000 residents. During the Consulate and as a consequence of the Wars of the Empire (26,000 war-disabled in 1812), Napoleon Bonaparte, patron of the Hôtel, had to open extensions of the establishment in Versailles, in Avignon and in Ghent. This original purpose of the “Hôtel des Invalides” is still respected by the Ministry of Defence. There are still, as of this day, a small number of pensioners living in parts of the buildings.

The “Dôme”, according to the law of June 10, 1840, was transformed — actually dug down — from 1843 to 1853, to become the monumental tomb of Napoleon. It is surrounded in the same area by the tombs of some of the greatest French military heroes of the last centuries.

For the details of the inner arrangement of the building and of the collections that it hosts, the reader is referred to the two plans in the following pages.

History of the museum and its collections: The more than centenary French Army Museum in Paris was created in 1905 when the earlier “Musée d’Artillerie” and the “Musée Historique de l’Armée” were united into a new name in a new location, the “Hôtel des Invalides”. The old “Musée d’Artillerie” had been established under the Revolution and housed in a former Dominican convent after the expulsion of the monks. It was the successor of two prestigious collections of arms and armours, the collection of the “Garde-Meuble de la Couronne” (the administration which in France controlled, conserved and supervised the furniture — and miscellaneous belongings — depositories of the King) and of the renowned collection of the Princes of Condé (in the castle of Chantilly). These two collections had been deposited at the Invalides as soon as 1852, long before the administrative, official fusion. More collections, large and small, came from the “Bibliothèque Nationale”, the “Musée du Louvre”, the artillery of the Fort of Vincennes, the Paris Mint, the Pierrefonds castle and from a number of more recent acquisitions, trophies from the colonial campaigns and private donations. In 1896, the joint collections became the property of the newly founded “Musée Historique de l’Armée”, which was brought on the baptismal fonts by the private groupe “La Sabretache”.

Today, the “Musée de l’Armée” in Paris is certainly one of the three most prestigious in the world; its collections of ancient arms and armours are outstanding. Its collection of “petits modèles d’artillerie”, original scale models of the time made by craftsmen, who had worked all their life in the very foundry and under the direct guidance of the Masters of Artillery of the time, is said to be “unique in the world”. The collection of artillery pieces, properly said, which the French — with a view to enclose any non-personal weapons that shoots projectiles propelled by the explosion of black powder — call “bouches à feu”, is certainly worth the voyage from the antipodes. The Napoleon I epic is another strong point of the museum.

The present day organization of the cannons presentation is as follows:

1. The most important part of the collections, the “canons classiques français” and their later variations, 60 outstanding pieces, are displayed in the central courtyard, the “Cour d’Honneur”.
2. Around the “Cour d’Honneur”, in the peristyls, are, on the south side, the oldest cannons in the collection and, mostly on

the west side, a variety of miscellaneous later pieces. Generally speaking, all such cannons are clearly labelled, clearly visible and accessible. Photography is permitted without restrictions. In short, an ideal situation for the serious visitor.

3. As for the inner courtyards such as the “Cour de la Victoire” in which, are kept a number of repetitive 18th and 19th century pieces, mostly cast iron pieces, they will be found of limited interest by many artillery amateurs or historians since they are, by their very essence, undecorated and almost unmarked, the meaning of the marks in that case being obvious (the weight, usually). The inner courtyards are normally not opened to the public, but the guards seem fairly relaxed about it. In between the inner courts and between the various departments of the museum, are a number of corridors, which host miscellaneous types of pieces from many countries, some truly outstanding. These are fully opened to the public.

4. In recent years, “new galleries” have been opened, none of which existed at the time MLP visited the museum. The artillery amateur will be particularly interested in the Antique Arms and Armour Department (which tells its story from the 14th to the 17th century), and in the Modern Department (the story from Louis XIV to Napoleon III). The World Wars Department covers the period 1871-1945.

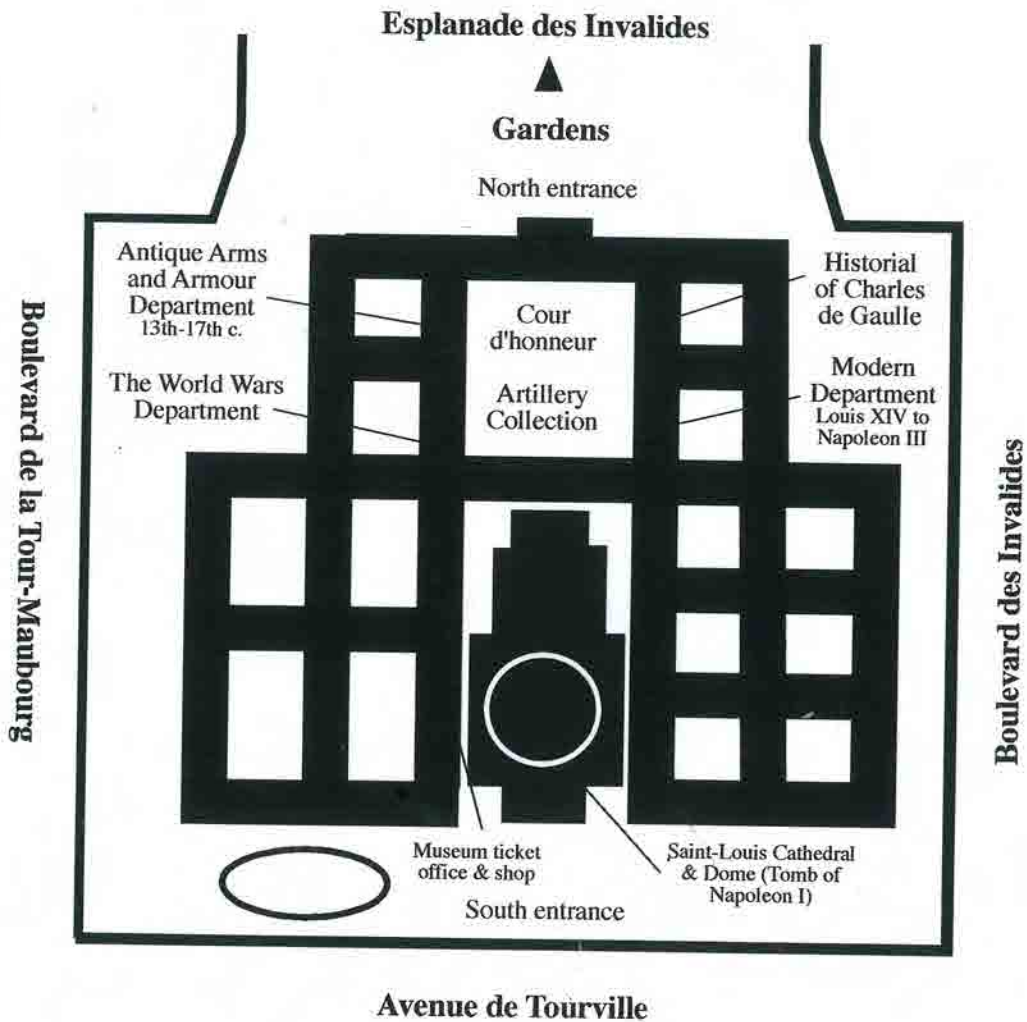
5. Outside, in the gardens facing the “Esplanade des Invalides”, are lined a number of superbly decorated foreign made cannons, Austrian, German, Oriental, Spanish, etc., which are all war trophies, proudly brought back to Paris from all over Europe, North Africa and Asia.

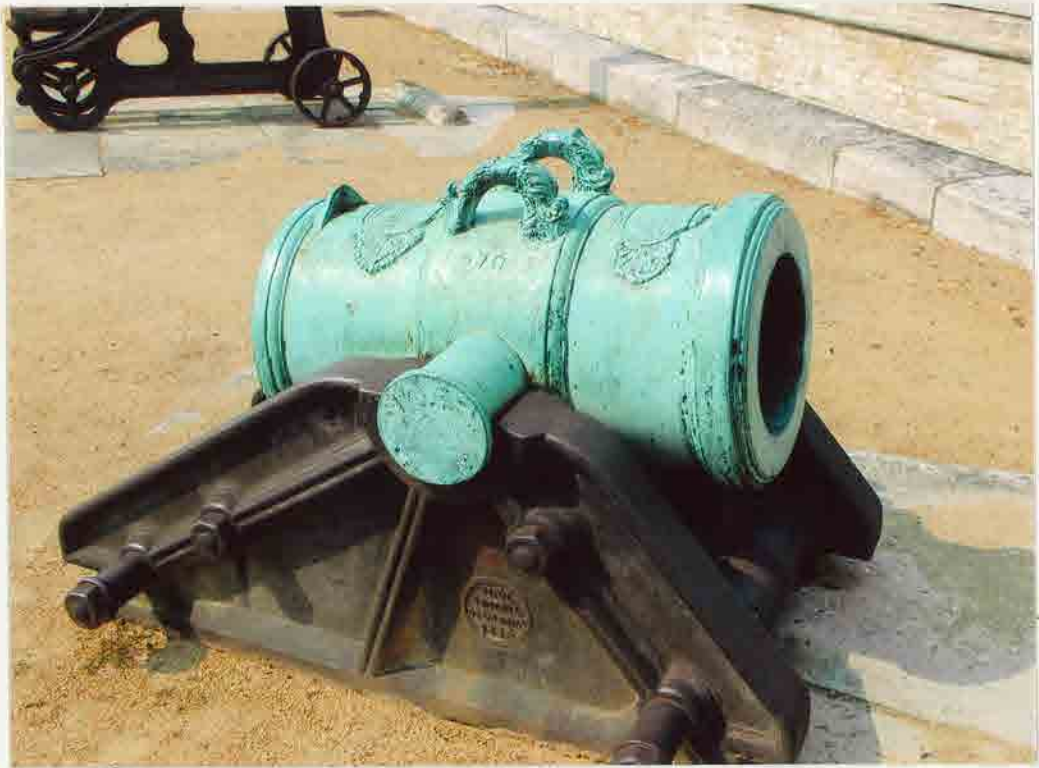
6. Of course, no visitor will want to miss the “History of Charles de Gaulle” Department or the “Eglise du Dôme” and the tomb of Napoleon I (a young artillery Lieutenant, who achieved considerable success).

NB: Due to considerable ongoing restoration and painting works on the galleries and façades that surround the “Cour d'Honneur”, the careful chronological-logical order of presentation of the bronze pieces has undergone repeated changes since 2013 and that situation will continue “at best until 2017”, according to the museum’s estimates. Such disruptions are of course unavoidable but all the pieces will, at all times, remain visible. In 2013, for instance, a large number of them had been taken outside in the garden of the Invalides and were lined along the façade on both sides of the North entrance. For the same reasons, the room devoted to the artillery scale models (an extremely fine collection) was closed in 2013 and the date of reopening is not known yet. (The year 2015 has been hopefully mentioned).

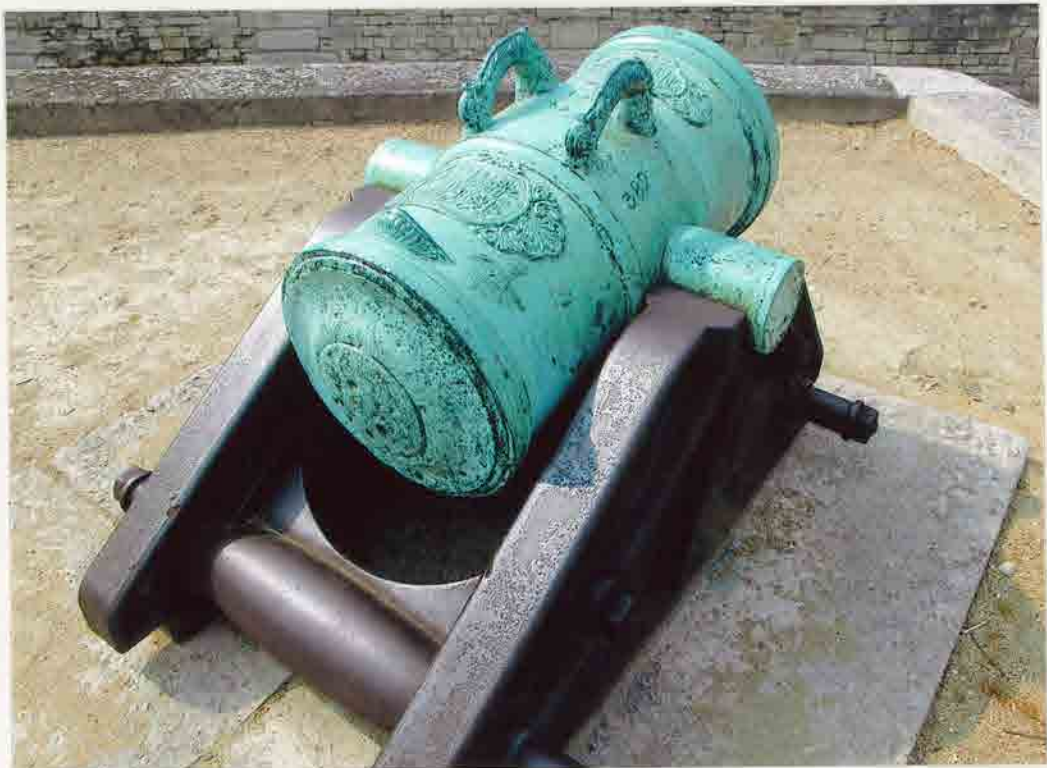


The North entrance (on the side of the Esplanade des Invalides).





Among the trophies, two bronze suspended mortars, with non matching supports (for display). Captured in Algiers in 1830. Both bear Arabic characters (untranslated) and more recent engraved (French ?) serial numbers.



ARTILLERY PIECES DISPLAYED IN THE GARDENS

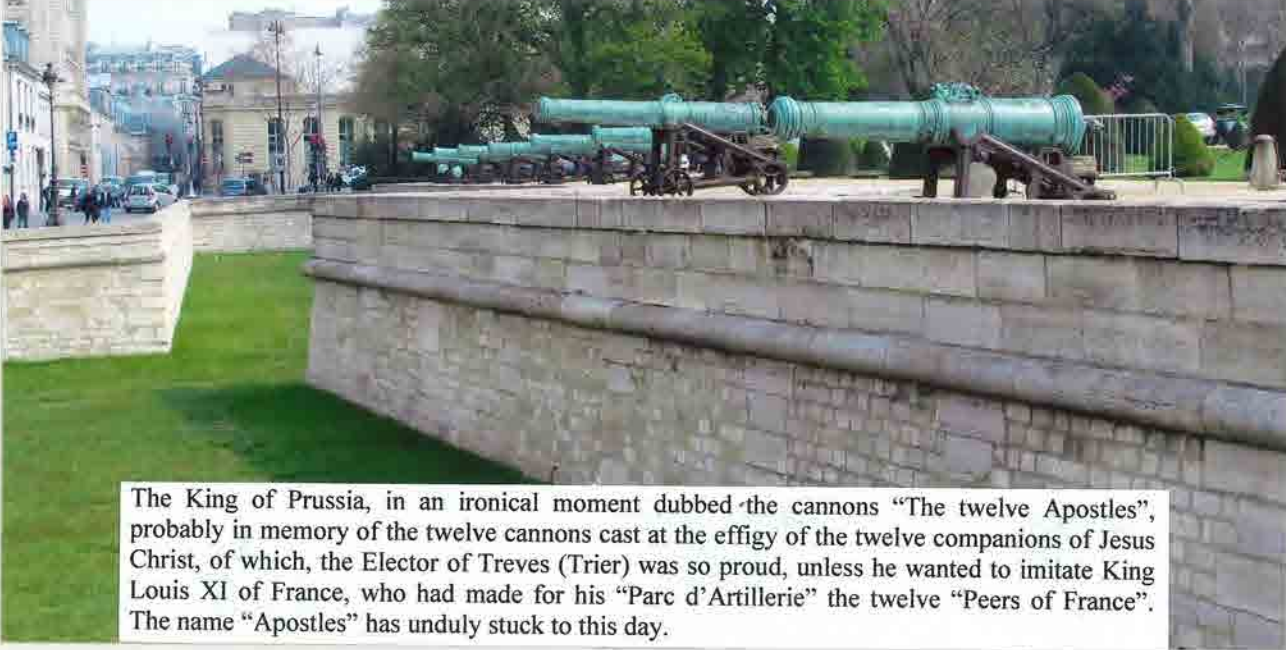


The Trophy Battery (displayed on stone supports). These guns were captured from the enemy and brought back as trophies. This group consists of twenty foreign pieces being sixteen Ottoman cannons, three Chinese cannons and one Cochinchinese gun, divided in two symmetrical groups.

Another "salvo cannon" of the first quarter of the 16th century. Calibre: 18.3cm. Length: 3.73 m.
On the chase: A dragon's head disgorges the muzzle neck. On the muzzle ring: The inscription "BARTOLOMEUS ME FECIT"
Lower, on the second reinforce is the figure of a knight brandishing a sword, galloping on an ornamented warhorse. It is the famous "Santiago Matamoros", St. James, the Moors Killer. A circular frieze-like decoration is repeated three times.
On the first reinforce: The Imperial arms of Charles V (in Spain, King Carlos I).
No handles, no breech button, but an ornamented breech moulding in the shape of a lion's head, horizontally pierced for the anti-recoil rope.
This gun was taken in Algiers in 1830 (at the same time of the famous CONSULAIRE) and is believed to have been one of the pieces abandoned by the retreating Charles V's expedition in North Africa in 1535.



Mostly Prussians and of the time of Frederick I (18th century), the cannons mounted on cast iron carriages and displayed around the edge of the northern moats form the "Triumphal Battery" of the Hôtel des Invalides. These eight cannons were served by invalid soldiers from the very beginning of the institution, to shoot salvos of honour in contribution to the great French army victories in battle or to Parisian celebrations. During the 1940-44 occupation of Paris by the German troops, these cannons were taken back to Germany. They have since been returned to France. One piece of the series is at present on display in the "Deutsches Historisches Museum" (the German Historical Museum), Berlin. It was not reclaimed by the French "Commission des réparations" because it had never been in France.



The King of Prussia, in an ironical moment dubbed the cannons "The twelve Apostles", probably in memory of the twelve cannons cast at the effigy of the twelve companions of Jesus Christ, of which, the Elector of Treves (Trier) was so proud, unless he wanted to imitate King Louis XI of France, who had made for his "Parc d'Artillerie" the twelve "Peers of France". The name "Apostles" has unduly stuck to this day.



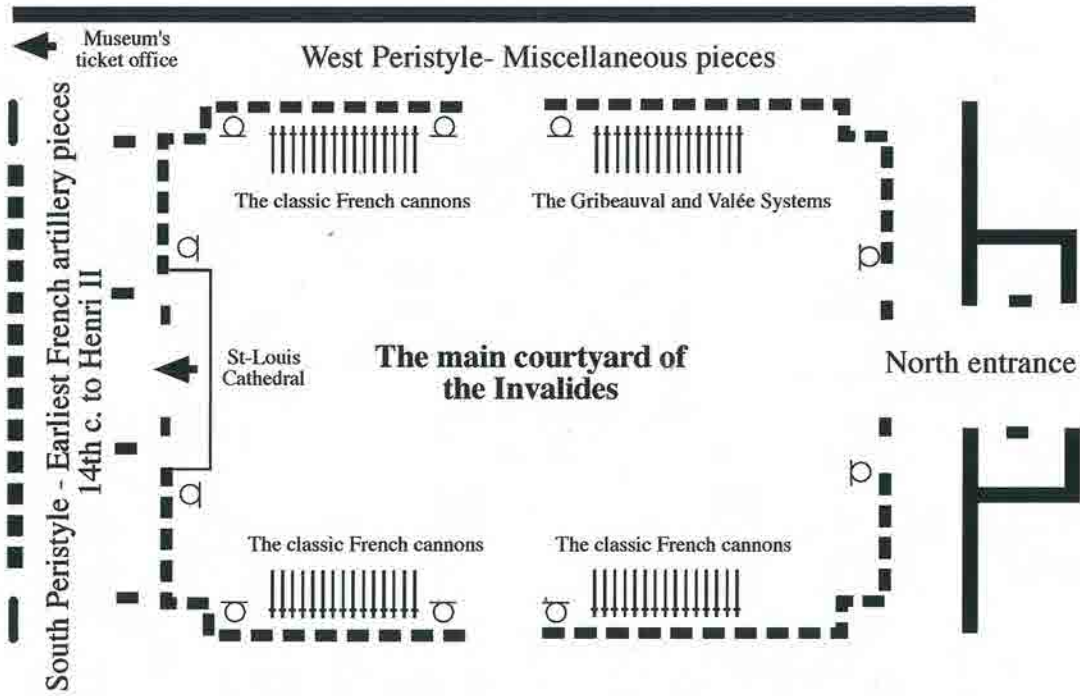
Details, the handles and the breech ring of one of the twelve parade cannons cast for the Elector of Brandenburg Friedrich I (1657-1713), who had made himself King of Prussia in 1701. The King commissioned a series of twelve superbly decorated bronze cannons to be cast, each bearing the portrait of one of the twelve Electors of Brandenburg who had been his predecessors. Each cannon features the standing portrait and a short biography of "its" Elector. Friedrich had the thirteenth cannon, the royal cannon, made for himself. The pieces are signed on the base ring, "IOHANN IACOBI GOSS MICH IM BERLIN. ANNO 1708". It is a 24-pounder, a "halbe Kartöne" or demi-cannon.

Another elaborately decorated German gun of the so-called "Batterie Triomphale": Imperial German, crowned coat of arms on the first reinforce (supported by the bicephal spread-eagle and surrounded by the collar of the Golden Fleece), with initials ".L.R.I.S.A. 1681"; on the chase, the crowned effigy, in a complicated artillery inspired cartouche, of Karl-Ludwig, Count of Hoefkirchen etc., Master of the Artillery; a fishing eagle above; in a cartouche, at the muzzle neck, the motto "EXIMAM AUT MERGAR" (on a band at the muzzle head, a difficult to interpret devise that could be literally translated as "Liberate or Sink" or "Draw out or Sink" ?); the letter "L" (for Leopold I, German Emperor, 1658-1705), repeated.



Artillery or artwork? The cannons of this series all have the same weight (2,360 kilos) and calibre 27. They were not however considered museum pieces. They served on the ramparts of Magdeburg, played their part in the siege of Prague under Frederick II, when eleven of them were captured by the soldiers of the Austrian Empress Maria Theresa (1740-1780), who took them to Vienna. It is there, in the Zeughaus, the Arsenal, that they took the fancy of Napoleon, who removed them for his "Grand Parc d'Artillerie". After the war they were left in Strasbourg, from where they came to the Paris "Musée de l'Armée".

CANNONS DISPLAYED IN THE MAIN COURTYARD OR "COUR D'HONNEUR" AND ITS PERISTYLES AND IN THE VARIOUS SPECIALIZED DEPARTMENTS.



\odot : Various mortars and howitzers



PIECES OF ARTILLERY DISPLAYED IN THE PERISTYLS, AROUND THE MAIN COURTYARD.



THE OLDEST BRONZE CANNON IN THE COLLECTION OF THE "MUSEE DE L'ARMEE"



Cannons cast under the reign of King Louis XI (r. 1461-1483) are extremely rare. This is one of two only in the "Musée de l'Armée at the Invalides". (The other one does not bear any inscription. Its story and the Rhodes episode are identical.)

This bronze piece carries its identity document on the face of its mouth, written in French, in the Gothic characters in use at the time: "1478. On command of Loys, by the Grace of God King of France, the 11th of this name had me cast at Chartres, Jehan Chollet, Knight Master of the Artillery, of the said Lord". The piece has trunnions, but no dolphins or breech button. Its general profile is still the form of the iron bombard of the beginning of the 15th century. The muzzle neck bears the arms of France, the crowned three fleurs-de-lis. Calibre: 24.5cm.; length: 2.24m.; weight: 1,608 kilos.

This piece had been part of the defences of the fortress of the Knights of St. John of Jerusalem in Rhodes, where it had to be abandoned when the Knights had to leave the island. It is one of the pieces that Sultan Abdul-Aziz presented to Napoleon III in 1862.

(Continued)



(Continued)

The arms of France.

The decorative indented end of the first reinforce.

The rose is the emblem of King Louis XI, with two trefoils (symbolism unexplained, possibly mere decoration?). It constitutes in fact the powder pan around the touch-hole.



The square holes in the breech mouldings were apparently made at a later date, possibly to install an aiming device.



This extremely well made, well decorated bronze cannon is identified by the marks and inscriptions in its first reinforce: A quartered shield bearing the arms of the Order of the Knights Hospitalers of Jerusalem (Hierusalem) — later called the Knights of Rhodes and, today, the Knights of Malta —, the cross, and the arms of the Grand Master Emery d'Amboise, the name of the Order (in Gothic characters, abbreviated). The date of casting, "1507", the name of the gun, "LE FURIEUX" (the Furious) and "L" for Lyons, where the gun was cast. Underneath are some light, scratched indications in Arabic, which presumably refer to the weight and/or the calibre of the piece. This is one of the pieces that the Knights had to abandon in the fortress in Rhodes when finally overwhelmed by the Turkish besiegers. (It was later given to Napoleon III by Sultan Abdul-Aziz (1830-1876), a great friend of the West European powers.)
Calibre: 26cm.; length: 1.90m.; weight: 1,838 kilos. There is no breech button but the flattened lion sculpted as breech moulding is pierced horizontally to receive the anti-recoil rope.



The main defender of the St. Nicolas Tower.



Heavy bronze cannon of the late 15th century once defended the St. Nicolas Tower, the main bastion of the fortress of the Knights in Rhodes. It bears on the muzzle neck three separated shields: The shield of the Order (Cross of St. George), the arms of the "Grand-Maitre Emery d'Amboise" and a third shield which, without its metals or colours, has not been recognized. On the right side of the chase, the following inscription in relief: "TVRIS. S. NICOLAI PRO. DEFESOR". Grand Master d'Amboise is the one, who reorganized the defence of Rhodes after the siege of 1480 by the army of Mahomet II commanded by Missah Paleologue, the first great siege, victoriously resisted, but which left the fortress half in ruins. Calibre: 23.2cm. Length: 2.60m. Weight: 1,427 kilos. This cannon was returned, with many others, by the Francophile Sultan of Turkey Abdul-Aziz.

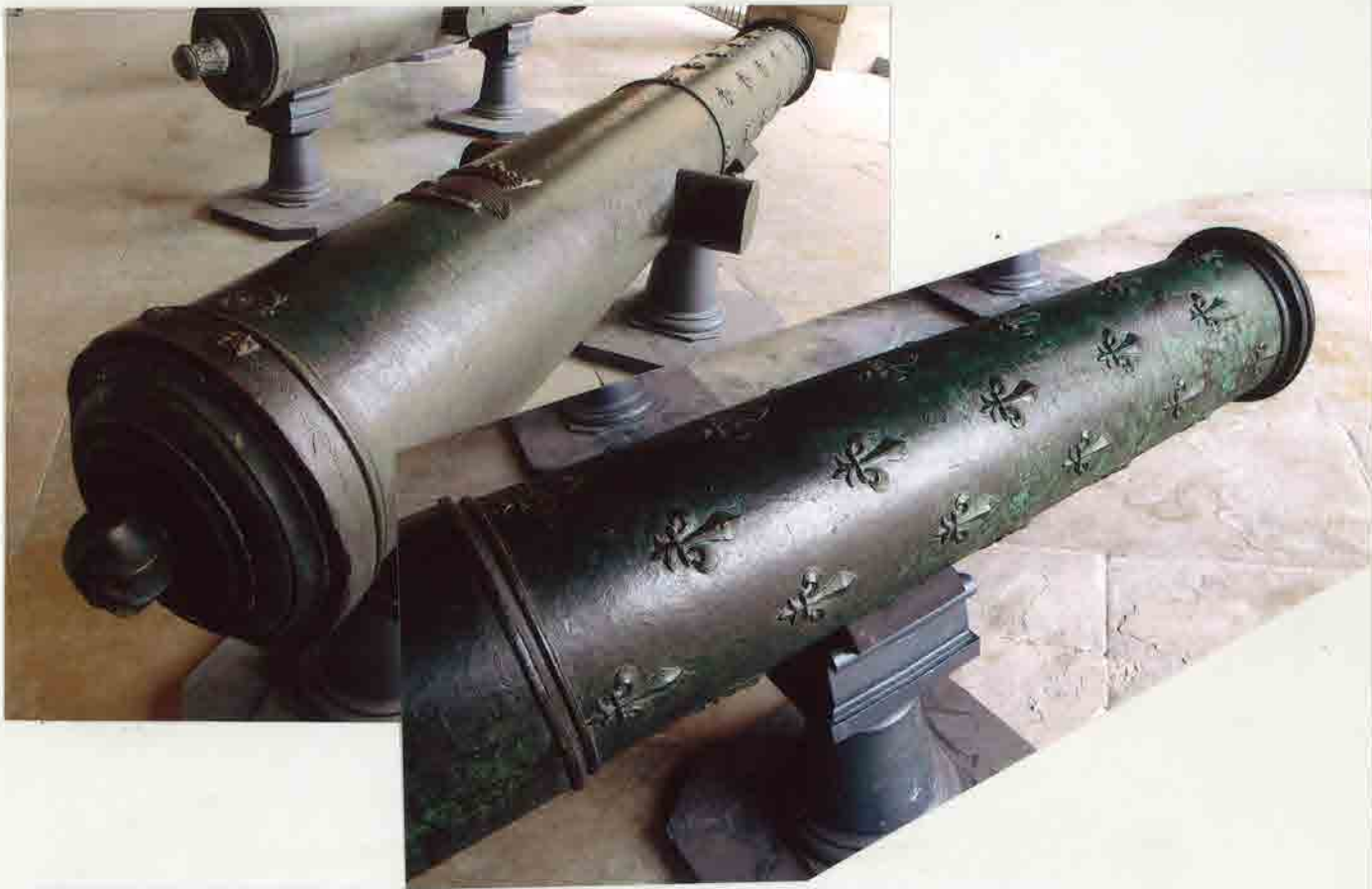


Bronze cannon of the time of King Louis XII (r. 1498-1515). The chase "semé de fleurs-de-lis", the royal initial "L" engaged in a crown on the first reinforce. Around the vent: "G" the initial of the founder. (Sent to the museum by the Bourges foundry.)





Large bronze culverin of the reign of Louis XII (r. 1498-1515). On the first reinforce: the crowned porcupine, the emblem of King Louis XII. Decoration of fleurs-de-lis on the vent field and on the chase. On the base ring: Traces of a device that could have been a vent cover or, possibly, an aiming device. Under the porcupine are some lightly engraved Arabic characters probably referring to the weight and the calibre of the piece, which also belonged to the armament of Rhodes and was abandoned after the siege and given to France by Sultan Abdul-Aziz.
Calibre: 17.7cm. Length: 4.05m. Weight: 1,927 kilos.



French cannon of the reign of Louis XII (r. 1498-1515) decorated on the first reinforce with the crowned porcupine, which was the King's emblem. The chase is "semé de fleurs-de-lis", the vent circled by "G", the founder's initial. The breech button is cut into eight faces, an uncommon feature at the time.





Bastard culverin of the reign of King François I. The first reinforce bears the crowned salamander, the emblem of the King, supported and surrounded by two flaming torches (no motto). The chase is "semé de fleurs de lys et de Fs". Calibre: 8.5cm.; length: 3. From the island of Rhodes and later returned by Sultan Abdul-Aziz with many other pieces.



On another similar piece cast at the same period (and also coming from the island of Rhodes), another type of crowned salamander with the motto "NUTRISCO ET EXTINGUO" (I feed it and I extinguish it) (refers to the fire in which, according to legend, salamanders could live happily).





Bronze, bastard culverin of the reign of Henri II. Cut at eight faces and bears the date of founding "1548" on one of the faces of the base "ring". The decorations on the top face include: the initial "B" around the vent (which might be either the initial of the founder, unidentified, or of the foundry). Higher: The crescent of the Goddess Diane the Huntress, which was also the emblem of Diane de Poitiers (the life-long mistress of King Henri II, who had been transferred to him by his father François I), surrounded by two hunting bows (referring to the same Goddess), the ropes broken and graciously twisted as befits a fierce huntress that has laid down her weapons, being tamed by love (the Editor's own poetic interpretation). Above again: The crowned initial "H" of King Henri. Note that the crown this time is covered, as befits a royal crown (not always the case earlier). Above again: A monogram consisting of two opposite "D", the two vertical legs of the letter joined by a horizontal bar, to mean "DH" (Diana / Henri). Above again, at the level of the trunnions: a fleur-de-lis and, above again: The weight of the piece engraved in kilograms ("1076"), an obviously modern addition. Calibre: 8.5cm.

This bastard culverin would have been shooting iron balls of 8 pounds. Note that the breech button is pierced horizontally.

The reference to Diane de Poitiers is common on most of the guns of the reign of Henri II (crescent, initial and bows). It is common also as stone carvings on all castles and buildings of his reign (1547-1559).



A Dutch naval piece. A gun bearing on the base ring the name and place of the founding: "ASSVERUS. KOSTER. ME. FECIT. AMSTELREDAM". On the first reinforce, in a cartouche: "ANNO 1624", the date of casting, and above: a shield bearing the initials "VOC" for "Vereenigde Oost-Indische Compagnie" and the "A" of Kamer Amsterdam (the Chamber of Amsterdam).



A similar Dutch naval piece, bearing the name of its founder: "CORNELIS OUDEROGGE FECIT ROTTERDAM", the date of casting on a scroll: "1646" and a shield bearing the initials of the VOC and the letter "M" for Middleburg (the capital of Zeeland, and the siege of the Chamber of Zeeland of the Dutch East India Company).



"EL MERCURIO", Spanish bronze cannon, cast in 1780. Calibre: 8.4cm. Length: 2.41m., would have shot an iron shot of 6 kilos.

This cannon is similar to two other ones now being displayed in the "Musée National de la Marine" in Paris, which were, like this one, taken during the expedition to Mexico in 1864. The decoration consists of the full arms of Spain on the first reinforce, surmounting a scroll that bears the name and titles of Charles III and, on the chase, the motto "VIOLATI FULMINA REGIS" (The offended King's Thunderbolt) on another scroll and, above again: The personal name of the gun, "EL MERCURIO".

IN THE "COUR D'HONNEUR": THE BEST. THE CLASSICAL FRENCH CANNONS OF THE GRIBEAUVAL AND VALÉE "SYSTEMS".



The fifteen pieces of the Gribeauval and Valée Systems.

THE FRENCH CANNONS IN THE “COUR D’HONNEUR” (17th to 19th century.)

By means of posted comments and individual descriptions of the pieces on display, the “Musée de l’Armée” of Paris clearly documents and explains to the visitors the evolution of French artillery over the centuries. The various Royal Ordnances and the successive “Systems” in particular, that were to make the French ordnance a model followed by a number of other countries, are described in close connection with the precisely relevant cannons, mortars and howitzers.

The “Cour d’Honneur” hosts the gems of the museum’s collection: A truly exceptional range of sixty classic French bronze cannons that retraces for the visitor two hundred years of French field and naval artillery history.



THE CLASSIC FRENCH CANNON (1666-1674)

What the French call “the classic French cannons” are robust bronze pieces, notable for their precise and harmonious measurements and rich ornamentation. They are the guns that brought so much success to the campaigns of Maréchal Vauban. Sebastien le Prestre de Vauban (1633-1707), in his long military career, directed fifty-three sieges; as a military engineer, he fortified the frontiers, built thirty-three fortresses and improved the defences of nearly three hundred. Those cannons were designed in 1666, in the early part of the reign of Louis XIV, at the initiative of the great Minister of War, the Marquis de Louvois (1641-1691), and under the direct guidance of Vauban by the Keller brothers, in their family foundry in Douai (northern France). They were cast there at first, in numbers, and also, in later years, in the various Royal Foundries that they created and supervised all over France, on royal orders.

The “canon classique Français” is in fact the result of a long evolution, which began in 1453 at the Battle of Castillon (Castillon-la-Bataille, 30 km East of Bordeaux). That French victory put an end to the 100 Years War by routing the English army and killing its commander in chief, General Talbot, by cannon shot. It was the first battle in history won by artillery in Europe and it marked the beginning of the Artillery Age, on land and at sea.

In the days of wrought-iron pieces, all cannons were one of a kind due to the artisanal method of construction. When bronze cannons were first cast (the oldest cannon piece displayed in the museum was cast in 1478), bronze foundries were sedentarized in France (at Lyons in 1498, at Paris in 1512, later all over the country) and cannons began to be cast by the dozen, a first attempt at standardization.

The origin of the classical French cannon can be found in the “Royal Ordonnance” of King François I, in 1550, in which he reserved to his exclusive service the use of seven categories of artillery pieces to be designated from then on as “the seven calibres of France” (which were actually six if one does not, and rightly so, consider the “acquebuse à crocq”). In the terminology of the royal edict, which reflected the terminology of the time, the word “calibre” did not mean what we mean today by that word. The word referred to an identificative description of the artillery pieces, not to the internal diameter of the tube (what the French now call the “âme”, which is about equal to the calibre in the modern sense of the word). In fact, the internal diameter of the tube of those six “calibres” was nowhere specified. It did not matter at the time and was left to the discretion of each founder, being a function of the thickness of metal deemed necessary.

The six so-called calibres were called “le canon”, “la grande couleuvrine”, “la couleuvrine bastarde”, “la couleuvrine moyenne”, “le faulcon” and “le faulconneau”. The purpose of the Royal Edict was to *de facto* prohibit the possession of any artillery by nobility and cities. Through a long process of prohibition, intimidation and confiscation that aim was finally reached under Henri IV and France was firmly underway to become unified.

THE "SYSTÈME VALLIÈRE" (1732-1764)

In 1733, a technical revolution had happened in Switzerland. Jean I Maritz had invented the (horizontal) machine to bore cannons. Previously, cannons were moulded vertically in an outer mould fitted with an inner core. From now on, cannons would be cast vertically as a solid mass in their outer mould. The piece was then horizontally bored with the new machine. The result was a much smoother, more precise inner tube. The new technique was to be a crucial part of the next improvements to be made to French artillery, improvements which resulted from King Louis XIV, hiring founder Jean I Maritz and his son Jean II Maritz and putting them in charge of reorganizing the work in all the kingdom's foundries.

It was Jean Florent, Marquis de Valière (1667-1759), "Lieutenant Général de l'Artillerie et des Armées du Roy" and "Directeur Général des Ecoles d'Artillerie", who had been the creative force behind the Royal Ordinance of October 7, 1732, which deeply reformed the French land and naval artillery. Afterwards, he strictly supervised the application of the new rules.

The main goal of the reform was a new attempt at standardization. The ordinance strictly redefined the types of bronze cannons that could, from then on, be cast for the service of the land artillery. The number of calibres was reduced to 5: 24-pounder, 16-pounder, 12-pounder, 8-pounder and 4-pounder. (For the "canon classique Français" the calibre indicates the weight in French livres of the iron projectile, c. 490 gr.)

The success of the Vallière System is due in great part to the work of the Maritz gun-founders, the father and the son, (Jean I Maritz being the inventor of the horizontal cannon's boring machine). The dimensions of the Vallière System guns were so well proportioned that they stayed practically unchanged when the further artillery reformers, Gribeauval and Valée successively introduced their own reforms.



Bronze 12-pounder of the Vallière System cast in 1736, "LE TONNERRE" (foreground).

SYSTEME VALLIERE 1732-1763

The dimensions of the cannons, all in bronze, are now strictly standardized:

	Total length (including breech button)	Calibre
"Canon de 24"	3.55 m	0.153 m
"Canon de 16"	3.35 m	0.134 m
"Canon de 12"	3.21 m	0.121 m
"Canon de 8"	2.87 m	0.105 m
"Canon de 4"*	2.52 m	0.084 m
"Obusier de 8 pouces"		0.216 m
"Pierrier de 15 pouces"		0.405 m
"Mortier de 8 et 12 pouces"		0.216 m and 0.324 m

* From 1755 on, appears a "canon de 4 court", L. 1.61 m.

In the Vallière System, the decoration and the standardized inscriptions are also strictly regulated.

The name of the cannon.

Since the early days of the Artillery Era, cannons, and specially the bronze cannons, have been individually christened. It is systematic in the Gribeauval System and in the Vallière System. In most cases, the reason for the choice of the name is obvious : "LE SOLIDE" (The Solid), "LE BELLIQUEUX" (The Bellicose), "LE FORT" (The Strong), "LE TONNERRE" (The Thunder), "LA FURIBONDE" (The Furious Lady) etc. Some chosen names call for a second degree or a humoristic explanation: "LE REVEIL-MATIN" (The Alarm Clock), perhaps supposed to cut short, at dawn, the happy dreams of victory of the enemy. But what about "L'HORGANISTE" (The Organ Player) ? or "LE NASILLARD" (The One who Speaks with a Nasal Voice) ? or "L'AFFINEUR" (the one who, in France, is in charge of the last stage of the maturing of cheese)? or "L'ARPENTEUR" (The Land Surveyor) or "LE PELERIN" (The Pilgrim)? And what should one think of "LE DELOYAL" (The Disloyal Man), the name of a bronze 24-pounder cast at Douai by Bérenger in 1715, the Duc du Maine being "Grand-Maître de l'Artillerie"?





“LE PORTE-MALHEUR” (The One who brings ill luck — obviously to the enemy!), a 24-pounder in the “Système Vallière”, identical to all pieces of that calibre in the system, the only significant difference being the name and coat of arms of each successive Master of the Artillery.



(Continues →)

On the base ring, name of the founder, place and date of casting.

On the first reinforce, the crowned arms of France (three fleurs-de-lis).

Above, the King's emblem, the Sun, with the motto "Nec Pluribus Impar" (Strong enough to vanquish the multitude or a vast choice of other, suggested second degree translations, all indicating the uniqueness of the person of the Sun King and giving an idea of the altitude at which He flies over the rest of humankind).

At the trunnions level, the handles in the form of mythological dolphins.

On the chase, successively, the coat of arms of the "Maître d'Artillerie"; above again, on a scroll, his name and titles; above again the motto of the Royal Artillery of King Louis XIV "Ultima Ratio Regum" (The last Argument of the Kings) and just before the muzzle neck, the individual name of the gun.



Louis Charles de Bourbon, Comte d'Eu, Duc d'Aumale, closely related to the King, was Grand Maître de l'Artillerie de France from 1736 to 1755.



"LE BELLIQUEUX" (The Bellicose, The Aggressive) a 16-pounder of the same system, cast in 1738 at Perpignan (Southern France) by Jacques Gor. Weight: 1,975 kilos.





On this similar 24-pounder of the Vallière System (called "LE REVEIL-MATIN"), the royal coat of arms and the royal crown, the coat of arms of the "Grand-Maitre de l'Artillerie", as well as his name, have been carefully scraped off, and so has been the motto that refers to "The best argument of the Kings". This clearly indicates that this cannon remained in use after 1789 and received such a vengeful treatment from the hands of the "Révolutionnaires".



Worst still, to add insult to injury, on another cannon, in the French Revolution period, a zealot of a Republican, after having scraped off the royal arms, has engraved in the centre of the oval shield the likeness of the "Bonnet Phrygien", the Phrygian cap of the rabbles.

In the Vallière System, the decoration, as well as the standardized inscriptions, are strictly regulated: the cascable and the breech mouldings are particular to each calibre in the system, allowing any gunner to immediately identify the piece and the size of shot it requires.



The telltale breech mouldings plus cascable combination: For a 24-pounder, the lion of Nemea with a club or mace in the mouth; for a 16-pounder, a Medusa holding a flame or torch in the mouth; for a 12-pounder, the wings and head of a cock; for a 8-pounder, the wings, claws and head of a basilisk or dragon and, for a 4-pounder, a lion with a mace in the mouth, identical to the breech plus cascable of the 24-pounder. (The great difference in the size of the two pieces avoiding any risk of confusion).



(Continues →)



The Lion's head and mace of the Vallière System for a 4-pounder, (17th century 4-pounders seem to be very rare in French collections). The cascable photographed here is from a piece that was formerly in the "Musée de l'Armée" (at the Invalides) collection, now on loan to the "Musée de l'Artillerie" in Draguignan. See photographs and comments in the Draguignan's EA.

The "Système Gribeauval".

Jean-Baptiste Vaquette de Gribeauval, a Colonel in the French Army in 1757, offers his services to Austria when he feels that his merits are not sufficiently recognized in France. He will become famous in the campaigns against Frederick II and in battles and was made Feld-Maréchal in Austria in 1762. By then he is probably the best artillery expert in Europe, having a first-hand professional and technical knowledge of all the qualities and drawbacks of the French, Austrian and Prussian artilleries.

When he returns to France, the King, considering him to be the most able person to renovate and further improve his artillery, makes him "Maréchal de Camp" and "Inspecteur de l'Artillerie" (1763). Gribeauval immediately starts working on his new reforms. In 1765, his new system is officially approved and the new type of cannons he advocates began to be produced in quantities. Gribeauval was made "Inspecteur Général des Armées du Roy" in 1765 and later "Inspecteur Général de l'Artillerie" (1776).



"L'AMÉ" (The Well Loved). 24-pounder cannon of the Gribeauval System, "modèle 1775". Cast in Strasbourg in 1832 and was rifled sometime in the 19th century.
Weight: 2,750 kilos.



SYSTEME GRIBEAUVAL 1765-1825

The general configuration of the cannons of the previous System are maintained but most of the decoration and marks are suppressed, with the exception of a royal monogram and the name of the "Commissaire aux Fontes", the foundry Director, with the date and place of the casting. The pieces are classified in four categories :

- Siege artillery: 24 and 16-pounders, howitzers of 6 "pouces" (22 cm), mortars (cylindrical or of the Gomer System, with a conical powder chamber) of 8 "pouces" (28 cm), 10 "pouces" (27 cm) and 12 "pouces" (32 cm), pierriers of 15 "pouces" (41 cm).
- Fortress artillery: 24, 16, 12 and 8-pounders, mortars as above.
- Field artillery: 12, 8 and 4-pounders but the tubes made shorter, also howitzers of 6 "pouces" (16 cm).
- Coastal and naval artillery: 36, 24, 18 and 12-pounders, howitzers and carronades.

(After J. Wemaere)



THE SYSTEM OF THE "AN XI" of the REPUBLIC, (1803)

The system is reduced to the following:

Shortened 24-pounder cannon, a long and a short 12-pounder cannon, a long and short 6-pounder cannon, a 6-pounder and a 3-pounder for operations in the mountains ("canons de montagne"), Howitzer: 15cm; Mortar "à la Gomer": 15cm, 24-pounders in both cases.

The System lasted only until the "Restauration".

(After J. Wemaere)

THE "SYSTÈME VALÉE" (1825-c. 1856)

Between 1825 and 1831, Sylvain, Comte Valée, Maréchal de France, capitalizing on the many lessons learned during the Napoleonic Wars, improved in his turn numerous technical details of the Gribeauval System. As a result, the so-called "Système Valée" artillery was highly successful at the attacks of Algiers and Constantine (1830 and 1837) and, later, during the Crimea War (1853-1856).



New in the Valée System: a cannon-howitzer of a calibre of 22 cm. This piece is called "L'ALMA". It was cast in Toulouse (south-west France) in 1855. Weight 2130 kilos. Artillery pieces now bear no decoration at all, except a scroll with their inscribed name on the top of the chase. The handles are octagonal in section and plain. The profile of the piece is cylindrical with no muzzle swelling. The trunnions have a rim-base. There is a peculiar narrowing of the profile between the base ring and the beginning of the first reinforce.

The name of the piece refers to a fresh Anglo-French victory on the banks of the Alma, a river of Crimea which flows into the Black Sea. The troops of Maréchal Saint Arnaud and Lord Raglan had defeated the Russian forces of General Mentchikoff on September 20, 1854.



The breech button of the pieces of the Valée System are as sober and uncharacteristic as can be.



In the main courtyard:
A suspended mortar bearing the
crowned double LLs of King Louis
XV and Louis XVI.
Two trunnion mortars, one of the
so-called "Gomer System" (with
an improved truncated cone-like
chamber powder). →



A massive "mortier à semelle"
(fitted on a bed plate to increase its
stability). The angle of shooting
being fixed on this type of mortars,
different ranges could be obtained
only by varying the quantity of
powder in the charge. →

"FONDU A TOULON LE 22 FEVRIER 1806. P. 3880 K."

PIECES IN THE CORRIDORS, INTERNAL YARDS, ETC.



One of a pair of Japanese bronze cannons. Decoration based on vegetal inspired designs. No information. These pieces are standing under the "Voûte d'Austerlitz", the Austerlitz vault.



A passing glimpse in one of the many reserve areas of the museum.



Chinese bronze cannon, cast in 1843. A trophy from the battle of Sin-Koo in 1860. Calibre: 7cm.; length: 1.59m; weight: 278 kilos. Projectile: An iron ball of 1.7 kilos.

This piece, one of a pair, is located at the entrance of the offices of the Military Governor of Paris (from the North entrance: Corridor on the left).



Row after row of cannons, mortars and howitzers are laying in the inner yards not normally opened to the public, in particular in the "Cour d'Angoulême" and the "Cour de la Victoire" (the forty-two pieces of artillery of which have been studied in great detail by Mrs. Marine Jaouen in her "Mémoire de D.E.A." in Historical Archaeology for the University of Paris I, a remarkable piece of research).

Considering the innumerable cannons scattered all over the buildings and outside areas of the "Hôtel des Invalides", laying on the ground or erected along the walls, it is hard to imagine that the museum should really know exactly how many pieces of artillery they keep.

The "Cour de la Victoire" (the Victory's Court) hosts 42 cast iron pieces of artillery, all naval pieces, covering the period 1786-1868. They consist in 14 muzzle-loading guns, 4 of which are rifled, 3 breech-loading rifled guns, 7 "obusiers" or howitzers, 2 carronades. These pieces are described in detail in the thesis of Mrs Marine Jaouen (2001, see bibliography).



Carronades and howitzers.

IN A CORRIDOR, EXITING FROM THE "ANTIQUE ARTS AND ARMOUR" DEPARTMENT.

Bronze Ottoman cannon of the late 16th century was taken as booty by the French army at the conquest of Algiers in 1830. Calibre: 17.8cm., length: 3.85 m.; weight: 2,910 kilos. This piece is a "perrier" (throwing stone balls).

This cannon astonished the French artillerymen and the French founders because it is a masterwork of foundry. There is no hole in the metal, indicating the high degree of technique of the Algiers founders. Three cartouches with inscription in Arabic characters are featured on the first reinforce. One indicates that the gun was cast at Algiers from September 29 to October 8, 1581, by the founder Ca'fer el-Mu'allim.



The whole surface of the tube is finely chiselled and stamped with flowery and foliage patterns.



This remarkably decorated presentation piece features the coat of arms of Frederick de Montbéliard, Duke of Würtemberg, and of his wife, Sibille de Anhalt (in Bavaria). The first reinforce is octagonal and comprises five recesses in which are small high-relief statues that figure, the first one, the Duke of Würtemberg (identified by his initials, "F. W."), the others the Air, the Water, the Fire and the Earth. Each of these is surmounted by figures that represent Justice, Hope, Faith, Prudence and Strength. Around the chase, which is in the form of a cabled column, is a writhing snake, the head of which serves as a sight. The lifting handles and the tail ring are in the form of an embraced couple symbolizing marital love. This piece was obviously cast to celebrate the wedding of Frederick and Sibille, but the identity of the generous donor is unknown.





Man and wife, naked, in an embrace.
A strong symbol of marital love.



The Duke of Württemberg ("F.W.").



Justice and Faith.

CANNONS IN THE "ANTIQUE ARMS AND ARMOUR" DEPARTMENT. 13TH-17TH CENTURY.



Portable and semi-portable firearms. These small cannon-like and/or mortar-like weapons are "bouches à feu" (literally "fire mouths", or "fire spitting mouths", a purposely vague term used to designate early artillery pieces that come in no particular category). These pieces were made by the local smith or cooking-pot and cauldron founder, according to his whims or to the whims of the Lord his customer. Earlier pieces were made in wrought-iron and barrel-like. These are the earliest cast iron such pieces in the collection (late 14th - early 15th century?) The range and the precision of such pieces were minimal. The effect was mostly moral, especially with untrained enemy soldiers.





This large wrought-iron bombard made in France around 1540, found in 1894 in the bed of the river Loire at La Chapelle aux Naux (from which the gun has kept its nickname) near the castle of Langeais. It was retrieved in 1897 and sent to the Artillery Museum. This bombard, built according to the process called "à tonaille" borrowed from the ancestral cooper's techniques, is typical of its time, although it is remarkably large. Calibre: 48.6cm.; length: 2m., weight: 1,500 kilos, would have shot stone balls of about 130 kilos to between 100 and 200 metres. This "bouche à feu", a muzzle-loader, already shows carefully made mouldings at the level of the first reinforce a first attempt at cannon's decoration.

Foreground: a wrought-iron bombard, made "somewhere in Western Europe", probably about 1410. L. 72 cm; cal. 3,8 cm; weight 41 kilos. A stone throwing breech-loader (with trunnions).

Behind: a wrought-iron bombard, French, about 1450. L. 83 cm; cal. 17,5 cm; weight about 200 kilos. This piece would have shot stone balls of about 6 kilos. The piece has trunnions destined to fit into a primitive type of carriage. This bombard was found in Metz during archaeological excavations in 1962.



This bombard-mortar, in bronze, is believed to be the largest of its kind known in the world. It was cast at the request of Grand Master Pierre d'Aubusson (1476-1503). The muzzle ring bears the words "F. PETRUS DAUBUSSON M HOSPITALIS IHER". The chase bears in a quartered shield the arms of the Order (an anchored cross, the ancient cross of the Order) and of the d'Aubusson (cross of St. George). It was probably cast in Rhodes itself before 1489. It is considered remarkable, not only for its size but for the quality of the casting. This weapon made for curved shooting, was used for the close defence of the moats or ditches of the ramparts (100 to 200 m). The projectile was a granite ball of about 260 kilos. The arrangement of the strong support of the trunnions allowed for an almost vertical shooting.



Dimensions: Calibre: 58cm., length: 1.95m.; (piece called "for 500 pounds of stone ball"); weight 3,325 kilos.



500-pounder (of stone) bombard mortar of Grand Master
Pierre d'Aubusson.
(Continued)



This is one of the pieces that the Knights had to abandon to the Turks when they left forever the island of Rhodes. It was presented to Napoleon III in 1862 by Sultan Abdul-Aziz together with other pieces of the same origin.



The exact meaning of the mark cast on the face of the left trunnion is not known.

500-pounder (of stone) bombard mortar of Grand Master
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(Continued)



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The "SAINT GILLES", a bronze cannon of the Knights Hospitalers of St. John of Jerusalem, has a long history. It was cast in Lyons, France, in 1507, for the Knights who placed it in a prominent position in the defences of the fortress island of Rhodes. L. 2;70 m; cal. 23 cm; weight 2032 kilos. The projectiles were iron cannon balls of 40 kilos. The cannon is decorated with a flattened lion's head as breech mouldings (pierced horizontally) and at the first reinforce it bears a scroll with the words "SAINT GILLES", surmounted by two shields in the shape of a (horse's) chamfer. One bears the arms of the Knights Hospitalers of St. John of Jerusalem, the second of Charles Alleman de Rochechinard, Grand Prior of St. Gilles (St. Gilles, in the present department of the Gard, near Nîmes), was the seat of an important abbey which may have paid for the casting of the piece (?) Above the shields, the letter "L" probably indicates the founder and, just above, are the mention of the date and place of casting: "FAIT. A LION. 1507". A fleur-de-lis above. The chase of the piece, which is octagonal, is "semé-de-lions rampant and fleurs-de-lis".





This extremely long piece, a bronze culverin of the early part of the 16th century is one of the longest bronze culverins still extant in the world. Calibre: 16.5cm. (ratio c. 32), length: 5.40m.; weight: 3,333 kilos.

The cannon ball would have been either stone or iron. The piece is faceted, with a high degree of precision in the casting and the arrangement of the facets alternates on the second reinforce (or where the trunnions are situated), only to resume their original faceting on the chase. The vent field as well as the muzzle neck bear a fine garland with vegetal motives.

The piece was cast for the Order of the Knights Hospitalers of St. John of Jerusalem as Emery d'Amboise was Grand Master (1503 to 1512) and bears his coat of arms. As a number of pieces of that period, the culverin features a strong hexagonal appendix, which served the purposes of the future breech button.

A group of three bronze culverins of the 16th c.

On the left of photograph 1, on the extreme right of photograph 2, is an octagonal Spanish culverin of about 1525-1530. L. 2;80 m; cal. 9,3 cm, weight 507 kilos. The piece is identified by its decoration showing the pillars of Hercules under the Imperial crown of Charles V, joined by a partly rolled around scroll on which some of the (badly worn off) letters of the traditional motto "PLUS ULTRA" can still be seen ("PLUS - - TRA", the last two letters on the part of the scroll enrolled around the pillars to the right). This proud motto, found on most Spanish coins of the 16th and 17th c. and on many other cannons, reminds the world that it is the Spanish monarchy — the Catholic Kings — who have proved wrong the old belief according to which the world ceased after the Strait of Gibraltar, behind which there was "nec plus ultra", nothing further on.

The scallop underneath probably refers to the Saint Patron of Spain, Santiago of Compostella, the symbol of which, carried by all the pilgrims all over the centuries, was a scallop. Animal's heads, probably a dog here, are known as breech mouldings on other cannons of the time of Charles V, a fashion which had become popular in a number of European countries. The twisting of the octagonal plan of this piece at the central section that carries the trunnions, is a remarkable refinement.

This culverin is another of the many pieces of artillery that the French brought back home after the conquest of Algiers in 1830.

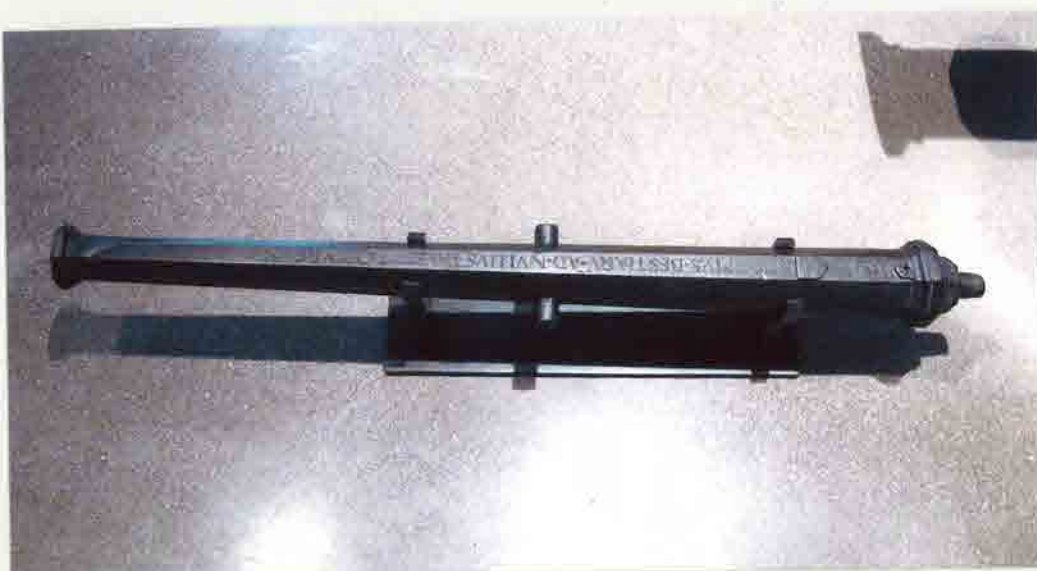


The twin pieces on the right on photo 1, on the left and on the foreground on photo 2, are French pieces of about the same period. L. 2,95 m; cal. 7,7 and 8,2 cm; weight 607 kilos (each). Projectile: an iron cannon ball of 1,5 kilo. Both pieces are clearly identified by the emblem of King François I, the crowned salamander. A group of letters (??) or perhaps figures is too far erased to be readable.

In France, in the 16th c., this piece would have been called a "couleuvrine moyenne" or average culverin, a designation that fits a bronze gun of a calibre of about 8 cm and a ratio length/calibre of 38. That designation was confirmed and maintained in 1550 at the time of the selection of the seven "calibres de France" by the "Ordonnance du Roy" of that year. (The "couleuvrine moyenne" was smaller than the "couleuvrine bastarde" and larger than the "faulcon", a terminology which makes sense in the French context only.)

Small bronze gun, a "fauconneau" or "falconnet", belonged to the smallest category in the seven "calibres de France" of the Royal Ordnance of 1550. (This ordnance meant to constitute a family of seven types of guns carefully selected and reserved to the exclusive use of the King, to serve and proclaim his royal privilege.) It is believed to have been cast in France around 1510-1515. It bears around the touch hole the same initial "G" that is the well-known signature of an unidentified founder. It is octagonal as so many pieces by the same founder are. Calibre: 3.2cm.; length: 1.06m., weight: 25.4 kilos, making it a portable or semi-portable weapon (that is by a team of two gunners, one carrying the gun, the other the heavy fork or any similar contraption that could stabilize the piece before firing. The piece bears on most of its length the following inscription: "LEO FO [inscription interrupted by a hardly readable escutcheon cast in relief and therefore erased almost beyond recognition, but described in the museum's notice as an "écu au lion"] RTISSIMVS . BESTIARVM . AD . NVLLIVS . PARESCIT OCCVRSVM" (Lion, the bravest of whole animals, who never met anyone he wouldn't dare to attack).

49



ERF. 48

This Ottoman multiple barrels bronze cannon is another of the artillery pieces, which were taken by the French as booty as the conquest of Algiers in 1830. It was cast in the early 16th century. Calibre: 13cm., length: 1.77m.; for the central tube, 7.5cm. for the eight others around. The name of the founder is partially mentioned in a cartouche with inscriptions in Arabic. The vent is common to the main tube and the upper one. The seven others powder chambers communicate through a number of channels spreading from the central vent. In other words, in theory, the nine barrels could either be shot together or by two or by seven.

This piece is considered by the experts of the "Musée des Invalides" as typical of the first years of the 16th century. Multiple barrelled guns, they believe, "were never a great success because the trajectory of the projectiles were somewhat erratic and the mass effect expected from joint firing was seldom obtained".



The "cannon made for Richelieu".

This French bronze piece once was part of a battery of six similar guns which were cast as to ornate the castle of the Cardinal Duke of Richelieu (was in Indre-et-Loire, demolished long ago). Armand-Jean du Plessis de Richelieu (1585-1642), Cardinal, Prime Minister of Louis XIII, was one of the greatest statesmen France ever had.



From 1627 on, he was "Surintendant Général de la Navigation et du Commerce de France" (General Superintendent of the Navigation and Trade of France). The coat of arms of His Eminency is cast on the reinforce (complete with Cardinal's hat and cords, Ducal crown and Order of the Holy Spirit).

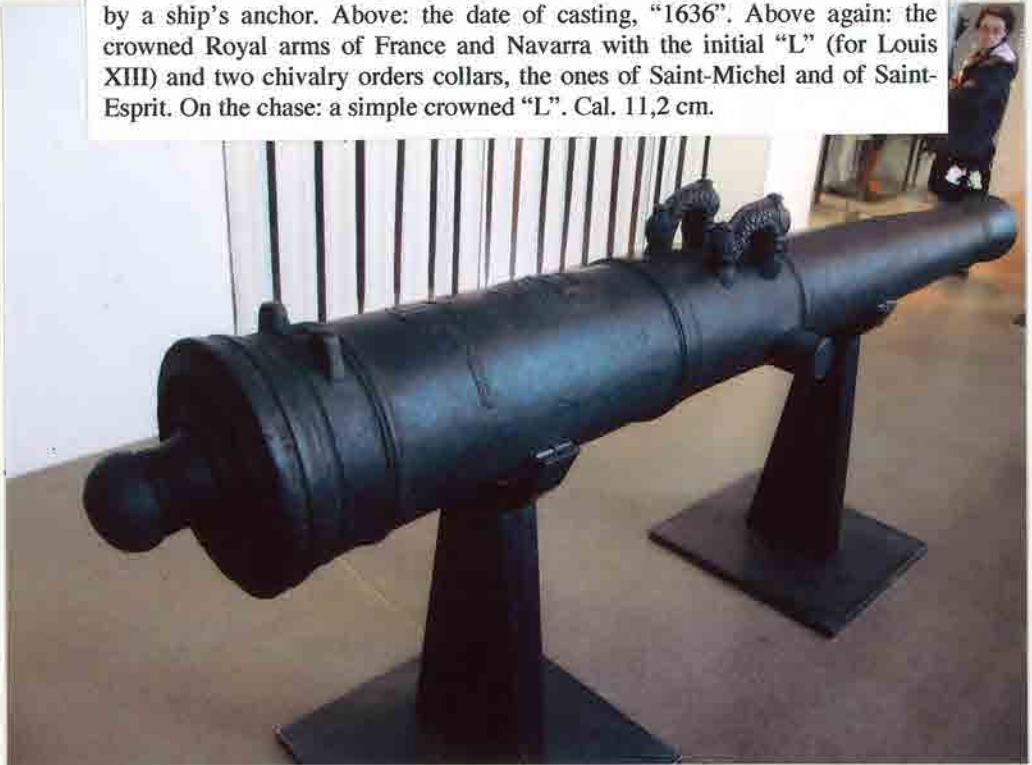
Piece cast in France around 1630. Calibre: 10.8cm., length: 2.75m.; weight: 872 kilos.





The breech button which figures the head of a young Medusa is a clear allusion to the sea. The handles of course are dolphins. The symbolism of the Fauns which decorate the muzzle neck is however not understood. The vent of the piece is not completely opened. This prestige piece, obviously, was never fired and was not meant ever to be.

Another, a "real" Richelieu cannon, a naval piece, cast in Chartres. On the first reinforce, the inscription "CARDINAL DE RICHELIEU", interrupted by a ship's anchor. Above: the date of casting, "1636". Above again: the crowned Royal arms of France and Navarra with the initial "L" (for Louis XIII) and two chivalry orders collars, the ones of Saint-Michel and of Saint-Esprit. On the chase: a simple crowned "L". Cal. 11,2 cm.



NAVAL ARTILLERY

The “Musée des Invalides” being the “Musée de l’Armée”, its collections, obviously, mostly concern land artillery. However, Army cannons and Navy guns were for a long time fully interchangeable (but not of course their stocks and/or carriages) whereas the Merchant Marine never followed any strict rules.

Underwater archaeological excavations have shown, confirming thereby all the existing ancient iconography and the scattered information existing in the French archives, that all over the era of wrought-iron cannons, the same artillery pieces were made and used, indistinctly, for land and for the sea. These were the days of the Veuglaire (breech-loaders with a separate powder chamber) and of the various bombards (muzzle-loaders) and perriers, which were in fact identical or very similar pieces being used to throw stone balls.

When the French Navy became organized (thanks, mostly, to Cardinal de Richelieu, who was “Grand-Maître, Chef et Surintendant Général de la Navigation et du Commerce de France” from 1627 to 1642, and after him, to the efforts of the great minister Jean-Baptiste Colbert, “Secrétaire d’Etat de la Marine” from 1669 to his death, in 1683) a true, permanent organized naval force was created, which was to be the main stay of King Louis XIV’s reign. Ports and shipyards were created (Rochefort), the training of the officers and the crews was methodically organized, and the great “Ordonnances” of 1681 and 1689 were promulgated, which constitute a veritable code for the Merchant Marine and for the Royal Navy. But the naval guns were never basically different from the land guns, in particular from the “cannon classique Français”.

What was peculiar to the Navy was the choice of the calibres and of course, their repartition on the various decks of the various classes of warships. There was not much difference in the decoration of the land and sea “canons classiques Français”, with the exception of the arms of the “Amiraux de France” on the chase.



Wrought-iron “pierrier” (perrier), a breech-loading swivel gun, would have been used on board ships as well as on land operations. So was probably the bombard in the background, one of the earliest of this type of pieces equipped with trunnions.

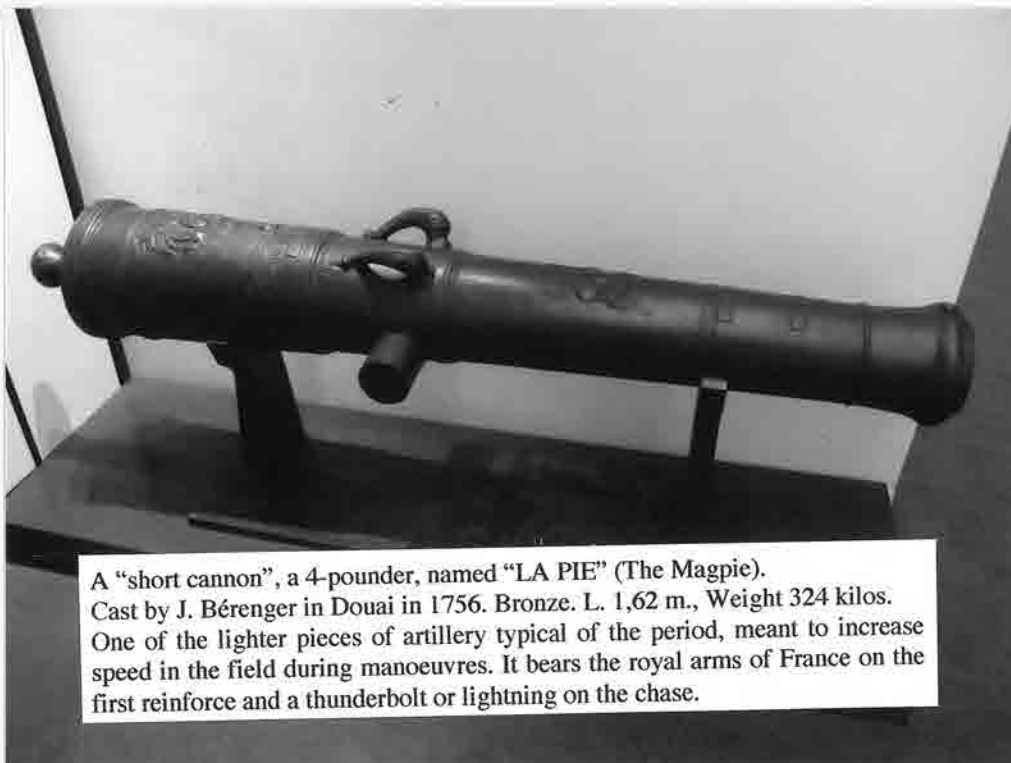
Not all of the 50 to 60 “pièces de la Marine”, which are listed in the fifth volume of the 1890 “Catalogue de l’Artillerie de la Marine” under the heading “Pièces de la Marine” (Catalogue by Robert L.) are on display at present. The famous “canon de Richelieu” (a “pièce de réjouissance”, not a true gun) and the “real” cannon that also bears the coat of arms with the crossed ship’s anchors of the Cardinal are prominently displayed in the “Antique Department”, the two naval pieces that bear the arms of the Count of Toulouse, Grand-Amiral de France at the time, are not to be seen. Neither are the six cannons of the late 18th c. (1781 and 1786), pieces of 36, 24, 18, “12 long” and “8 long”.

The surviving French naval cannons are much rarer today than their land counterparts. In 1768, the Navy inventories still listed 186 bronze cannons. In the same year 1768, the Navy’s inventory listed 7,588 cannons in cast iron. From then on, most of the bronze cannons began to be melted down. The last ones disappeared with the Revolution.

Today (2013), only exceptional pieces exist in the French museums, plus, of course, the relatively considerable number of bronze pieces recovered from underwater archaeological excavations.

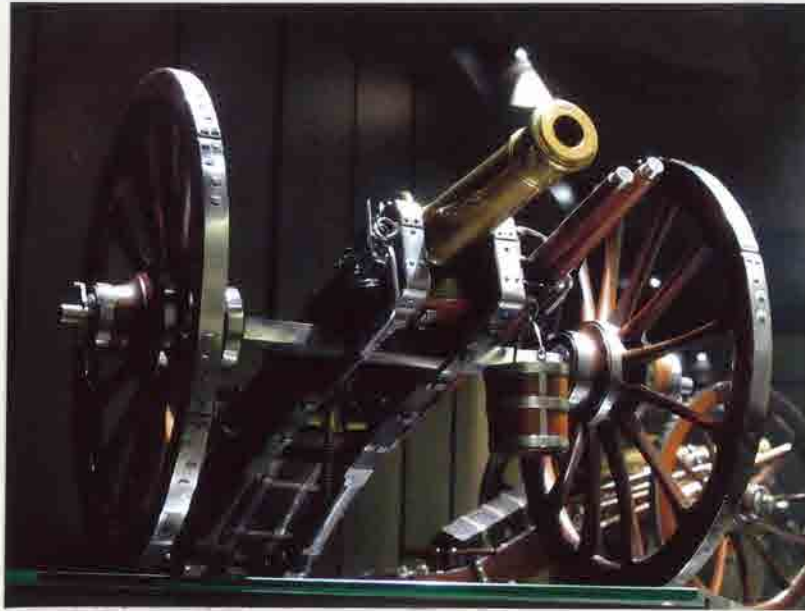


This English mortar (bronze, calibre 12), was cast in Woolwich, England, in 1740. It was taken from an English redoubt at the battle of Yorktown and subsequently presented to the French Regiment Royal-Auvergne by George Washington for their help during the American War for Independence.



A "short cannon", a 4-pounder, named "LA PIE" (The Magpie). Cast by J. Bérenger in Douai in 1756. Bronze. L. 1,62 m., Weight 324 kilos. One of the lighter pieces of artillery typical of the period, meant to increase speed in the field during manoeuvres. It bears the royal arms of France on the first reinforce and a thunderbolt or lightning on the chase.

The collection of small scale models of cannons and mortars of the "Musée de l'Armée" is said to be the richest in the world. Each of these models is both an artwork and an invaluable historical document. The first ones made at the end of the 16th century were actual prototypes for the study of pieces to be cast. The "Maîtres d'Artillerie", the founders and the artillery officers or seamen used them systematically. Each of them is a testimony to the professional excellence of the founders, the engravers, the chisellers and the carvers. Slightly later models were war toys. They could actually be fired. They were standard gifts for the young princes during their education. In the 17th century they became desirable diplomatic gifts. The small ornamental cannon presented to King Louis XIV by the "Parlement de Franche-Comté" when this province was reattached to France in 1676 is but one example (the two lower photographs). Today, the small scale models are perhaps the most complete source of information for the artillery historian.



A field piece of 4, "modèle 1764". By J. Bérenger in Douai, 1788. Scale 1:4.



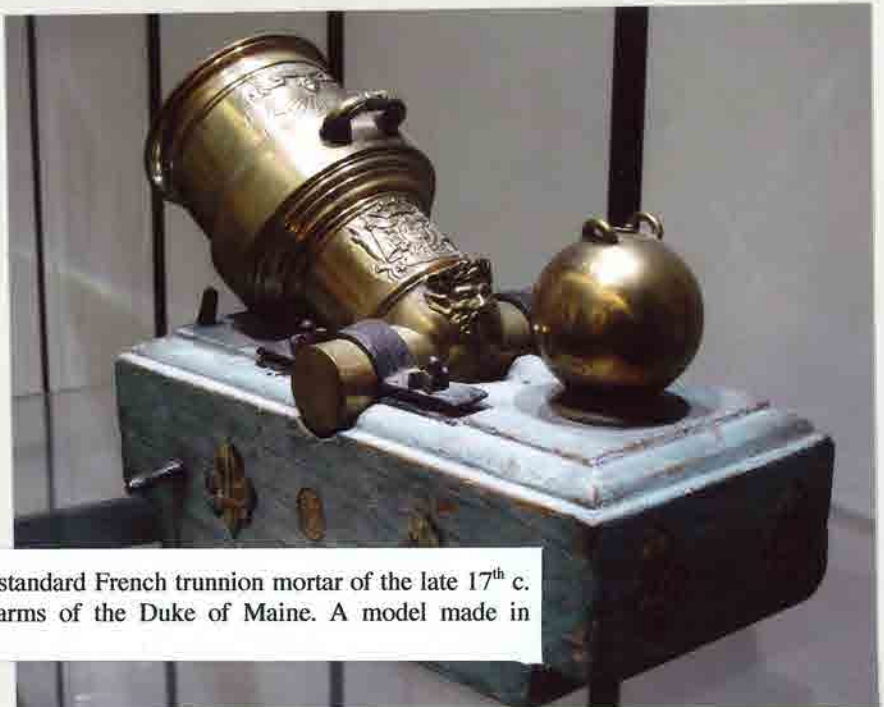
The so-called "Canon de Franche-Comté", a scale model made and presented to King Louis XIV, in 1676. Made by Laurent Ballard, a Spanish 12-pounder. Gilt bronze and fruit tree wood. Scale 1:4.





1: A 12-pounder bearing the arms of the "Dauphin de France" (the heir to the throne). Germany, Nuremberg, 1663, W.H. Heroldt. Scale 1:6

1 (right): 10in. mortar. France, 1775-1785. Scale 1:4.
 2 (left): 10in. "Mortier à la Gomer". France, 1775-1785. Scale 1:4.
 3 (lower right): Siege "pétard".



A "mortier à l'ordinaire", a standard French trunnion mortar of the late 17th c. (with bomb). It bears the arms of the Duke of Maine. A model made in France after 1694. Scale 1:6.

**MUSEUM:
MUSEE NATIONAL DE LA MARINE, PARIS
NATIONAL NAVY MUSEUM, PARIS**

- Location: On the “Esplanade des Invalides, Place du Trocadéro”, in the “Aile Passy” of the “Palais de Chaillot”. The “Aile Passy” which houses the collections of the “Musée National de la Marine” Paris, is the right wing, (“right when you look at the nearby Eiffel Tower”) of the Chaillot Palace.
- Postal address: Musée National de la Marine — Palais de Chaillot — 17, Place du Trocadéro — 75116 Paris — France.
- Telephone: ++33/(0)1 53 65 69 69
- Fax: ++33/(0)1 53 65 69 65
- Email: infos.publics@musee-marine.fr
- Website: www.musee-marine.fr
- Curator: Vice-Admiral Jean-marc Brûlez (Director); Marjolaine Mourot (Keeper)
- Contact person: As above.
- Services offered: Audio guides, guided tours, temporary exhibitions. A very rich library, open to the public. A very well stocked naval and technical book shop, including the full collection of back issues of the excellent, the extremely informative magazine of the museum: *Neptunia*. The several indexes of articles published in the magazine, since its foundation are worth consulting for every type of research.
- Opening hours: Monday, Wednesday, Thursday and Friday : 11h-18h.
Saturday and Sunday: 11h-19h.
Closed on Tuesdays, January 1, May 1 and December 25.
- Recent catalogues and publications on the history of the building and its collections include: A rich selection concerning special parts of the collections but no publication specially devoted to their naval artillery pieces.
- History of the building: The Palace of Chaillot where the Musée National de la Marine is now located was a desert-like, un-built rocky place pierced with the many quarries, which were dug for the stone that built the city. It is Emperor Napoleon who, impressed by the beauty of the site, decided that “un Kremlin cent fois plus beau que celui de Moscou” should be built there to serve as a palace for his son. In 1810, the architects Percier and Fontaine were ordered to prepare a project. The project was grandiose and covered the hill on a front of more than 400m. Most of the area was levelled, many small houses expropriated, and the “Pont d’Iéna” was built on the Seine (1813). The end of the First Empire marked the end of the works.
Under the Restoration, a new project was born. The pretext was to celebrate the capture of some bastions in Spain by the

Duke of Angoulême (one of them named Trocadéro), hence the name. Little was done and the project was abandoned.

It was on the occasion of the “Exposition” of 1878 that the first “Palais du Trocadéro” was erected by the architect Davioud. The palace raised much controversy, which is quite understandable since it consisted mainly in a rotunda flanked by four Romano-Moorish towers.

Its welcome destruction was decided in preparation of the “Exposition” of 1937, at which time the actual Palais de Chaillot was built on the plans of architects Carlu, Boileau and Azema. This new Chaillot Palace is well inserted in the site and built in the rather sober style of the time.

From day 1 of its construction it had been foreseen that once the “Exposition” of 1937 should be finished, the Chaillot Palace would house the Navy Museum and the Ethnographic Museum. The frescos, which decorated the building are still there as witnesses of the early plan.

History of the collections: The “Musée National de la Marine” is said to be, with the museum of Saint-Petersburg, one of the two earliest maritime museums in the world. The collections have their origin in a collection of ship’s models, including many “modèles d’arsenaux” (authentic models of the time), which were presented to King Louis XV in 1748 at the time the King decided the foundation of a “Salle de Marine”, a Naval room in the Palace of the Louvre. The collection was enlarged from various sources and King Charles X in 1827, created the first “Musée Naval” in the galleries of the Musée du Louvre. The start of the installation of the collections, which had been expanding continuously, took place at the Chaillot Palace in 1939, soon after the end of the “Exposition” of 1937. Naval artillery and its history are not the main strong point of the “Musée National de la Marine” in Paris although the development of underwater archaeological excavations, the result of the discovery of many wrecks by amateur divers, has in recent years significantly enriched the artillery collection of the museum. But the museum’s collections are prominent in ship models, paintings, prints and ship-sculptures. Aside from the permanent presentation of its collections, the museum organizes temporary exhibitions on various themes such as, in recent years, the works of Jules Verne, the history of piracy, toy boats and ships, etc., etc. No visitor to Paris should omit a visit to the “Musée National de la Marine” at the “Palais de Chaillot”.

EDITOR'S ALBUM

ORDNANCE PIECES

**PARIS
(2013)**

**MUSEE NATIONAL DE LA MARINE
(NATIONAL NAVY MUSEUM)**





A bronze field piece on its original carriage, with elevating device. It bears the crowned initial "N" of Napoleon III surrounded by a branch of oak and a branch of laurel (in imitation of Napoleon I), also the place and date of casting. The carriage bears the name of the army company to which the piece and carriage belonged : the "3ème Compagnie des Douves" of the fort of Douai in 1870. ("Douves" means moats, apparently the moats of the fort of Douai which the said 3rd Company was to defend on that very year against the invading German army.)

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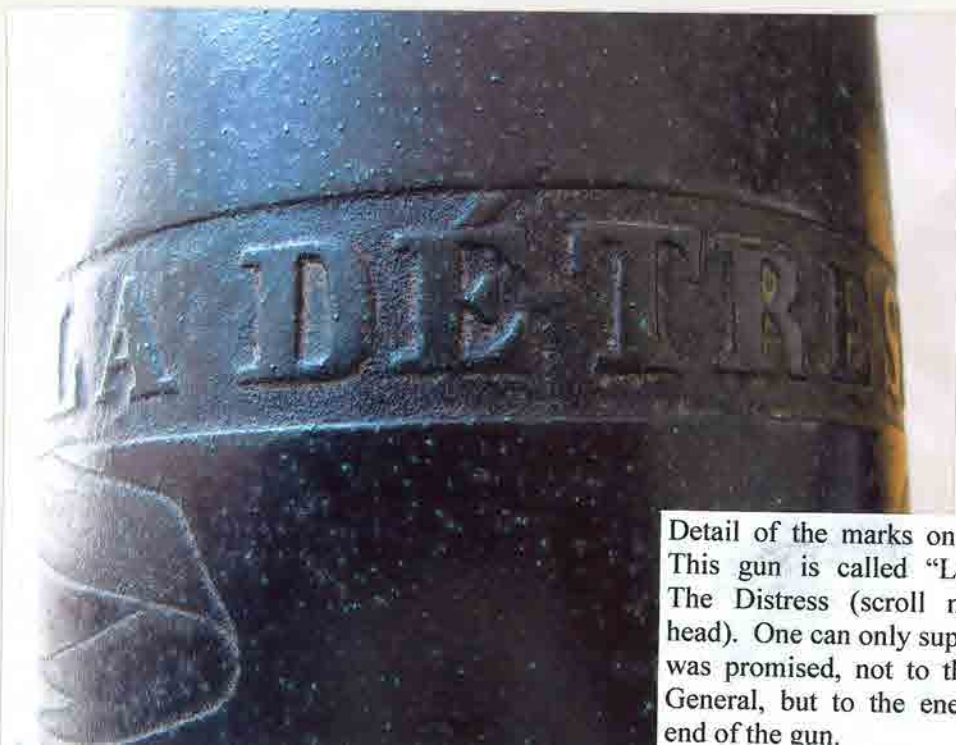


The detail of the marks on the same piece. The meaning of the capital "L" later engraved just forward of the handles is not understood. This cannon bears, cast in a scroll, just before the muzzle neck, its own name : "L'ADULTE".



A similar bronze field piece. It bears the number "172" on the left trunnion and the place and date of its casting. The initial "N" for Napoleon III is again imitated from the cypher of Napoleon I.

(Continues →)



Detail of the marks on the same piece. This gun is called "LA DETRESSE", The Distress (scroll near the muzzle head). One can only suppose that distress was promised, not to the gunner or his General, but to the enemy at the other end of the gun.



The fascination that ancient weapons have always exerted on children can still be verified today by any museum's visitor. Particularly fascinating to the little ones is the cannon, the king of all weapons.

As an institution, the French “Musée National de la Marine”, which has its headquarters in Paris, runs five actual museums. The Paris “Musée de la Marine” is its principal establishment. It has three “antennes” or local establishments on the coast of the Atlantic, formerly “le Ponant” — in Brest, Port-Louis and Rochefort —, and one on the coast of the Mediterranean, formerly “le Levant” — in Toulon —, all of which are worth a long visit. Two former small branches or “antennes” of the “Musée National de la Marine” which once upon a time existed in Bordeaux and in Nice are now extinct and the collections moved to the remaining sites.

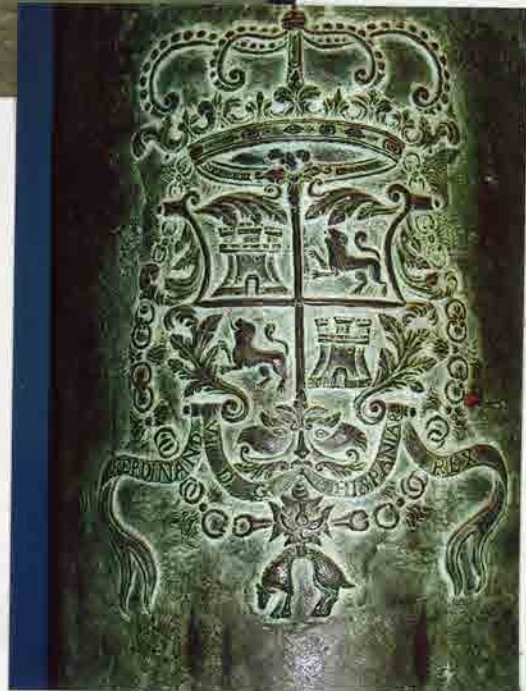
Of all these museums, Mendel Peterson has visited, in 1971, only the very small (and now extinct) Nice Museum. He was justified to do so for there were no artillery pieces now in these days in any of them. The cannons now on show in the various National Navy Museums are almost all the result of recent underwater excavations by diving archaeologists.



When the French troops stormed the fort of San Juan de Ulloa which defended the city of Vera Cruz and protected its anchorage, they captured the whole artillery that had been on the ramparts for centuries (Mexican War, November 27, 1838). Two of the finest cannons taken on that occasion eventually found their way to the Musée de la Marine in Paris.



This heavy fortress piece cast in 1755 is decorated around the powder pan with volutes, it bears on the 1st reinforce the basic coat-of-arms of Spain (Castilla and León) with the Orders of the Holy Spirit (indicating a Bourbon king) and of the (traditional) Golden Fleece. An elegant scroll bears the name of the then reigning king, Fernando VI ("FERDINAND. VI D. G. HISPANIAR. REX"). On the chase are two scrolls bearing "VIOLATI FULMINA REGIS", and the name of the cannon: "EL ERCULES".





"EL CELTIBERO" (the Celtiberian) is another trophy taken from the ramparts of San Juan de Ulloa (Vera Cruz) in 1838. Cast, as indicated on the base ring, by Josef Barnola in Barcelona in 1746 ("JOSEPHUS BARNOLA FECIT. BAR^{ne} 1746"). The first reinforce bears the full arms of the Bourbon of Spain (full coat-of-arms with all the Crown's kingdoms and provinces), struck in the centre with the three fleurs-de-lis of France and featuring the jewels of the French Order of the Saint-Esprit above the Golden Fleece. An elaborate scroll reads: "FERDINANDUS VI. HISPANIARUM. ET INDIARUM REX." on the charging cylinder: "VIOLATI FULMINA REGIS" and the name of the cannon, "EL CELTIBERO".





In recent years most of the important acquisitions of the museum have been produced by underwater excavation on the wrecks of French warships. This bronze 24-pounder has been recovered from a wreck that can be either, the L'ASSURÉ or the SAGE (both shipwrecked in the same area in 1692). Generally speaking, at the end of the 17th century (this gun was probably cast around 1666), the 24-pounders (or "calibre 24", the weight of the cannon ball used) were the armament of the lower battery of the "vaisseaux de 1er rang" or first rate ships of the line, whereas the second battery consisted of 18-pounders. Later, from 1766 on, the lower battery of the "vaisseaux de 1er rang" was armed with guns of the calibre 36.

This gun is richly decorated all over. It bears on the breech the name "LE DUC DE BEAUFORT" on a scroll with two crossed anchors. (François of Vendôme, Duke of Beaufort (1616-1699), grand-son of King Henri IV and Gabrielle d'Estrées, occupied the charge of "Grand Maître de la Navigation" from 1651 to 1669). He was the last one to be granted the charge under that name. Above, it bears the full royal arms of France and Navarre, with the Orders of Saint-Michel and of the Saint-Esprit. The dolphins are particularly charming. On the fleurdelised chase is a blank (or eroded) scroll and, half way up, a crowned capital "L" for "Louis", King Louis XIV). →



#128

FRENCH - AN 2 1st REP
BORE - 4 3/4 "



N. 128. Canon de 19 de réserve. Sur le premier renfort A. N. et sur le cul-de-lampe : Frèrejean frères. Pont-de-Vaux, au 11 de la République.



LGAF. 10



The sober simplicity of the “L” of the monogram of King Louis XIV on this gun cast about 1666, surprises all of us, who are used to the sun-like radiating splendid monograms and the flamboyant mottos that characterize the guns cast for the Sun King’s navy and armies, in later years of his reign. One must remember that in 1666 Louis XIV was just 28 years old and it was but recently, 1661 that he had announced to his ministers, from now on, he would reign, alone, putting an end to the Regency of his mother, the power of Mazarin and the influence of his ministers.





Another French naval bronze 24-pounder. It bears the royal arms of France on the first reinforce and, on the second reinforce, the name of "LE COMTE DE VERMANDOIS" (scroll on crossed admiralty anchors). (Louis de Bourbon, Count of Vermandois was "Amiral de France" from 1669 to 1683.)





This bronze 12-pounder, a culverin-like cannon, was cast in 1703 by Hubert, who was then in charge of the foundry at Rochefort (at the mouth of the Charente river and the main shipyard cum arsenal of the French Navy on the coast of the ocean since the days of Louis XIV). The piece, a land artillery piece, bears on the first reinforce the crowned royal arms of France (with composite, unusual decoration all around) and, on the charging cylinder, the name and the coat-of-arms of the "DUC DU MAINE" (1670-1736) who was the legitimated son of Louis XIV and Madame de Montespan. The Duke of Maine was at the time General of the Galleys and Grand Master of the Artillery. The dolphins are dragons and a stylized incendiary device decorates the chase girdle. The name of the gun is "L'INTRAITABLE".

(Continues →)





The dolphins of "L'INTRAITABLE" are in the form of dragons. The stylised incendiary device that decorates the chase girdle is a torch. The motif of the flame design is repeated in association with the fleur-de-lis at the muzzle neck.





French short howitzer, a so-called "obusier de 36 modèle 1787", designated as an "obusier de vaisseau". It was cast in Nantes in 1794. It was recovered by the diving archaeologists of the DRASSM, the French "Direction des Recherches Archéologiques Subaquatiques et Sous-Marines" in the wreck of the French warship the "GOLYIMIN" built in Lorient in 1804 and lost by shipwreck in the narrows at the entrance of Brest harbour in 1814. The inscriptions include, in a scroll: "BRUMAIRE. L'AN. III DE LA REPUBLIQUE". (Brumaire is the second month of the French Republic; the date corresponds to October/November 1794). Under the scroll that contains this inscription are the letters "A.N." (for "Assemblée Nationale") and the Phrygian cap on the top of the lance, the symbol of the French revolutionary rabble". The initials underneath (C.M.L.V.) are unexplained (they may refer to the responsables of the casting at the "Fonderie de Nantes" which produced this short "obusier de vaisseau").





This swivel weapon called in French, an “espingole à percussion”, was specifically cast in bronze and steel for the Navy.

The rotating shaft of the swivel would be put in the railings supports of the vessel or on the top of the masts. The “espingoles” were often set up also, at the bow of the ship’s launches or longboats.

The ammunition used would be either heavy scatter shot or a lead ball.

This particular “”espingole” is of the “modèle 1840”.

**MUSEUM:
MUSEE NATIONAL DE LA MARINE, BREST
NATIONAL NAVY MUSEUM, BREST**

- Location: In the “Château de Brest”, the Brest Castle (or Fortress), the most conspicuous building in the city, down the “rue de Siam”, (which is the main street) at the mouth of the Penfeld river, next to the “Recouvrance bridge”.
- Postal address: Château de Brest — 29200 Brest — France.
- Telephone: ++33/ (0)298 22 12 39
- Fax: none yet at time of visiting
- Email: brest@musee-marine.fr
- Website: www.musee-marine.fr
- Keeper: Monsieur Besselièvre, (Administrateur du Musée de la Marine)
- Keeper’s telephone: ++33/(0)298 22 13 09
- Services offered: Bookshop, audio guide in 5 languages (not for artillery fans), temporary exhibitions.
- Relevant publications: The recent (May 2013), much illustrated booklet (50 pages), titled “Le Château de Brest” and authored by Historian Jean-Yves Besselièvre and others for the “Musée National de la Marine”, is excellent as a general source. It contains, furthermore a good bibliography. Artillery, however, is not part of the story other than the fact that its destructive power, which progressed constantly from the 14th century on, forced the castle occupants to constantly reinforce the ramparts and the defences.
- Opening hours: October to March: 13h30-18h30 – every day.
April to September: 10h-18h30 – every day.
Closed: June 1st, Dec 25, Jan 1st to 9, Aug 1st to 16.
- History of the building: The “Château de Brest” is the oldest building in the City. It is a mediaeval fortress, built on the foundations and ramparts of a roman castellum of the late 3rd-4th century of, which significant architectural remains are visible to-day, their masonry consisting in the usual alternating layers of stones (seven levels) and bricks (two layers).
The original part has been constantly reinforced over the ages and is a unique example of a fortification that was in uninterrupted military use for 17 centuries. Richelieu, around 1631, decided Brest should be the main French naval base for the “Ponant” (for the Atlantic fleet), Colbert made it happen and Vauban, in his turn made the Castle impregnable (end of the 17th century) and the Brest anchorage (“la Rade”) unreachable through the cross fire of a number of batteries.

Brest has ever remained, from then on, a major naval base, an arsenal and a ship building centre. It is to-day the seat of the “Préfecture Maritime de l’Atlantique” (modern equivalent of the past’s Admiralty).

The Castle is about the only building in and around Brest, which has not been razed to the ground by the carpet bombings of the Allies in August and September 1944.

History of the collections: The origin of the Museum can perhaps be found in a small collection of ancient local models and sculptures of ships displayed in the arsenal of Brest from the beginning of the 19th century on. After W.W.II, this collection was spread between the five branches of the National Navy Museum Network, and in exchange the Brest Museum received other artefacts, which allowed it to open its doors in the Castle in 1958. These included pieces from the first French Naval Museum, which was created at Le Louvre in 1827; it owed much to the encyclopaedist, Duhamel du Monceau, who had bequeathed to King Louis XV, his exceptional collection of ships models.

To-day, the general collections are exhibited in five parts of the fortress: The “Tour Madeleine”, the “Tours Paradis”, the “Donjon” (or Keep) and the “Tour de Brest”.

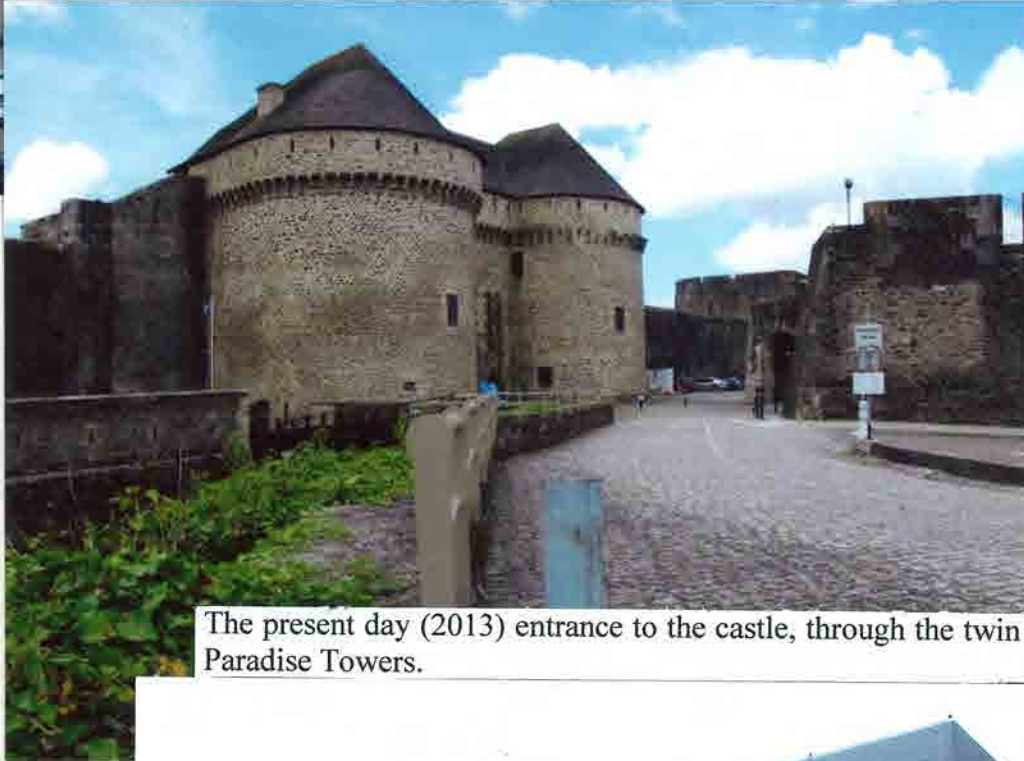
A few artillery pieces are spread, without any appearance of logic, in the exhibitions rooms and outside. The cannons and mortars have only one thing in common, their haphazard origin. (Little seems to be known about their history or provenance and consequently, little is to be learnt from the rare explanatory notices).

A museum, well worth a long visit for its setting and views as well as for the good collection of ship models and the beautiful wooden ship sculptures (in the “Salles de la Sculpture Navale) that were produced in the sculpture workshops of the Brest Arsenal in the name of “the Magnificence of the King” so that (Colbert dixit) “his ships would be the most beautiful ever seen on the sea”.



19th century high-relief wooden group (carved pine). Amphitrit, a dolphin and some young Tritons were to grace the side or the stern of one of the King's ships. The sculpture is believed to have been carved in the very workshops of the Brest Arsenal.

“Château de Brest” seen from the river, Blavet.



The present day (2013) entrance to the castle, through the twin Paradise Towers.



The intra-muros building housing the present day “Préfecture Maritime de l’Atlantique” (about the equivalent of the past’s Admiralty). Rebuilt after WWII.

The Château de Brest's cannons displayed in the open air.



One of a pair of heavy 19th century naval guns, one of them inscribed "MARINE". Calibre: 18cm. Weight marks unreadable.



Two cast iron naval guns. Surface eroded and painted black. Weight marks unreadable. No other inscriptions. Calibre: c. 11.5cm.



Recovered from the sea bottom, in circumstances reportedly unrecorded, this bronze, Dutch naval cannon has suffered from sea corrosion (and continues to). Calibre is just under 14cm. Its origin is attested by the arms, with inscription, of the "ADMIRALITEIT RESIDERENDE TOT ROTTERDAM A° 16..."

Pieces of artillery exhibited inside the fortress buildings.



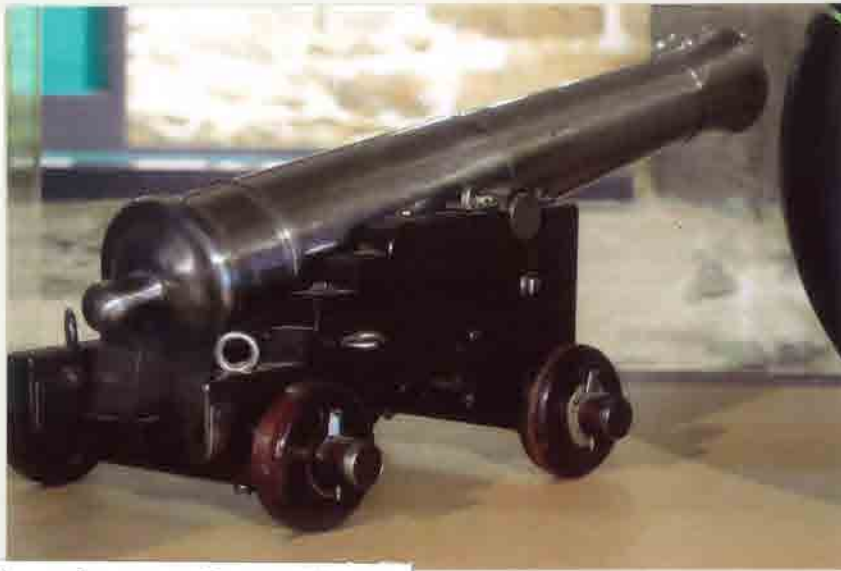
Small cast iron signal-gun (unmarked). Probably 19th century.



This short cylindrical bronze howitzer bears on a scroll the inscription "FRIMAIRE L'AN 3 DE LA REPUBLIQUE" (which corresponds to November-December 1795) and, underneath, the initials "A.N." for "Assemblée Nationale" and the capital letters C.M.L.V. On the base ring: "FONDERIE - NANTES".



Cast iron 4-pounder, a naval piece. Circa 1660-1670. Much damaged superficially and no inscription remaining, if any. The breech button lost.

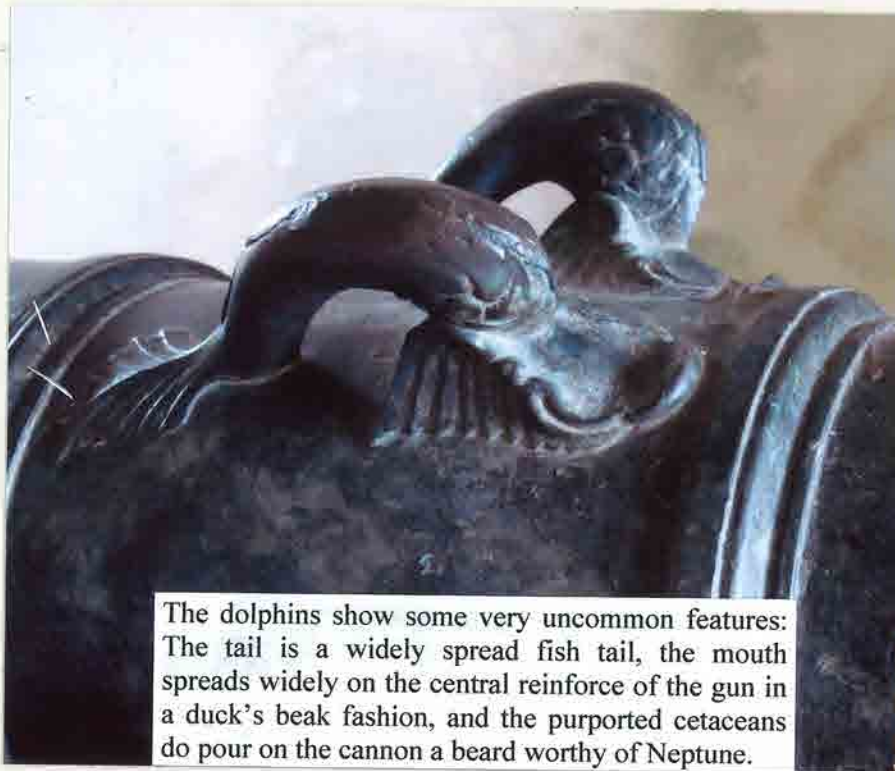


A scale model (1/6) of a naval 12-pounder cannon, System 1786. The model (iron) was made in the models workshop of the Brest Arsenal between 1786 and, probably, 1829.



One of a pair of fine small bronze cannons. The pieces were cast in Cochinchina at an uncertain date. The general profile betrays European influence in casting but the "dolphins" are Oriental, Chinese-looking sea creatures.





The dolphins show some very uncommon features: The tail is a widely spread fish tail, the mouth spreads widely on the central reinforce of the gun in a duck's beak fashion, and the purported cetaceans do pour on the cannon a beard worthy of Neptune.



Small bronze cannon, possibly a recent acquisition (?), is lacking any identification or explanatory notice. However, its decoration and markings establish its civil status.

On the face of the right trunnion is engraved "N°138".

Continued

The decoration on the first reinforce consists in an elaborate complicated cartouche surmounted by a crown. The crown, at first sight, can be identified as the royal crown of Portugal. The complicated cartouche is common on 18th c. Portuguese cannons. (It is found also on many coins of the 18th c.) The escutcheon, in the centre of the cartouche, is circular and not in the shape of a normal shield, as most Portuguese ones are, but the charges identify it without a doubt as Portuguese. It features five small escutcheons — placed as a cross — that evoke the first five cities in Portugal taken back from the Moors at the very beginning of the Portuguese Reconquista, under King Affonso I (in the 12th c.), each one of these is charged with five bezants in saltire (the old Byzantine coins known in Europe since the Crusades) that symbolize the 30 denarii paid to Judas for the betrayal of Jesus. The whole is surrounded by the usual seven towers. Underneath, in a cartouche in the cartouche, is the barely readable name of

“IOSEPHUS
I”

Just ahead of the vent field's astragal and fillets is the inscription: “M^{NL} GOMES DE CAR^{UO} FS^A TE^N GN^{AL} DA ART^{RA} DO R^{NO}” which, surely (once the necessary corrections are made to the wrongly engraved ^{UO} after CAR and when the F of FS^A is changed for the E it should be) can be read as “Manuel Gomes de Carvalho e Silva, Tenente General da Artilharia do Reino”. This Lieutenant General of the Artillery of the Kingdom is known to have been active in Lisbon from 1748 to 1754.

It should be noted that the Editor's Album for the Museu Militar of Lisbon shows various large guns or mortars that bear the name of this same Lieutenant General of the Artillery and the same complicated cartouche with the name of the same sovereign. Joseph I reigned under the name of Dom José I (1750-1777).

On the base ring, where one would expect to find the name of the founder and the date, one finds only, unfortunately, a very, almost completely erased faintly engraved inscription, possibly “... L... A. L... AB... TO...IV” (?) As for the figures clearly and deeply engraved on the mouldings of the breech: “4-3-04”, they obviously refer to the weight of the piece, expressed in “arrateis” (1 arratel = 16 onças or 0,46 kilo). The inscription must be read as follows: “4 quintais (of 4 arrobas each, 1 arroba being 32 arrateis or 14,7 kilos, or 236 kilos) + 3 arrobas (i.e. 44 kilos) + 0.4 arrateis (i.e. 4 onças or 115 gr), the total weight being c. 280 kilos.



Scale mode made in the workshops of the Toulon Arsenal where this extraordinary piece was first put ashore (scale 1/6, 25).



The most famous cannon in Brest and, possibly, in France, is the so-called “LA CONSULAIRE”, cast in 1542. By its exceptional dimensions, this culverin-like piece could probably be called a basilisk. It was used for the defence of the port of Algiers in the 16th and 17th century. In the 17th century, in spite of a succession of treaties and promises, the “pirates Barbaresques”, continued their attacks and exactions against the French merchantmen sailing in the Mediterranean, making their crews slaves in Algiers. In retaliation, the Royal French Navy, under the orders of the great Admiral Abraham Duquesne, attacked and heavily bombarded the port of Algiers, in 1682 and again in 1683, with the specially built mortar carrying “galiotes à bombes”, built by the brilliant shipbuilder-engineer and Navy officer Renau d’Elissagaray. In re-retaliation, the Ottoman ruler who headed the defence of Algiers, then under Turkish control, dragged the French consul, Monsieur Vacher, from his consulate and tortured him for days and nights, the usual Turkish way. Finally, Monsieur le Consul Vacher was attached, alive, on the muzzle of the huge cannon and the cannon was fired (July 29, 1683).

Much later, in July 1830, when the French conquered Algiers as part of their colonial expansion in North Africa, under King Louis-Philippe, the commanding officer quickly seized the sadly famous symbol of the ancient Barbaresque domination over the Mediterranean. The huge cannon was sent to Brest and it was decided that it should be made part of a monument destined to celebrate the taking of the city of Algiers and would be erected in the middle of the Brest Arsenal. The monument was inaugurated in 1833, not far from the castle, in the compound of the naval base. The monument is still in place.

According to the fashion of the time — obelisks were very popular in France — LA CONSULAIRE was erected vertically, as would have been a column, and, for good measure, was topped with a large victorious Gallic cock. The four sides of the pedestal were decorated with bronze low-relief panels (the work of sculptor Soeur, who also made the model of the cock), two of which depict maritime, and military subjects, whereas another commemorates the taking of Algiers (July 5, 1830) by the French armies under the “Commandant d’Escadre” Admiral Baron Duperré and the erection of the monument. The fourth low-relief is an allegory to Africa liberated, vivified and illuminated by the beneficial effects of the French colonisation and of civilisation.

The dimensions of LA CONSULAIRE are: Calibre: uncertain. Length: 6.60m.; weight: 12 tonnes.



A soldier of the campaign of Algeria, around 1830.
(An anonymous sculpture in the Draguignan Military School.)



EDITOR'S ALBUM

ORDNANCE PIECES

**PORT-LOUIS
(2013)**

**MUSEE NATIONAL DELA MARINE
(NATIONAL MUSEUM)**

**MUSEE DE LA COMPAGNIE DES INDES
(MUSEUM OF THE FRENCH EAST-INDIES COMPANY)**

Jointly presented in this Editor's Album, because both museums share different wings of the same fortress, the Port-Louis "Citadelle", where they display similar artefacts in order to tell, each one in its own manner, the same story of the concomitant chapters of the same military, naval, maritime and commercial history of France as it developed simultaneously in this same Lorient-Port-Louis area of Brittany (Department of Morbihan).



EDITOR'S ALBUM

PORT-LOUIS

**MUSEE DE LA COMPAGNIE DES INDES
(MUSEUM OF THE FRENCH EAST-INDIES COMPANY)**



MUSEUM:
MUSEE DE LA COMPAGNIE DES INDES, PORT-LOUIS
MUSEUM OF THE (FRENCH) EAST INDIA COMPANY, PORT-LOUIS

Location: In the “Citadelle” (fortress) of Port-Louis (Morbihan), on the bank of the Blavet estuary, downstream of the city of Lorient.

Postal address: Citadelle de Port-Louis — Avenue du Fort de l’Aigle — 56290 Port-Louis — France

Telephone: ++33/ (0)297 82 19 13

Fax: ++33/ (0)297 82 42 88

E-mail: museeindes@mairie-orient.fr

Website: www.musee.lorient.fr

Curator: Mme Nicolas (Director)

Contact person: —

Services offered: No library but the main research centre on the subject of the history of the French East India Companies is nearby, at the archives and library of the Company, in the “Enclos du Port”, at the “Quai des Indes” in Lorient.

The museum organizes every year a temporary exhibition on a related subject — always of the highest quality — “hors les murs” at the “Hôtel Gabriel” in the “Enclos du Port” in the “Rue de l’Enclos du Port”. The recent (2012) exhibition “L’Odyssée de l’Imari”, for instance, was outstanding.

Opening hours: February to April 30: 13h30-18h. Closed on Tuesdays.
May 2 to August 31: 10h - 18h30 every day.
September 1 to December 15: 13h30-18h. Closed on Tuesdays.
Closed May 1, December 16 and January 31.

Recent catalogues and publications on the history of the building and the museum include:

A leaflet, freely obtainable at the ticket office.

Also several, very general booklets.

Also in the shop some more serious books on the Company and various aspects of its history.

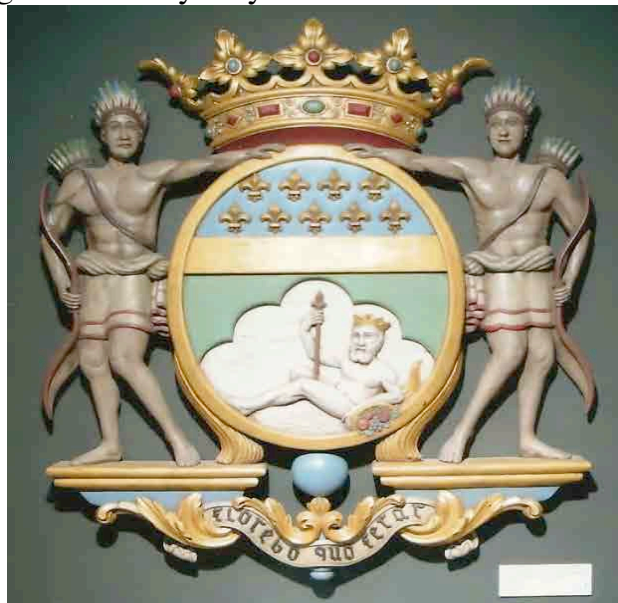
History of the building: See under “Musée National de la Marine, Port-Louis”.

History of the museum and its collections: Since 1984, the “Musée de la Compagnie des Indes” is housed in the Caserne Lourmel (north-east wing) inside of the fortress of Port -Louis. The museum, formerly the “Musée d’Art et d’Histoire de la Ville de Lorient”, was previously located, in Lorient, inside of the arsenal, at the “Enclos du Port”, in the “Hôtel Gabriel” (rue de l’Enclos du Port). It is there that the museum, (which is still run by the City of

Lorient) nowadays organizes its temporary exhibitions, as said above, on specialized, related subjects.

A part of the collections: Most of the artefacts and sculptures, the paintings and engravings, many porcelain items, as well as models, etc., originated in the later years of the last Company, the “Compagnie de Calonne”, or came from the Arsenal. The story of the French East India Companies, although it is heavily centred on the best known one only (the one founded at the instigation of Colbert and vigorously supported by King Louis XIV) is attractively told through its ships and the goods they carried, of which significant samples are exhibited. The impetus being, for artistic reasons, placed on the Chinese and Japanese porcelain. The cultural influence of that trade, in France, is well underlined.

Although the “Musée de la Cie des Indes” does not display actual cannons, it shows models of the Company ships that carried them for defence or conquest and is extremely informative on the inter-Asia trade of the junks and other local boats that were so important to the trade of the Europeans. These were the beasts of burden of the sea that kept bringing their goods, all year long, from all parts of the Far East into the warehouses of the Companies trading posts or forts where the Eastindiamen could then load them quickly in their holds during their twice yearly visits.



The Arms of the French East India Company and its motto: “FLOREBO Quo Ferar” (I will flower everywhere I am transplanted”) Wooden sculpture.



Chinese junk taking sail in, in a gale.

(Oil of canvass, 2nd half of the 19th century. From the "Hong-Kong studio", attributed by the museum, to the famous painter Hingqua, active from 1850 to 1880, or to his entourage.)

Chinese and other junks were all important to the trade of the European East India Companies, since they carried from all parts of Asia, the goods that will be stocked in the Company's establishments and "comptoirs" in wait for loading in the next Company's fleet.



An amusing painting of a Dutch Eastindiaman, seen by Japanese eyes and painted by a Japanese hand. A detail of a painting of the artificial island in the bay of Deshima, the only Dutch establishment allowed in Japan. (This VOC "retourschip" is a century and a half older than the MAURITIUS and not comparable.)

(Collection of the Musée de la Compagnie des Indes, Lorient and Port-Louis).



The VOC monogram, on the bow flag — but not the flags themselves or any part of the ship — indicate that the anonymous Japanese (?) painter, who decorated the lid of this precious wood casket, meant to depict a Dutch Eastindiaman. He was obviously much impressed by the Dutch artillery (the size of the cannons, not their number).



“VOC”, the monogram of the Vereenigde Oost-Indische Compagnie (Unified East Indies Company), the Dutch East India Company, on an 18th c. Japanese porcelain bottle (cobalt blue under cover), on the bottom of a Siamese 18th c., round box and on three copper tokens of the Company, cast in Ceylon in the 1st half of the 18th c. These copper tokens were used as local money. The “T” above the monogram is for Trincomalee, and the “C” for Colombo, two of the trading places of the Company on the island of Ceylon. (About actual size on photo.)

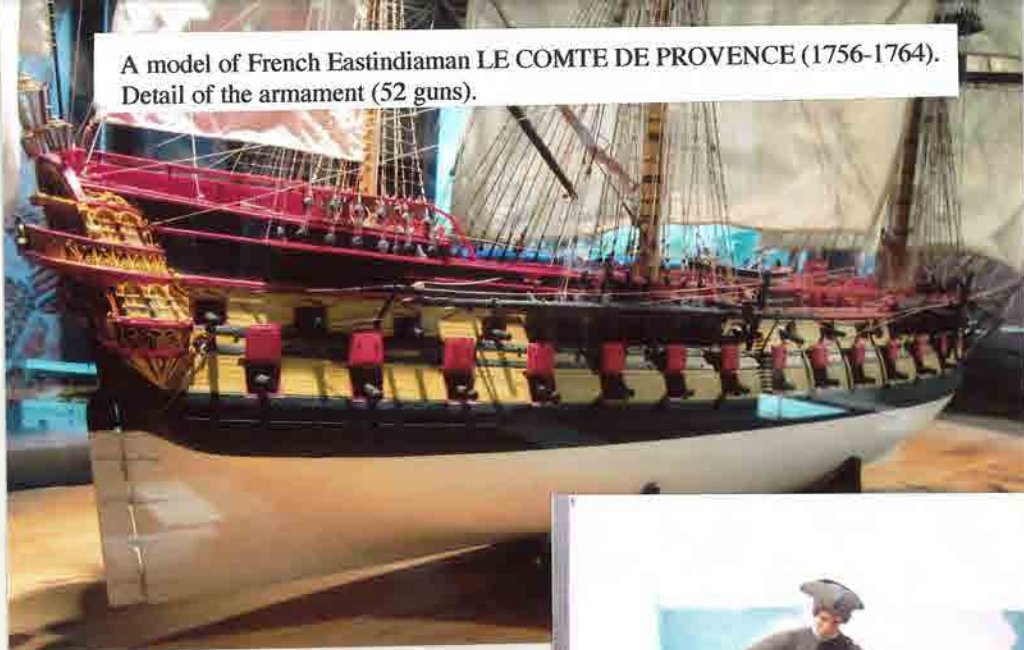




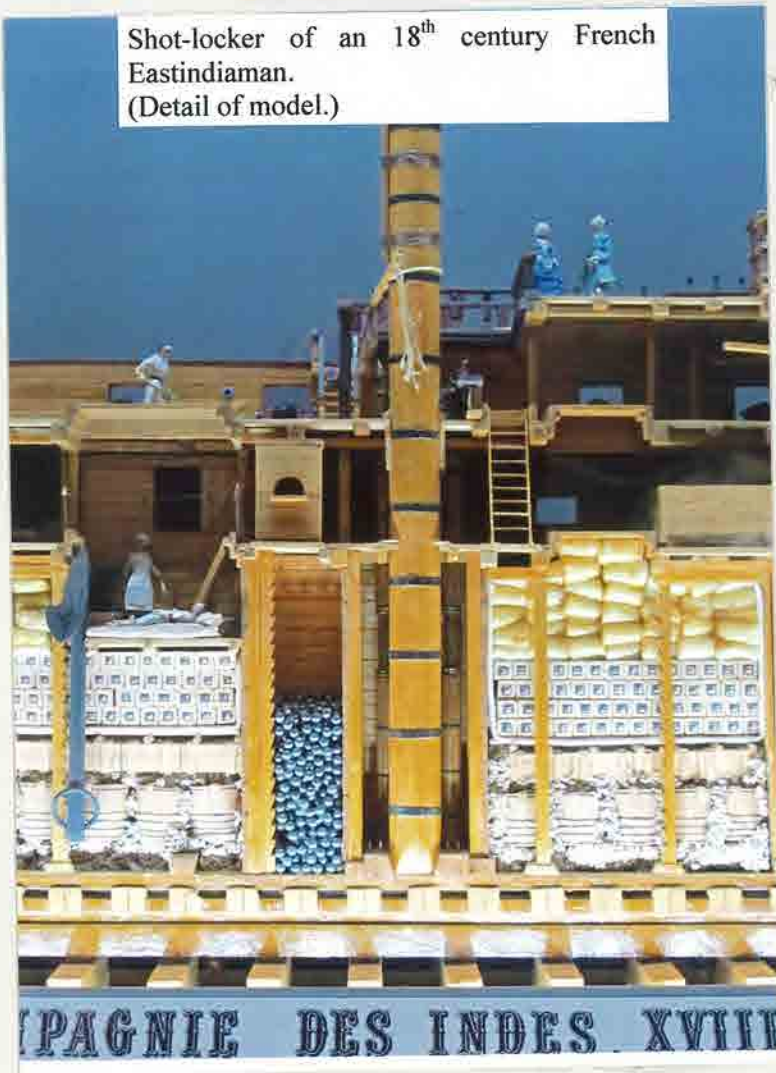
The SOLEIL D'ORIENT, a French Eastindiaman of about 900 tonnes, built in Lorient from 1667 to 1671, launched on May 6, 1671. It was at the time the largest vessel built in Lorient for the French East India Company. It carried 40 to 50 cannons and would have had a crew (seamen, gunners, soldiers and merchants, plus the passengers) of 150 to 220 men (in peace or in war time).

(Model by the "Capitaine de Vaisseau" Jean de Louch, 1976)

A model of French Eastindiaman LE COMTE DE PROVENCE (1756-1764).
Detail of the armament (52 guns).



Shot-locker of an 18th century French Eastindiaman.
(Detail of model.)



PAGNIE DES INDES XVIII

Hand-held ship lanterns were made of copper in order to avoid any possibility of a spark. Still, they could not be taken inside of the powder room, which was lighted from the outside through a small glass window.



A gunner cleans the touch-hole of his piece with a priming iron, watched by another seaman holding a sponge. They are watched by the chief gunner who is responsible to the artillery officers for all that concerns the cannons and their upkeep.
(A model in the "Musée de la Compagnie des Indes", Port-Louis.)



EDITOR'S ALBUM

PORT-LOUIS

**MUSEE NATIONAL DE LA MARINE
(NATIONAL NAVY MUSEUM)**



On the pediment of the main gate of the citadel.

**MUSEUM:
MUSÉE NATIONAL DE LA MARINE, PORT-LOUIS
NATIONAL MARITIME MUSEUM, PORT-LOUIS**

Location: In the “Citadelle” (fortress) of Port-Louis (Morbihan), on the bank of the Blavet estuary, downstream of the city of Lorient.

Postal address: Musée National de la Marine — Citadelle de Port-Louis — 56290 Port-Louis — France

Telephone: ++33/(0)297 82 56 72

E-mail: j.labeausse@musee-marine.fr

Website: www.musee-marine.fr

Curator: Mme J. Labeausse (Director)

Contact person: As above

Services offered: No library on site. Books related to naval and maritime history for sale in the book shop. Nothing specifically on the history of artillery, at this time, 2013.

Opening hours: February 5 to August 31: 10h-18h every day.
September 1 to April 30: 13h30-18h. Closed on Tuesdays.
December 16 to January 31: closed.

Recent catalogues and publications on the history of the building and its collections include: A one leaf, short promotion sheet. Also, a detailed leaflet on the general history of the Citadel.

History of the building: The fortress or citadel of Port-Louis, which controls the entrance to the roads of Lorient, is a testimony to the events of the history of Brittany in the 16th and 17th centuries. It was built originally from 1590 on by a Spanish army that took and occupied Blavet, as the town was then named, following a request for help made by the Duke of Mercoeur, the governor of Brittany, to King Philip II of Spain after the assassination of Henri de Guise. Mercoeur was at the time one of the pillars of the “Holy League” (the “Ligue”), which unified all the French Catholics against the Protestants in an effort, (which proved unsuccessful) to prevent Henri de Navarre, a Protestant, to become king of France as Henri IV. It is Don Juan del Aguila, who conducted the building of the fortifications and became the local governor. The architect was Cristobal de Rojas. When the Spaniards left, Henri IV having been crowned king of France, most of the citadel was left intact and due to its invaluable strategic location, it was, by order of Louis XIII, in 1616, considerably extended and further fortified. The architect now was Jacques Corbineau. Later extensions, on the orders of Cardinal de Richelieu, were added from 1641 on. The finished fortress consisted of seven bastions, one of them detached, triangular in shape, protected by wide moats and guarding the access to the fortified place. Other, weaker buildings and installations protected by the

massive, stone walls included the lodgings of the governor and officers, a chapel, the barracks, the powder room and the ammunition yard. The parade grounds were in the centre.

History of the museum and its collections: The core of the original permanent collections proceeds from the Lorient arsenal and, to a small extent, from the citadel itself. Today, it consists mainly in paintings and engravings, a fine collection, and of actual small embarkations, ship models, some of which original builder's models, weapons and artillery pieces. Additionally, a number of modern or contemporaneous pieces of artillery are displayed in the former powder room, next to the "Parc à boulets".

In recent years, the museum's curators have put the accent on two main topics: The rescue at sea from land bases with specially devised unsinkable crafts and helicopters and, on the other hand, on what they call "Trésors d'Océans" (Oceans Treasures), possibly the best permanent exhibition in France of material recovered from post-mediaeval wrecks, including artillery.

The thematic exhibit named "Trésors d'Océans", is introduced by a room that evokes the Road to the Indies and is illustrated by maps, navigation instruments, ship models and samples of the goods and artefacts that were traded both ways in the maritime trade with Africa, India and the Far East. It is the second part of "Trésors d'Océans" that will interest most the artillery specialist. It is called "Le Grand Bleu" and is entirely based on the results of recent underwater archaeological excavations. The wrecks of Eastindiamen and of Asiatic ships of earlier periods are represented by recovered, everyday use shipboard artefacts, by fine examples of their porcelain cargo and general cargo and also, for the Eastindiamen, by their heavy armament, their guns. All these artefacts have been excavated from the following wrecks:

The wrecks in the "Treasures of the Oceans" permanent exhibition and their artillery:

1) The *Mauritius*.

The "retourschip" *Mauritius*, of the VOC, lost in 1609 near Cape Lopez, on the coast of Gabon, as she was returning from her second China voyage was excavated in 1986 by a team of diving archaeologists of the very official "Direction des Recherches Archéologiques Sous-Marines" of

Marseilles”¹. The material recovered and studied from this large Eastindiaman includes, additionally to the cargo of pepper (130 tonnes), zinc (c. 19,000 flat circular ingots) and a few boxes of “kraakporcelein” (private trade, probably). 24 cannons were recovered, of which some were being used as ballast, as was one “pétard”.

2) The returning English Eastindiaman the *Griffin* and three antique Chinese junks (the so-called *Lena*, the *Royal Captain junk* and the *Breaker*).

An important part of the Museum’s collection consists in the superb Franck Goddio donation. The French, independent underwater archaeologist, Franck Goddio, founder and brilliant Director of the Paris based “Institut Européen d’Archéologie Sous-Marine” (or IEASM), has, over the last twenty years, accumulated a series of successes in his well-organized, well-funded and meticulously carried out underwater excavations, all over the world. The numerous artefacts, which he has presented to the “Musée de la Marine de Lorient”, over 150 objects, tell us the story of the trade between West and East from the 11th to the 18th century and are by themselves worth the voyage. (These generously donated artefacts are the part that the host government, in this case the Government of the Philippines, has gratefully allowed the excavator.)

¹ Now renamed “Département des Recherches Archéologiques Subaquatiques et Sous-Marines” (still known as the DRASSM), headed by Michel Lhour and Luc Long (2013).

1. The cannons from the *Mauritius* (DRASSM excavations)

The *Mauritius* is the earliest (1609) wreck of a Dutch Eastindiamen, excavated as of today (2013) and its armament, apart from the reformed cannons in the ballast, is representative of the transition in naval artillery between the “old” 16th century types of naval guns and the “modern” pieces of the early 17th century.

The artillery pieces recovered by the diving archaeologists of the DRASSM, a total of 28 pieces, of which some, by their disposition on the bottom, were safely identified as battery cannons, whilst the others found on the very bottom of the hull, mixed with the ballast and under the cargo of zinc ingots, were obviously reformed cannons brought back either to be recast or just for their weight. Also found in the wreckage was a “petard”, made of brass, 29cm. high, with a diameter of 35.5cm. (maximum inferior diameter), to 26cm. (Not a naval piece of course.)

Of the cannons recovered, 9 were bronze pieces, 17 were cast iron pieces, and 2 were rather anachronistic antique wrought-iron bombards.

In the museum those pieces are exhibited in two separate settings.

At this time, 2013, most of the recovered guns are presented to the visitor at the bottom of a succession of large, square 4m. deep pits — reminding one of bear pits unless the hole was formerly part of the water tanks or underground reservoirs of the citadel. Above these cavernous empty spaces, the visitors are circulating on an iron latticed foot-bridge. The cannons on the bottom — are illuminated with red and yellow lights, spotlights, to the regret of the interested visitors, and especially of photographers, over lit, in some parts of the cannons while leaving other parts in the shadow. In those circumstances and in view of the distance, the visitor who wishes to study the artillery pieces in detail is unable to do so.

A selection, however, of the best preserved, most interesting pieces is displayed in an adjoining but separate building, allowing the visitors to actually see them entirely, to inspect them in detail and to measure them.



Overlooking some of the *Mauritius* guns in the first the “modern part” of the display.

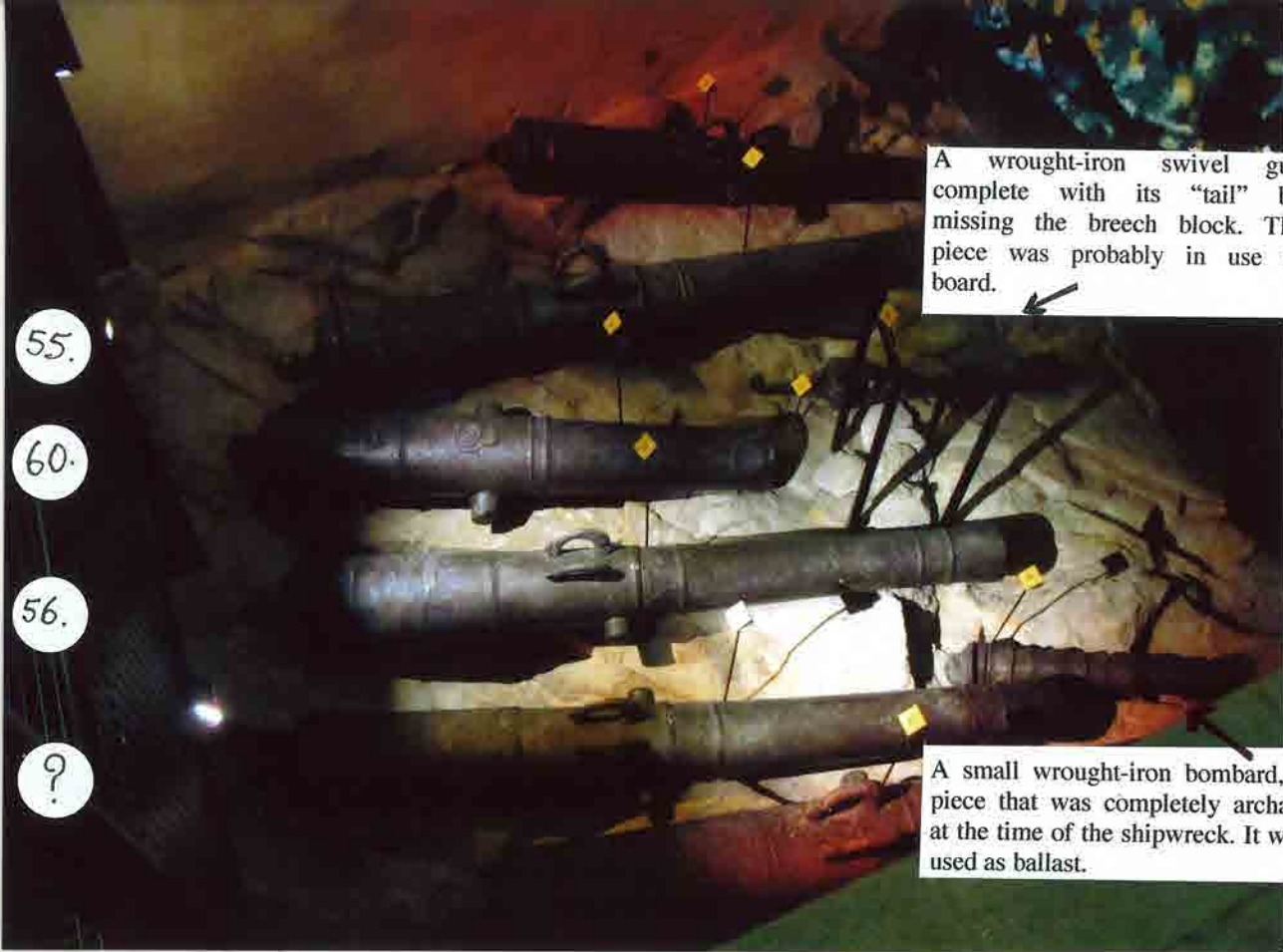


55: Labelled as a “demi-canon”, a half cannon of 24 pounds, that was part of the battery of the ship and was cast by Gerard ... Both in 1600 (a member of a dynasty of “cannongieters” which were active in Utrecht between 1590 to 1825). This cannon being, as a number of others, hardly visible for the visitors, the following details have been borrowed from Michel Lhour et al. publication (*Le Mauritius*, Paris, 1989). This piece is 3.53 m. long and the calibre 15 cm. It therefore qualifies as a bastard culverin. The rich decoration includes the arms of the Admiralty of Amsterdam (a lion holding two anchors) surrounded by a circular crown of laurels. Circular decorations just ahead of the trunnion and at the base of the muzzle neck feature vegetal motives and an eagle with spread wings. Further incised inscriptions include the original weight of the gun, 4500 pounds of Amsterdam (or 2445.8 kilos). Another cast inscription appears just underneath the crossed anchors: “ADMIRALITEYT RESIDERENDE T... AMSTELREDAM”.

The orange segment-shaped mouldings of the cascable part are found on many other pieces of the period, including guns cast by other contemporary founders.



60: Not much more visible, this cast iron cannon (one of two identical pieces recovered). Calibre: 13.5cm., length: 2.37m. An 18-pounder apparently. According to Michel Lhour et al. publication (*Le Mauritius*, Paris, 1989), the inscriptions on the gun include the crowned Tudor rose circled by the Order of the Garter with caption and, surprisingly, an armillary sphere. The initials “ER” for “Elisabeth Regina”, the last of the Tudor sovereigns, are cast under the rose and garter. As for the further identification marks, the gun bears the date 1587, the figure “XXXX” (meaning doubtful), the initials “IP” for English founder John Philips and the numeral “2650” (weight of the gun in pounds, being about 1,200 kilos). Noticeable for their significance are the broadly tapering cascable area and a fin-like triangular sight on the top of the muzzle head. An identical gun is displayed in the other room and fully visible.



A wrought-iron swivel gun, complete with its "tail" but missing the breech block. This piece was probably in use on board.

55.

60.

56.

?

A small wrought-iron bombard, a piece that was completely archaic at the time of the shipwreck. It was used as ballast.



56.

56: One of the three VOC guns recovered, formerly at the portholes of the ship. Two were found side by side, being presumably the stern "pièces de retraite". L. c. 3.22 m; cal. 14 and 15 cm. (24-pounders). It is stated by Michel Lhour et al. that the three guns bear on their first reinforce the cast likeness of a Dutch Eastindiaman of the time, very similar, although very much erased, to the well preserved VOC Eastindiamen cast on comparable cannons recovered from the WITTE LEEUW (lost in 1613 at St. Helena island and recovered by the GRASP under the leadership of this Editor). Both bear on the base ring the indication "ENRICUS MVERS ME FECIT 1600" (same founder as for the WITTE LEEUW guns). An important difference however is that two of the cannons, the ones cast in 1600, were obviously made for one of the "voor-companies", the one of Amsterdam (1598-1602) in one case (name still partly readable). It was one of the independent city-funded private companies which competed with each other until 1602, when the government brought everyone to the table to force them to unify as the "Vereenigde Oost-Indische Compagnie", for which the second gun was cast, as indicated by the mention "OOST... NDISCH... TOT..." (?) Such guns are extremely rare. The third similar gun recovered bears the inscription : "DIE VEREENIGHDE OOST INDISCHE COMPAGNHIE TOT..." and is a post-1602 gun. Part of the "signature" on the base ring of this gun has survived : "CORNELIUS AMMERROY ME FECIT..." Dimensions : L. 3.38 m; cal. 15 cm.

On the upper left corner, a bronze “pétard”, a land-war artefact used during sieges to blast the wooden doors of the attacked fortresses. It was of course part of the cargo.



?

38.

39.

Most of the MAURITIUS guns are displayed at this time (2013), in semi darkness. A row of labels, some of which are readable on the railing of the footbridge, refers to numbers that identify each cannon in reference. Part of the information is there, but difficult to read at this time.

38: Labelled again as a “demi coulevrine” of 10 or 12 pounds. A cannon used as ballast, believed to have been cast, in iron, in England around 1600.

39: Labelled as a “demi coulevrine” of 10 to 12 pounds, a cannon used as ballast, cast in iron, in England, around 1600. This cannon, together with a group of seven very similar pieces is commented by Michel Lhour et al. as follows : “Length between 2.97 and 3.08 m, the weight about a ton and a half, the calibres between 11 and 11.5 cm, making the guns 10 or 12-pounders. The cannons are believed to be all English, a point which is strengthened by the weight indication of one of them, indicated in three unites : hundredweights, quarters and pounds, being “9-1-0” or about 1473 kilos).”



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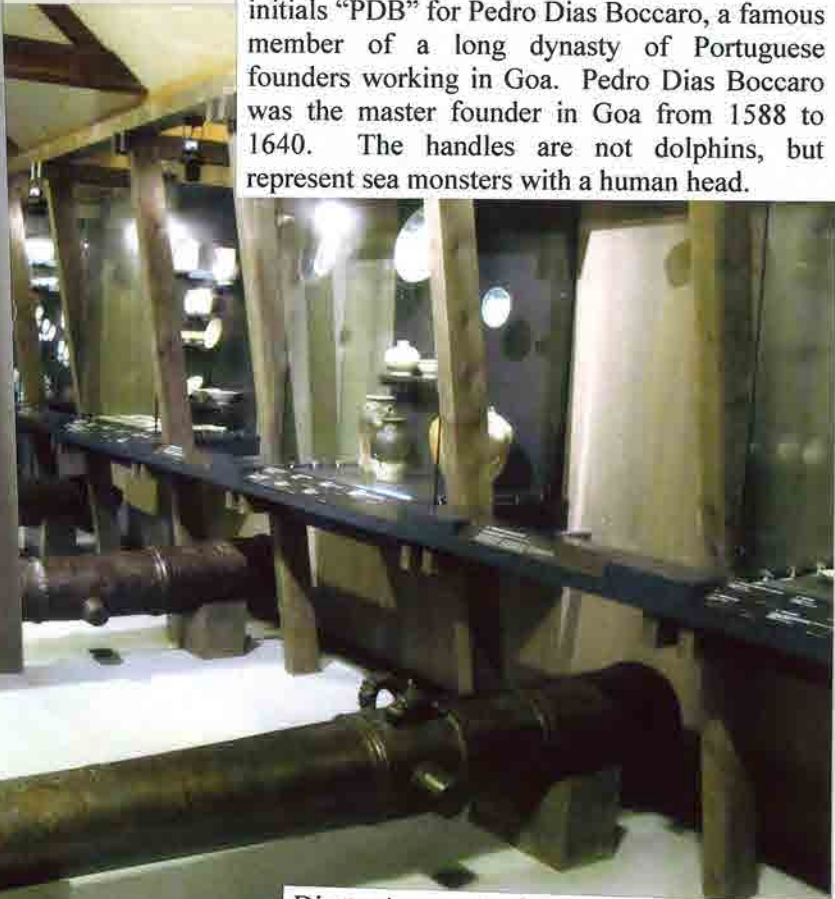
38.

39.

THE FINEST, BEST PRESERVED, MOST IMPORTANT GUNS RECOVERED FROM THE WRECK OF THE MAURITIUS ARE, DISPLAYED IN A SEPARATE ROOM AND ACCESSIBLE FOR CLOSE INSPECTION. IN THIS SAME ROOM, THE CERAMIC ARTEFACTS OF THE MAURITIUS AND THE PORCELAIN PIECES FROM THE FRANCK GODDIO DONATION ARE EXHIBITED.



This piece was being transported with the ballast, in the hold of the MAURITIUS. It is a "third of a Perrier" cannon, a bronze 10-pounder. It bears the crowned shield of Portugal, the telltale armillary sphere and the initials "PDB" for Pedro Dias Boccaro, a famous member of a long dynasty of Portuguese founders working in Goa. Pedro Dias Boccaro was the master founder in Goa from 1588 to 1640. The handles are not dolphins, but represent sea monsters with a human head.



Dimensions of the "terço de canhão-pedreiro":

Calibre: 17cm., Length: 2.58m. 10-pounder throwing stone balls.

The "breech button" is actually, a mere cylinder.



A "demi-cannon", a bronze 24-pounder, once part of the battery of the MAURITIUS. It was cast in 1592 in the Netherlands, as per inscription, by gun-founder Coenraad Anthonisz, (known to have been active in the Hague from 1591 to 1616).



Dimensions: Calibre: 15cm., length: 3.20m.



The decoration: above the chase girdle is the likeness of a carpenter surrounded by his tools. On the first reinforce: the name of the city of Delft (spelled "DELF") and its coat-of-arms supported by two lions, the date "1592" and the inscription "WIE DIE STADT VAN DELF WILL QUELLE DIE WACHT HEM VOR DEN TIMMERMAN EN ALLE ZYNNE HESSELEN" (Whomever will dare to bother the people of the city of Delft will have to be ready to be thrown to the carpenter and his companions). This inscription probably evokes the financial contribution of the carpenters guild to the casting of the piece, or it may refer to either a remarkable contribution once brought to the defence of the city by the carpenters corporation, or to a promise to do so in the future. All this in the context of the Northern Netherlands fierce war against Spain.

B: The second cannon in the row is a bronze demiculverin, a 12-pounder, which was carried in battery by the MAURITIUS (one of two). It is a cannon of the late 16th century, believed to be Spanish. This gun has no cascable but a "tail ring", identical to the dolphin-like handles. Most of the marks in relief it once carried, have been either erased by sand action, or by human hand for political reasons, but the crowned shield almost certainly bears the royal arms of Spain. Notice the "turban-shaped" muzzle head.



Dimensions: Calibre: 11cm. (ratio 24), length: 2.83 m.



B.

A.

Dimensions: Calibre: 13.5cm., length: 2.37m;



Gun A: Cast iron, English 18-pounder used as ballast over the keel of the MAURITIUS. It is a surprising piece, the work; it is believed, of John Phillips (active in England in the 2nd half of the 16th century). The gun was cast with the following decorations: At the trunnion level, the crowned rose of the Tudors surrounded by the Order of the Garter, complete with caption "HONI SOIT QUI MAL Y PENSE"; underneath are the initials of Queen Elisabeth I, Elisabeth Regina (the last of the Tudors, 1558-1603) and, on the first reinforce, an armillary sphere with indistinct letters of devices just underneath; and, underneath again, the figure "XXXX"; on the base ring is an engraved mark "Z??(damaged)0".

Generally speaking, cannons cast under the reign of Elisabeth I, are considered rare (this cannon might well have fought the Spanish Armada one year after it was cast).

An English cannon bearing at the same time the English crowned Tudor rose and an armillary sphere is unheard of. The armillary sphere is the device that traditionally identifies Portuguese cannons and its presence in this case could have been utterly confusing to an archaeologist if it had been the only mark left non-erased by sand action for instance. For the Portuguese, it symbolized their unprecedented geographical discoveries. Its presence as a cast, original decoration on an English cannon is unexplained.



This cast iron piece from the battery of the MAURITIUS is probably an English gun of about the year 1600. The museum's label calls it a "mignon (minion) of 3 or 4 pounds". L. 2.53 m; cal. 8 cm. The heavy surface corrosion suffered by this cast iron cannon has left only two identical readable inscriptions: "2000", one on the base ring, the other nearby, next to the touch hole. (2000 English pounds = about 906 kilos.) The slow tapering funnel-like profile of the mouldings and general cascable area are typical of the cannons of about 1600. The breech button (or what remains of it, is flat and practically useless).

The wrecks excavated by the Franck Goddio team (IEASM excavations)

The remarkable collection of ceramics and miscellaneous artefacts recovered by the “Institut Européen d’Archéologie Sous-Marine” donated to the museum are displayed in a separate room in display cases that cover three walls.

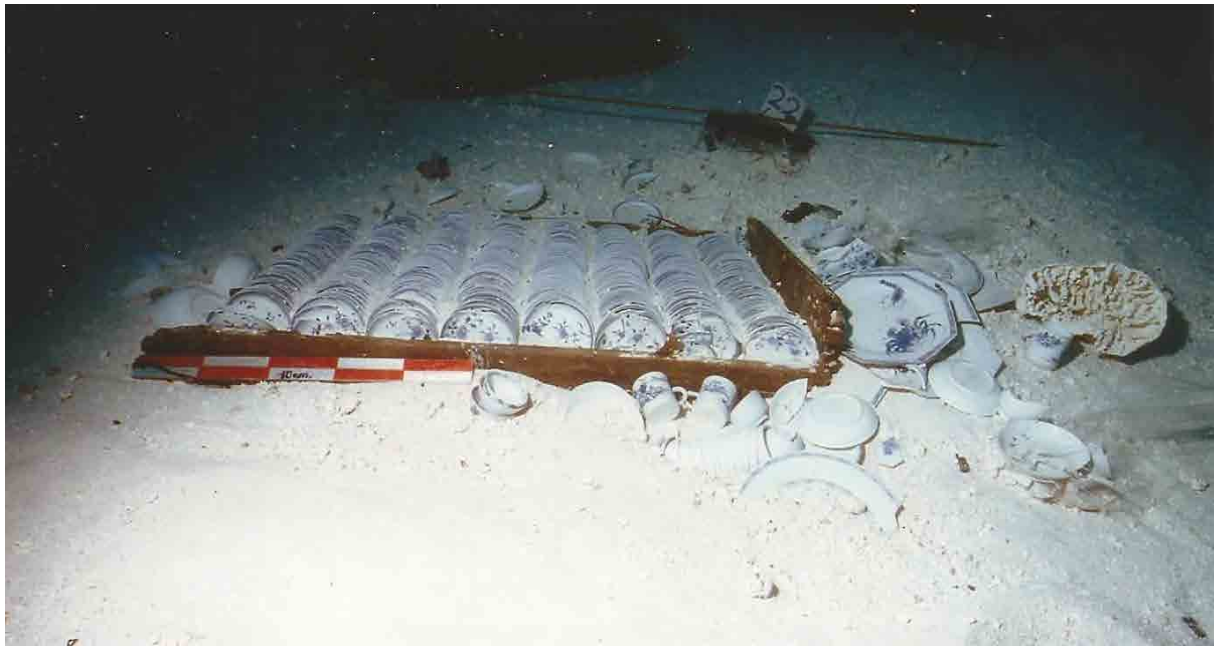


They include everyday use ceramic vessels and a wide sampling of porcelain and sandstone artefacts that were part of the cargo of the very ancient junks recovered and studied. These artefacts were recovered on the wrecks of the following ships:

- The returning English Eastindiaman, *GRIFFIN*.

The *GRIFFIN*, launched c. 1748, lost in 1761, 130 feet long, 499 tonnes, ran on a shallow reef of the Sulu Sea, south of the Philippines Islands, on his way home from Canton, in company with four other sails and with a cargo of 300 boxes of tea, 200 boxes of porcelain, silk, tons of cotton goods, etc. Of the porcelain cargo (Qianlong period), most pieces are “Blue and White” punch bowls, octagonal plates with crabs and shrimps decoration, large dishes, teacups and teapots, etc., often so well preserved under 3 to 8 metres of sand, in piles or even in their cylindrical wooden box, as to, sometimes, have kept intact the gold or colour enamels that added so much to the charm of their decoration. Other porcelain pieces were Chinese tea and/or coffee cups imitating Japanese ware, etc.

None of the ship's cannons were found although the *GRIFFIN* was probably carrying 28 pieces on its two battery decks (and 40 tonnes of cannon balls). Only unusable old guns mixed with the ballast were observed. Since none of the ship's anchors were found either, it is believed that the good guns and anchors were recovered from the stranded ship early after she was abandoned (without casualties).



Some of the porcelain from the *GRIFFIN*'s cargo as found under the sand.
(Photograph by Gilbert Fournier. Courtesy F. Goddio, IEASM)

- The three "old" Chinese trading junks.

1. In 1985, the Franck Goddio team casually found an ancient wreck in the shallow coralline aggregate of a reef west of the Palawan Island named "Royal Captain Shoal". The name of the reef comes from an English ship that had been lost on it. The search for that wreck was the real purpose of the survey. The *ROYAL CAPTAIN* was not found, but the remains of the junk, which took the name, for convenient reference, of *ROYAL CAPTAIN JUNK*, gave up a full cargo of Ming ceramics of the reign of Wan-Li (1579-1609). It consisted exclusively of utilitarian goods, aimed at the Philippines market at the time: Plates, cups, bowls, boxes, bottles and heavy Swatow-type goods, including jars.

2. The junk LENA (again a nickname for convenient reference) was found and excavated in 1997 by the Goddio team in deeper water: 47m., off the island of Busuanga, north-west of Palawan, in the China Sea. This junk, lost apparently under the reign of Hongshi (1488-1505), of the Ming Dynasty, has brought through the variety and quality of its cargo, significant new information on the intra-Asiatic maritime trade as it was being carried long before the arrival of the Europeans in Asia, in fact from the 11th century or earlier.

Part of its cargo, ordinary ceramics, iron or tin ingots, cooking utensils, etc., may have been aimed at the market of the Sultanates of the Philippines, of Borneo or of the Moluccas, the high quality and the refinement of a number of pieces on the other hand, such as the large dishes of “blue and white” porcelain, the water bottles, boxes, writing sets, etc., indicate that part of the cargo, which had come from China, Annam and Siam, was destined to more sophisticated markets, such as Persia or the Ottoman Empire.

3. Another junk, of exceptional interest and dating from late 11th century, was discovered in 1991, south-west of Palawan island, again in the Philippines. It has been nicknamed THE BREAKER. The cargo has been dated to the Song Dynasty of the North (960-1127). The elegant, high quality goods found were of a great variety: Incense burners, bowls, bottles, cups of various sizes, boxes, pots, jars, and also lead ingots. The cargo is representative of the production of South China. They are celadon of various types, porcelains with a bluefish white cover, etc. Also found were some very rare sandstone goods of Cizhou type, with their characteristic decoration (oxide based paint under cover). The wreck was found in less than 3 metres of sand, well protected in a crevice. Most objects were still in piles of various types and dimensions, or conditioned inside of larger jars. An interesting example of the rational methods of packing of the Chinese merchants of the time.

All in all, the excavations on these three junks have brought very valuable information concerning the pre-East India Companies, pre-Artillery Age commercial exchanges in the whole China Sea, an active, permanent multi-currents trade that was nurturing and developing the local markets that the European companies’ merchants were to find later in Asia.



In a separate building, the former powder room of the fortress, a display of cannons of various origins. On the foreground, a cast iron 18-pounder, Maritz system 1758. This gun was recovered from the wreck of LE JUSTE (1724-1759) sunken off Saint-Nazaire. Jean Maritz Superintendent of the Artillery Foundries, introduced in France the horizontal drilling of the guns, a technical progress that allowed better uniformisation in the manufacture of artillery. Maritz also standardized for the first time the mouldings and the vent holes. Shortly afterwards, LE JUSTE, of almost 35 years of age and one of the oldest ships in the French Navy, was equipped, in part, with the most modern artillery of the time.



Cast iron 36-pounder, Système 1786. Cast in 1811. This heavy gun, famous in the French Navy, has armed all the lower batteries of the largest French ships of the lines of 74 to 118 guns. It was the heaviest calibre in the French Navy (from 1786 to 1820), superseded in calibre only in 1849 with the adoption of the 50-pounders.



In another area of the fortress, in the former powder room, the museum displays a series of Navy cannons meant to illustrate the evolution of the French naval guns in the 18th and 19th century.



"Canon de 30 court", the short 30-pounder of the "Modèle 1820". This iron 30-pounder is a new calibre, introduced by still another reformer or systems inventor, the Lieutenant General Thirion, Inspector General of the Naval Artillery. The 1820 new rules introduce the English innovation of the annular top of the breech button (to accommodate the anti-recoil cable).



"Fauconneau". An iron, light gun with an inserted rifled steel lining. Apparently an experimental prototype (1746). Rifled guns were not generally used in the 18th century.



Quite unexpected in the fortress (and with no explanatory panel), an early 19th century cast iron, Russian trunnion mortar.

EDITOR'S ALBUM
ORDNANCE PIECES
ROCHEFORT SUR MER
(2013)

MUSEE NATIONAL DE LA MARINE
(NATIONAL NAVY MUSEUM)



**MUSEUM:
MUSEE NATIONAL DE LA MARINE, ROCHEFORT
NATIONAL MARITIME MUSEUM, ROCHEFORT**

Location: In the “Hôtel de Cheusses”, just south of the “Corderie Royale” and of the dry docks of the old “Arsenal” or Naval Dockyards.

Postal address: 1, Place de la Galissonnière — 17300 Rochefort — France

Telephone: ++33/(0)546 99 86 57

Fax: ++33/(0)546 87 53 27

E-mail: rochefort@musee-marine.fr

Website: www.musee-marine.fr

Curator: Mr Denis Roland (“Attaché de Conservation”)

Contact person: As above

Services offered: No artillery-related library but an exceptional 25,000 volumes strong library on the history of naval medicine and surgery.

A well stocked book shop offers, serious publications on, namely, the history of ship-building and the history of the French naval artillery, including, reprinted in convenient book form, all the most excellent articles of Jean Boudriot, the best illustrated source, by far, on the history of the French navy from the 17th to the 19th centuries.

Opening hours: January 1 to September 30: 10h-20h
May 2 to June 30: 10h-18h30
October 1 to April 30: 13h30-18h30
Closed January 1 and December 25

Recent catalogues and publications on the history of the building and its collections include: Several promotional leaflets.

History of the building: The “Hôtel de Cheusses” is the only building in the dockyards that pre-existed the foundation, in 1666, at the initiative of Colbert, of the maritime arsenal. “It is the pleasure of His Majesty that the establishment at Rochefort should be the largest and the finest there is in the world”, so wrote Colbert in 1668 after he had persuaded King Louis XIV that the French Navy needed a place where all the vessels of “la Royale” on the west coast of France might be built and maintained. It took just a few years to erect the complex of buildings and worksites along the banks of the Charente River, which brilliantly fulfilled the mission assigned by the King. Over 260 years, more than 500 vessels were built in the Rochefort dockyards. Countless miles of ropes of all thicknesses and of all strengths were made in the “Corderie Royale”; a superb 374m. long building that supplied all of the Atlantic French Navy. The “Hôtel de Cheusses” served as the home for the “Commandant de la

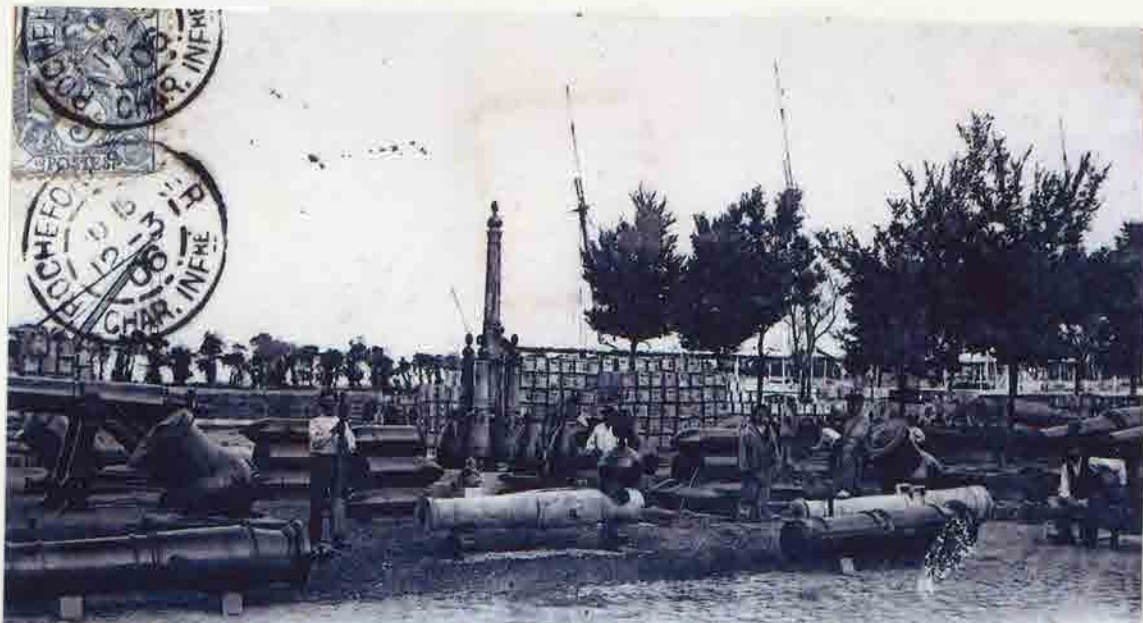
Marine” and as a meeting place for the “Chefs d’escadres” and lesser naval officers. Interestingly, this beautiful classical building still keeps the wood panelling made for the naval commander by the dockyards workmen.

History of the museum and its collections: The “Hôtel de Cheusses” is now housing the collections of the Musée National de la Marine, Rochefort, which originated mostly from the everyday work of the dockyard and its craftsmen. The collections are exceptionally strong on the history of naval medicine (there always was and still is a school of naval medicine in Rochefort), they are strong on ships models, many of them originals produced in the dockyard, by the very shipbuilder under contract with the Navy for previous approval, before building of the actual ship. They are official documents and represent invaluable tools for the historians of naval construction. The museum has interesting woodcarvings sculptures, from the sculpture workshop of the dockyards, and a number of interesting paintings showing mostly naval battles. The tools of the carpenters, joiners, blacksmiths, carvers, riggers and sail makers, as well as the techniques used over several centuries for ship building are very well exhibited and explained. The museum, unfortunately, is poor on the chapter of ancient artillery. On the other hand, a scrupulously correct replica of *L’Hermione*, a three-masts frigate 65m. long on which Lafayette, in 1780, sailed to America, where he participated in the American War of Independence, has been built in Rochefort, since 1997. It is now finished, but for her masts, rigging and internal accommodations. It is worth a long visit.



In the courtyard of the “Service Historique de la Défense, Département Marine”, in Rochefort (not a museum but a Navy record repository and specialized library): an early 19th c. cast iron naval canon. It bears on the base ring the place and date of its casting: “NEVERS 1809”.





21 — ROCHEFORT-sur-MER - Arsenal, Terre-plein de l'Artillerie

Cl. Galeries Parisiennes

Rochefort sur Mer 12 Mars 06

The Arsenal or "Terre-plein de l'Artillerie" at Rochefort-sur-Mer, in 1906, along the banks of the river Charente. The masts (background) are of a ship afloat in the river.



The "Direction d'Artillerie" of the Rochefort-sur-Mer harbour in the early part of the 19th century.



Two cast iron French made, early 19th century carronades (in front of the museum) and inside, a fine model of a similar "carronade de 30". (The model is at scale 1/6). The model shows a 30-pounder, 1.70m. long, weighing about a tonne. A muzzle-loader, which the arrangement shown on the model obliged the gunner to clean, to cool and to recharge the piece from the outside of the hull, precariously standing on a special narrow support.





Most of the very fine models in the museum were made in the very workshops of the Arsenal and as a preparation to the building of the actual ships they very accurately portray in reduction.



An authentic gun carriage (for a "canon de calibre 8 long") made of elm wood. Probably in use under Napoleon I. It was recovered by fishermen off the mouth of



One of the finest ancient models in the museum is the model at scale 1/24 of "le Dauphin Royal", a 110 guns ship of the line, built in 1751. This model was specially constructed for the instruction of the dauphin (the son of Louis XV). Note the details of the guns portholes and the loading portholes or "sabords de charge" aft and on the bow.





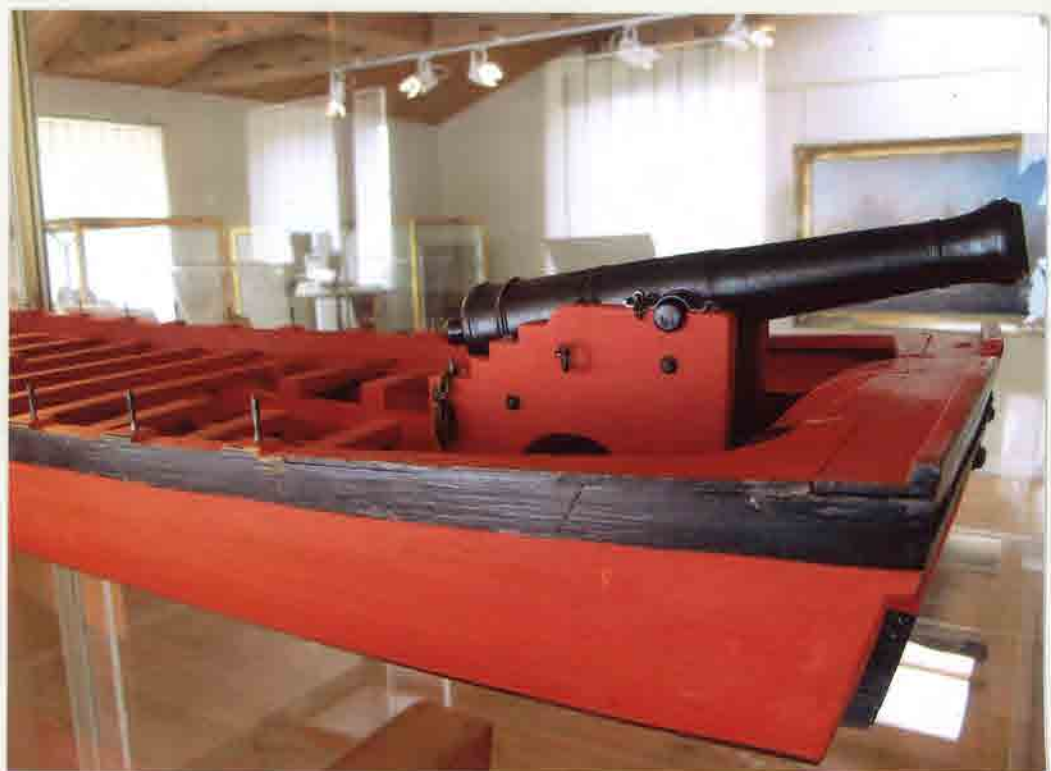
At the heart of the museum's collections is an extremely fine series of "modèles d'arsenaux" or arsenal models made in the very shipyard of Rochefort at the time or before the construction of the ship which they represent.

In 1679, the minister Colbert ordered that in every arsenal exact small scale models should be made of a ship of the line of each of the five ranks. The purpose was to send these as reference prototypes to all the arsenals in France with the purpose to harmonize the construction in the whole kingdom. But those very exact models served other purposes too. They helped the naval authorities to accept or modify a projected type of ship and, on the other hand, they served as "modèles d'instruction", models for the instructions of the pupils of the various naval schools in France. The production of such models in the arsenals lasted until the early 20th century.





Model at scale 1/10 of the main launch of a warship (made in 1814). The launches, larger than the ship's boats, are working boats, not meant to be used as life boats, except in necessity. They are built and equipped for heavy and difficult jobs such as transport of heavy goods, ferrying the drinking water caskets to shore, fishing up an anchor or bringing ammunition from one ship to another etc. In case of war, the launch can be armed for specific missions. In this case the model is carrying a bow howitzer (a 24-pounder) and a cannon at the stern, a 36-pounder. The launch is thus exceptionally heavily armed. For navigation, such a boat did use two sails or its 24 oars.





(Rochefort Museum's Collections.)



The collection of paintings, mainly of naval battles, of the Rochefort Naval Museum is excellent. This painting shows the battle of Dominica of April 17, 1780. The battle between the two fleets in line, with two naval forces of equal strength, was to remain indecisive after half a day of cannonade.

(Original oil painting by Auguste Louis de Rossel de Cercey (1739-1804).)



Which reminds us of the definition often given by the French Secretary of State for the Navy, the Count of Maurepas (1723-1749) : "Do you know what is a naval battle? Manoeuvres are done, guns are fired to each other, then each of the two naval armies withdraw and the sea is not less salted".



The painter Pierre-Clément Caussé (1784-1847) was also a Navy officer. Here we see him painting a scene with its anecdotic details : a sea fight between two bricks (the French one on the left, the English one on the right) which may have happened at some time in the first half of the 19th c.). (Oil on canvass.)



Notice how the gunner is forced, to clean, cool and reload its caronade, to exit the ship by the porthole and to stand, fully exposed to enemy musketry, on a wooden step, attached for that purpose to the outside of the hull.





The scrupulously reconstituted frigate HERMIONE, entirely built in the old shipyard of the Rochefort Arsenal where the original frigate was built (on the plans of Henri Chevillard the Older), then launched in 1779. It left for the United States of America in early 1780 with the Marquis de Lafayette and his party and a number of guns (one of which is now displayed in the Smithsonian Institution's American History Museum in Washington DC), destined to aid the Independentist American Insurgents against the British. After its return from America and an honourable career, the frigate HERMIONE was lost by shipwreck on the reefs called "Le Four" at Le Croizic.

According to plans, the new HERMIONE is to sail to the United States in 2014 or 2015 in order to commemorate the historic support brought to the American Independence cause by the famous Marquis de Lafayette and the France of King Louis XVI.



The HERMIONE, in 1780, was carrying 32 cannons: 26 12-pounders (photographs) and 6 6-pounders. In later years (1789 to 1793), she would have been carrying 26 12-pounders and 8 6-pounders.

(Cdt. Alain Demerliac, "La Marine de Louis XVI")

One of the many charming wooden sculptures produced in the sculpture workshop of the Rochefort shipyard to decorate the locally built ships.



Naval guns are not cast, put in their batteries and shot in a vacuum. They are part — the key part — of a vast, complicated system directed by the King or the Government, organized by the Navy or the Ministry of War, by the local Admiralty and, finally, by the Captains and officers of the ships. The gun and the warship are inseparable and, surely, anyone deeply interested in ancient artillery will be equally interested in the ship that was carrying the guns they study. It so happens that this passion for gun and ship was very much shared at the time by everyone concerned, and this to the point of making not only the gun, but also the ship a work of art. This is why the above photograph is published in this volume.

MENDEL L. PETERSON LGA

FRANCE

NICE

**FORMERLY ON THE TERRACE OF THE
MUSEE NATIONAL DE LA MARINE, NICE
(NATIONAL NAVY MUSEUM, NICE)**

**The museum no longer exists and the cannons can be seen in the
MUSEE NATIONAL DE LA MARINE, TOULON
(NATIONAL NAVY MUSEUM, TOULON)**

**This LGA has been prepared by the editor with MLP's existing photographs and
original field notes dated 26-27 April 1971.**

THERE IS NO EDITOR'S ALBUM FOR NICE.

MUSEUM:

**MUSEE NATIONAL DE LA MARINE DE NICE. (A LA TOUR BELLANDA).
NATIONAL NAVAL MUSEUM, NICE. (NO LONGER EXISTS).**

Location: The Bellanda Tower or “Tour des Ponchettes” stands at the end of the “Quai des Etats-Unis” in Nice (Alpes Maritimes). It is leaning on the “Rocher des Ponchettes”, the South-West part of the “Colline du Château” (no trace of the castle of Nice, is left to-day). The tower is now mostly hidden by two hotels. In the days of Mendel Peterson it housed the “Musée de la Marine” of Nice, which no longer exists.

Postal address: None.

Telephone: None.

Fax: None.

Email: None.

Website: None.

Curator: None.

Contact person: None.

Email contact person: None.

Services offered: None.

Opening hours: None.

Recent catalogues and publications on the history of the building and its collections include: None.

History of the building: An “antique style” tower built in the nineteenth century (following the fashionable taste of the time for building false ancient ruins or monuments) on the site of the former mediaeval “Tour St Elme”.

History of the museum: Formerly devoted to the Maritime History of Nice, its ancient merchant fleet and its harbour namely at the time when Nice was not part of France but of Savoy, it was closed down in 2006, was reopened as the “Musée National de la Marine, Nice” and is now definitively closed.

History of the collections: Used to contain ship models, plans, maps, prints, nautical instruments, etc., relating to the city’s old and important maritime history.

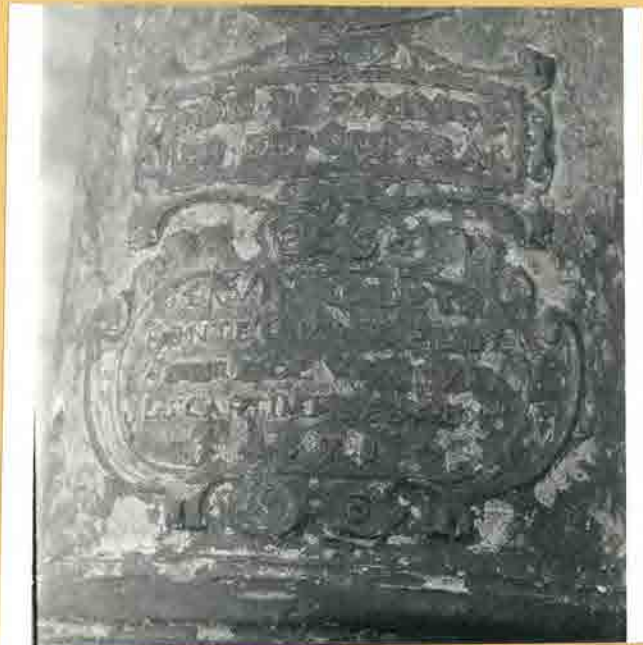
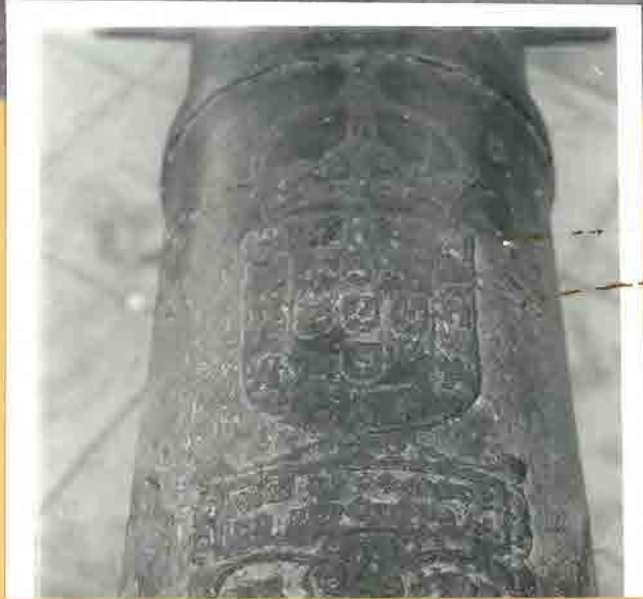
Used to exhibit, on the platform on the top of the tower a small but fine collection of 18th century brass ordnance pieces, which were photographed by Mendel Peterson in April 1971 and which are now on show at the “Musée National de la Marine, Toulon” (see further on).



The Bellanda Tower in Nice, with pink and white access staircase and partially hidden by the new hotels.

Portuguese, bronze "ringtail gun" of the mid-17th century. Calibre: 5in., length: 221 1/2in.

On first reinforce: Arms of Portugal (and two inscribed cartouches).



In rectangular cartouche:
 DOM. P. PRINCE
 PE. DEPORTUGAL
 Beneath, in oval cartouche:
 SERVINDODETE
 NENTE G^L MANDEL DE
 ANDRADE VENTURA
 ESCARTIM ME PEC LX^A
 1671

Meaning:
 Dom Pedro, Prince
 of Portugal
 Serving as Lieu-
 tenant general Manoel de
 Andrade. Ventura
 Escartim has made me in Lisbon
 1671



Another Portuguese, mid seventeenth century, bronze "ringtail gun". Calibre: 5in., length: 221 ½".
On vent field: "+ 28 | - 24 +".



On first reinforce: Arms of Portugal and beneath it
in rectangular cartouche :

“ALFONSO.VI.REY
DE PORTUGAL”.

In oval cartouche:

“SENDO TEN
ENTE G¹ RIVICORE
ALVCAS MANOËLDI
AS ME FES LX^A

1659”

MEANING:

ALFONSO VI, KING
OF PORTUGAL

BEING LIEUTENANT GENERAL
(of the artillery) RUI CORREA.

LUCAS MANOEL DIAS MADE ME
LISBON, 1659”

(Editor)

EDITOR'S ALBUM

ORDNANCE PIECES

**TOULON
(2013)**

**MUSEE NATIONAL DE LA MARINE
(NATIONAL NAVY MUSEUM)**



**THERE IS NO M.L.P. LGA FOR THE "MUSEE DE LA MARINE", TOULON.
(Museum not visited by Mendel L. Peterson).**

MUSEUM:
MUSEE NATIONAL DE LA MARINE, TOULON
NATIONAL NAVAL MUSEUM OF TOULON

Location: Toulon, France, on the “Quai de Norfolk”, next to main entrance of the “Arsenal” or Navy Yard.

Postal address: Place Monsenergue, 83000 TOULON, VAR, France.

Telephone: ++33/ (0)422 42 02 01

Fax: ++33/ (0)422 42 15 88

Email: toulon@musee-marine.fr

Website: www.musee-marine.fr (Rubrique : Toulon)

Curator (Director): Madame Baron

Curator’s telephone: ++33/ (0)422 42 02 01

Email contact person: None.

Services offered: Audio guide, guided tours, temporary exhibitions. No library but the Service Historique des Armées, Département Marine, Toulon and their extremely rich holdings are next door in the old “Corderie”.

Opening hours: September to June: 10h-18h – closed Tuesdays.
July to August: 10h-18h – every day.
Closed: January, also June 1st and December 25.

Recent catalogues and publications on the history of the building and its collections include: No specific publication.

History of the building: Recent and functional but does use as its entrance the superb ancient “Porte Royale” of the “arsenal” (of 1738) that has been displaced for the purpose in 1976.

History of the museum: One of the fine national naval museums (Musées nationaux de la Marine) now (2013) run by private operators for the Ministry of Defence.

History of the collections: Mostly original objects or monuments formally in use in the arsenal from the day of its creation by King Louis XIV in 1738. The purpose was to group in one military harbour the vessels and the galleys (which were formerly based in Marseilles). Rich in original builders models of vessels and frigates of past centuries, in ship decoration, paintings, navigation instruments, etc. The holdings include a small but important collection of cannons including the ones that were formerly on show at the “Bellanda Tower Marine Museum”, in Nice.

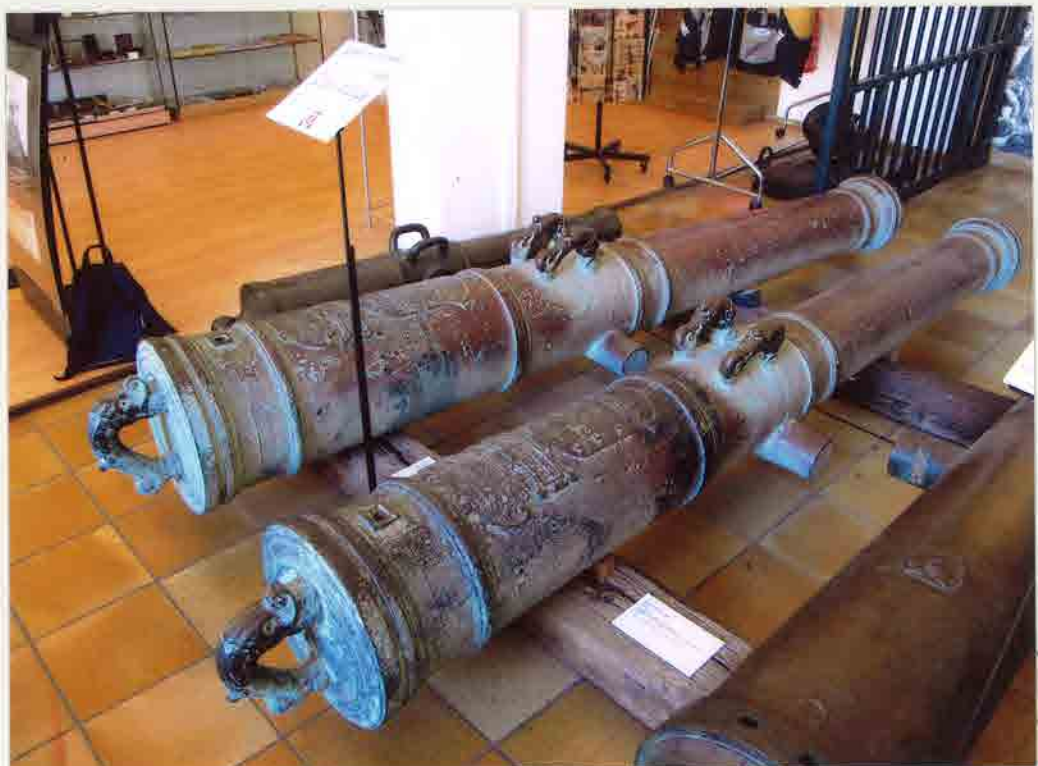


Entrance to the Musée de la Marine of Toulon is flanked by two, rather unexpected Russian, cast-iron naval guns of, apparently, the 19th century.





Two brass pieces (background), in this group in the “Musée de la Marine” of Toulon, are the two Portuguese guns, once described and photographed by Mendel Peterson on the top of the Bellanda Tower, in Nice.



See the description of these two Portuguese “ringtail” guns in the preceding pages.
(Continued →)



The two guns have been cleaned and professionally treated for conservation. The hands of the same sculptor obviously, have sculpted the dolphins of the handles and of the tail-ring.



Bronze gun, cast in France, was an order from an ally, Ferdinand the 1st, Duke of Parma and Infant of Spain.

It bears its name "La Levrette" (the she-greyhound) on a scroll aft of the muzzle-neck and the full coat of arms of the Duke.

The base ring bears the "signature" of the founder and the price's "birth certificate": "Cast in Strasbourg, the 29th of November 1766 by J.B. DARTEIN, administrator general of casting".

Jean-Baptiste de Dartem (1719-1781) was "Commissaire Général des Fontes" at the Strasbourg foundry. His cannons were, at the time, among the first ones that had plain, undecorated handles and cascabel.



This fleurdelised bronze culverin was cast in 1525 in Marseilles, by the founder Claude Laignel, whose initials are cast around the vent. It is one of the very rare guns that bear an early version of King François I's emblem, the salamander walking in flames (here looking more like a dragon), uncrowned and looking to the right. Underneath, lightly engraved later, the arms of Louise de Savoie, the King's mother and, at the time, the Regent of France (François was detained in Spain since 1525 precisely, as a result of the disastrous Battle of Pavie in Italy). On a scroll just underneath the coat of arms: The year the gun was cast.



The coat of arms of Louise de Savoie is surmounted here by the "crown with the cord" of the queens of France.

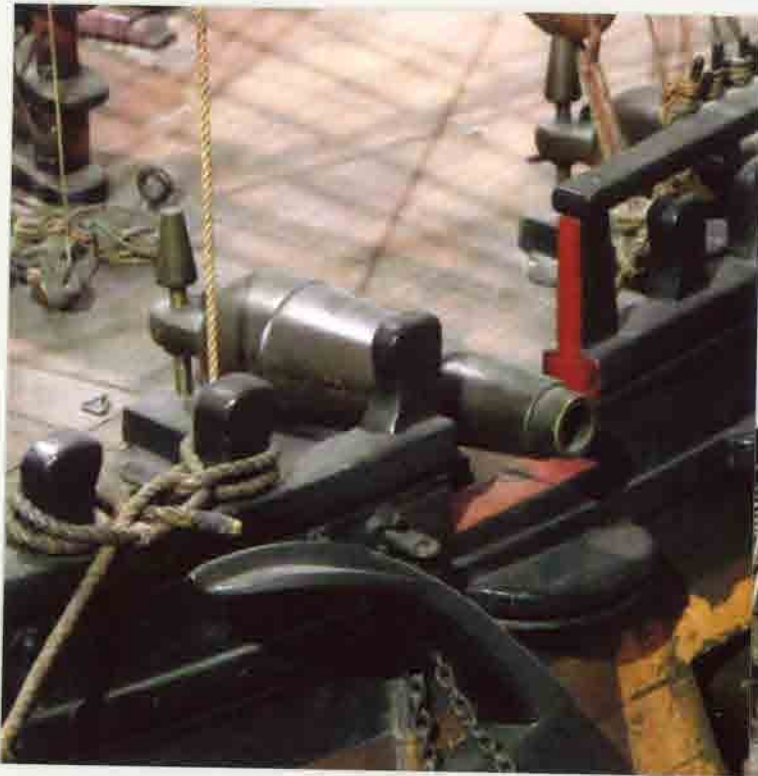
The gun belonged to the armament of François I's ship "La Grande Maîtresse", sunken in 1533 in the harbour of Toulon and was recovered in 1951 during harbour works.



Unidentified heavy bronze cannon. Except for its decoration, it bears only a rectangular cartouche in low relief, which has been either left blank or erased. It bears no inscription. It has no handles. Its breech button is atypical.



This 17th c., Swedish gun is not what it seems to be. It is actually a breech-loader. The breech and the whole cascable part, from the base ring on, is mobile and can be unscrewed for loading purposes. This was probably achieved with the help of a cross-lever applied to the delphinoid tail-ring or with tools applied to specially made (square) holes (provided in the base ring). The gun bears the arms of King Gustavus Adolphus of Sweden (1594-1632), the date of casting: "1625" and a serial number : "N° 169". The touch-hole is pierced through the base of the breech moulding (which is unusual) and its powder pan is cut in the upper part of the tail-ring.



The 74 gun "vaisseau" "Le Duquesne" (1788-1805) – an instruction model, made in the workshops of the Toulon arsenal in 1787 (Scale 1/12) for the instruction of gunners and seamen. The ship was launched in September 1788 and sailed until 1801 as such, in the Mediterranean before being rigged as a flute for troopship duty and armed with carronades on her upper desk (as shown on the model).



This instruction model (at scale 1/10) was built in the models workshop of the Toulon arsenal in 1765, previous to the start of the building of the frigate "La Sultane" (26 guns ; 1765-1793).

The frigate sailed the Mediterranean for almost 30 years. The model, a pedagogical tool, served to the instruction of young seamen and gunners for about as long.



This model of "La Sultane" is one of the first ever "simulators" or "navigation trainers". It features, on the starboard side, two sets of rollers (or wheels) - the axle horizontal - intended to simulate the effects of the rolling on the rigging, on the securing of the artillery and on the stowing of the supplies and ammunition.



A model of a French steel carronade of 24 (of C. 1834). The French Navy used carronades from about 1800 to 1849, when they were replaced by the "canons-obusiers" or howitzers.



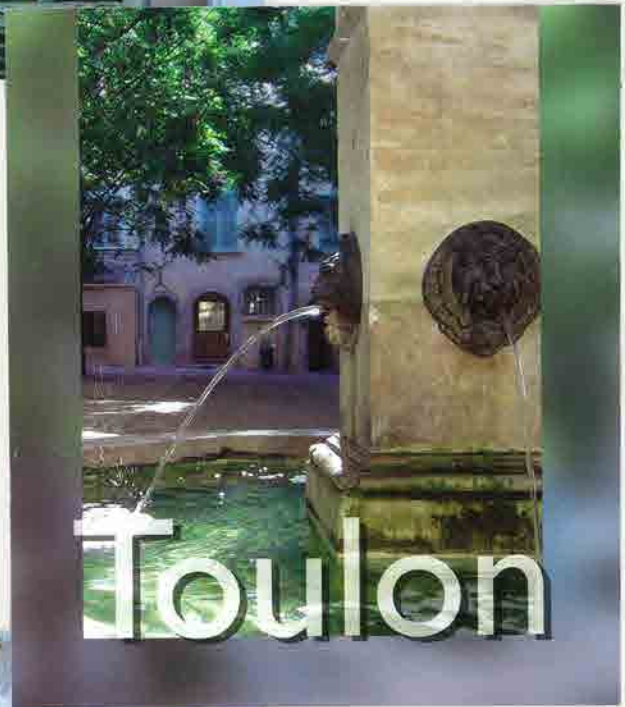
This bronze "mortier éprouvette" or "testing mortar" was used to verify the quality of the gunpowder received from the Navy suppliers. Gunpowder was the result of a long and complicated process of mixing saltpetre, sulphur and ground charcoal. To be accepted, the powder had to pass a test that consisted in successfully shooting a 30 kilos brass ball at 175 meters at least from a "mortier éprouvette" as this one, with 90 grams of the supplied gunpowder.



The bow and the bow chasers of the "galère extraordinaire", "La Dauphine" launched in Toulon in 1736 and the last but one of the series. She was built by the "Maître de hache" Reynair. The model (at the scale 1/24) was made in the Toulon models workshop.



The front of an old house, on a quiet square in the heart of old Toulon. Who was the "Lieutenant-général d'Artillerie" who once lived here ?



EDITOR'S ALBUM

ORDNANCE PIECES

**DRAGUIGNAN
(2013)**

**MUSEE DE L'ARTILLERIE
(ARTILLERY MUSEUM)**



There is no Mendel L. Peterson LGA for the “Musee de L’Artillerie”, Draguignan (this museum was inaugurated in 1982).

**MUSEUM:
MUSÉE DE L'ARTILLERIE, DRAGUIGNAN
ARTILLERY MUSEUM, DRAGUIGNAN**

- Location: East of and in taxi distance of the small city of Draguignan, on the Avenue de la Grande Armée. The museum building is next to the entry-gate of the “Quartier Bonaparte”. The city is about mid-way (inland) by rail, between Nice and Toulon.
- Postal address: Musée de l'Artillerie — Ecoles Militaires de Draguignan — Quartier Bonaparte — BP 400 — 83007 Draguignan Cedex — France
- Telephone: ++33/ (0)483 08 13 86
- Fax: Idem
- E-mail: musee-artillerie@worldonline.fr
- Website: www.musee-artillerie.asso.fr
- Curator: Lt. Colonel P. Guyot (Conservateur).
- Contact person: As above
- Services offered: A presentation film in French or English, introducing artillery and its history, is screened for the benefit of the arriving, non-initiated visitors.
The bookshop is well stocked with general and specialized publications.
Temporary exhibitions are from time to time organized. A recent example: “ANIMALS IN THE WAR, actors, victims and companions”.
- Opening hours: From Sunday to Wednesday: 9h-12h and 13h30-17h30.
Closed December 15 to January 15.
- Recent catalogues and publications on the history of the building and the museum include: Several free brochures distributed at the entrance. These are short, detailed and useful for the information and orientation of the visitor.
- History of the building: Recent and functional.
- History of the museum and its collections: The present day “Musée de l'Artillerie” was originally called “Le Musée du Canon et des Artilleurs”. This museum had been pioneered by Colonel Raymond Giaume, who was its “conservateur” or keeper from 1977 to 1986. (The colonel was also the founder of the very active “Association des Amis du Musée du Canon et des Artilleurs”). This first museum was officially inaugurated on June 5, 1982, in the present day building.
It is considered as the heir of the Fontainebleau Museum destroyed in 1940 and, further back, of the collections of the Grands-Maîtres de l'Artillerie of the “Ancien Régime”. The present day museum was created at the time the School of Artillery was moved to Draguignan. The museum is both a

public museum (20,000 visitors in 2012) and part of the past Army Gunnery School, which was the first military school to be installed in Draguignan (the first School of Artillery was set up in 1791 in Châlon-sur-Marne, from where it moved to Metz in 1802, and to Fontainebleau from 1871 to 1940). The museum's collections are considered instrumental to the training of the young "artilleurs". In recent years, the French army has concentrated on the Draguignan site a number of other specialized schools.

The exhibition of the actual pieces of artillery and/or pictures is logically organized in coherent chronological units. The visitor having watched the presentation film should begin his visit by the first floor. On the right, he will find the unit devoted to the origins of the cannons (1453 to 1732), which will lead him to the "Napoléon and Wagram" part, illustrated by the history of the French cannon's evolution from 1765 to 1870 "From Gribeauval to Vallée, a century of evolution". The evolution of the French artillery has been, indeed, profoundly marked by a number of successive "Systèmes", the inventors of which, in succession, meant to simplify, standardize, better organize and improve the French naval and land artillery. That is well explained in the exhibition. (Note that detailed explanations concerning the successive French "Systèmes" have been given by this Editor in his EA that concerns the "Musée de l'Armée" at the Hôtel des Invalides, Paris. Such details will not be repeated in the following pages of this EA.)

The visit will then lead the visitor to the turn of the century mutations in the history of artillery, then to the "Great War" (1914-1918) and to the present day aspects of the evolution of the artillery.

Coming down to the ground floor, the visitor will start their visit on the right side with the part devoted to naval artillery — (at this time, 2013, not the strong point of this museum — and then will find again a history of the French artillery organized by systems from the "de Vallière Système" of 1732 to the 75mm. gun of 1897. The left part of the ground floor is devoted mostly to WWII, but also to "Ammunition and Light Artillery".

The "Musée de l'Artillerie" in Draguignan sees itself, in the own words of its Curator, as "a museum of history, knowledge, citizenship, where keys for a better understanding of today's world are given..."

CANNONS DISPLAYED OUTSIDE

This bronze naval gun bears on the base ring the place and date of its casting: "AN 1813 / RUELLE" (a State-run foundry working exclusively for the Navy, on the Charente river, near Agoulême.) The decoration on the chase — probably the Imperial crown and the "N" — have been hammered off at some time. →



"LE HAUTAIN", a 19th c. naval piece (for shipboard or for coastal fortifications). Cal. 13,8 cm. The tube rifled. Inscriptions indicate it was cast in Douai (Northern France) on August 18, 1866. It bears the "N" monogram of Napoleon III above the vent. The breech button is fitted with a short horizontal cross-bar to better hold the anti-recoil rope (the gun breeching). (Was formerly at the Invalides in Paris.)

Another, identical cannon displayed nearby was cast in Bourges (Central France), on



Cast iron naval piece. Calibre: 16cm; weight: 3,089 kilos. Cast in 1811 in Sant-Gervais, France.



One of a pair of small Chinese cannons. The inscriptions on the base ring and on the face of the left trunnion are un-translated. Calibre: 9cm., length: c. 1.30m.

CANNONS DISPLAYED INSIDE THE MUSEUM



Pair of small calibre bronze pieces (previously in the “Musée de Vizille”, near Grenoble — more information not available) is an example of a successful identification from some very uncommon clues.

The round escutcheon on the chase is divided quarterly, two opposed quarters divided quarterly again, the two others fretty, consisting of bendlets and bendlets sinistres interlaced. A cross of St. Andrews underneath, the Order of the St. Esprit around, identified by the two “HH” (the Order was founded by King Henri III in 1578) and surmounted by a French Ducal crown. In such a French context, a shield placed as it is should belong to the then Master of Artillery. It appeared that the shield belonged to the “Duc de Humières”. Louis de Crevant, Duc de Humières (1685-1694) was a Maréchal de France and a favourite of King Louis XIV (he illustrated himself at the battle of the Dunes in 1658 and in Cassel in 1677). He was “Grand-Maître de l’Artillerie from 1685 to 1694. The Editor’s Album for the “Musée de l’Armée” at the Invalides (Paris) shows a similar coat of arms moulded on the chase of the cannon “LE SOLIDE”, a bronze 12-pounder cast in Douai by the Keller brothers in 1688. On that cannon, a scroll above the shield reads “LE MARESCHAL DE HVMIERES”. The radiating “sun” with a long-haired boyish face of the SOLIDE is almost identical to the one studied. A scroll above this latter “sun”, now erased and unreadable, except perhaps for the letters “BU”, can only have been inscribed “NEC PLURIBUS IMPAR”.

The royal coat of arms near the breech — it is surmounted by a Royal crown (covered) — must, in the context, be of France but seems at first sight quite extraordinary. The charges in the central, circular shield are again unreadable but could only be three fleurs-de-lis. The two crosses underneath can only, by tradition, be the Orders of St. Michel (founded by Louis XI in 1469) and the Order of the St. Esprit. (No collars recognizable under the lavish vegetal decoration). The most extraordinary part is that the shield is supported by two wings, not eagles’ wings but, apparently, phoenix wings. Unheard of? Yes. And still, on the same cannon LE SOLIDE, the royal shield is surrounded by branches with long leaves, the top of which might, from a distance, be mistaken for wings. Has the sculptor goes one step further on our small pieces?

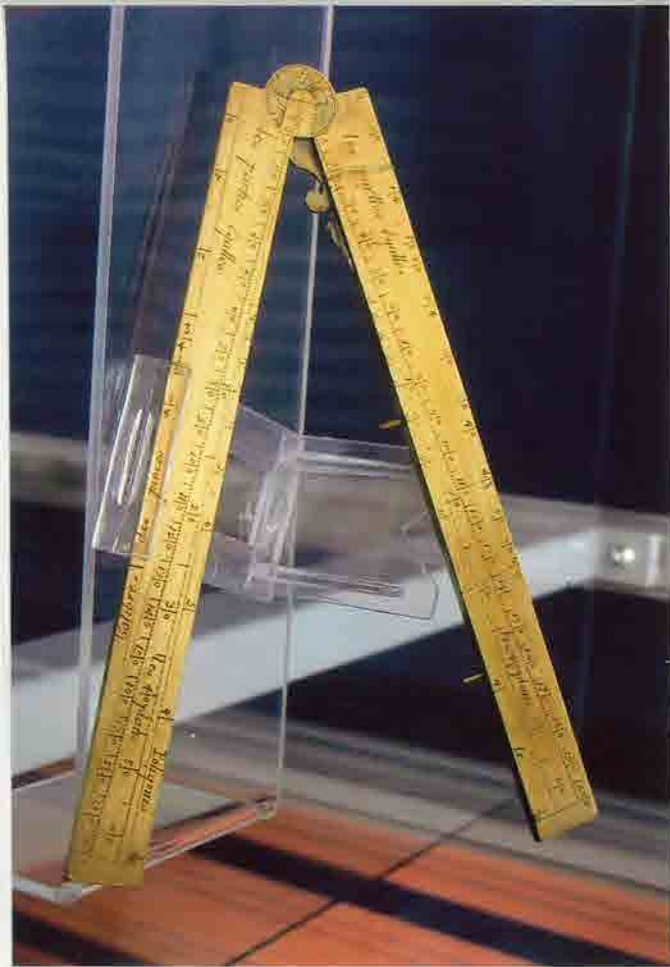
Still unexplained are: On this version of the de Humières shield, the asymmetrically placed roundels and also, on these incongruous Royal arms: The two very small crowns on dexter chief and sinister chief of the central escutcheon, or are they hanging from the Royal crown?

Obviously, the small cannons were not meant to ever fire in battle. They are presentation pieces, “pièces de réjouissances”, the firing of which would only have saluted some festive celebrations. This explains and excuses such fantasy in decoration.





A stamped badge (gilt copper, 1814) once on the front of the shako of an artillery officer of the French Navy (a 1812 regulation design).



An 18th c. "compas d'artillerie" or artillery dividers. It allowed the gunner to make quickly and visually a number of calculations such as the corresponding weight of an iron cannon ball with its diameter, the density of various metals etc. The piece is signed "MENANT à PARIS".





Consistent with its didactic vocation, this artillery museum presents its gun models in actual field situations. They are handled according to the right drill by artillerymen wearing the right uniform. A vivid, effective way of bringing to life the past history of artillery.



Scale model of a cannon of the "Système Gribeauval", the "Caillebotot".



A 30-pounder cannon of the Gribeauval System in the "Naval Artillery" part of the museum. This type of 30-pounder cannons was designed, namely, to fire on enemy vessels cruising along coastal defence fortifications. The carriage was, on that occasion, fixed on a rotating platform, that could pivot on a half circle, a mount that could be very quickly aimed at the target, a target, as a matter of fact, which was passing at a rather rapid speed if in the short range of this type of guns (500 m with precision, 1800 m maximum).



A 1 pound infantry cannon of the late 18th c. The carriage reconstituted. These light cannons actually belonged to the Infantry Regiments. They were served on the field by the infantrymen themselves, with the help of a few artillerymen.



This 4-pounder of the Vallière System of the year 1732 was of the smallest calibre in this system composed of 24, 16, 8 and 4-pounder cannons.

The Vallière System cannons are of high quality. Their main features are greater power but it also means greater weight. All pieces are superbly decorated, according to rigid regulations. Each cannon features its personal name, King Louis XIV's motto, "The last argument of the Kings", the coat of arms and name of the Captain General of the Artillery in charge at the time, the radiating sun of the King with a scroll bearing "NEC PLURIBUS IMPAR" and, on the first reinforce, the royal arms of France. The name of the founder and the date were engraved around the base ring. This particular cannon, it will be noticed, has been transformed at the end of the 18th century by adding a gun-sight similar to the Gribeauval gun-sight, a removable device, for which a securing system has been improvised.

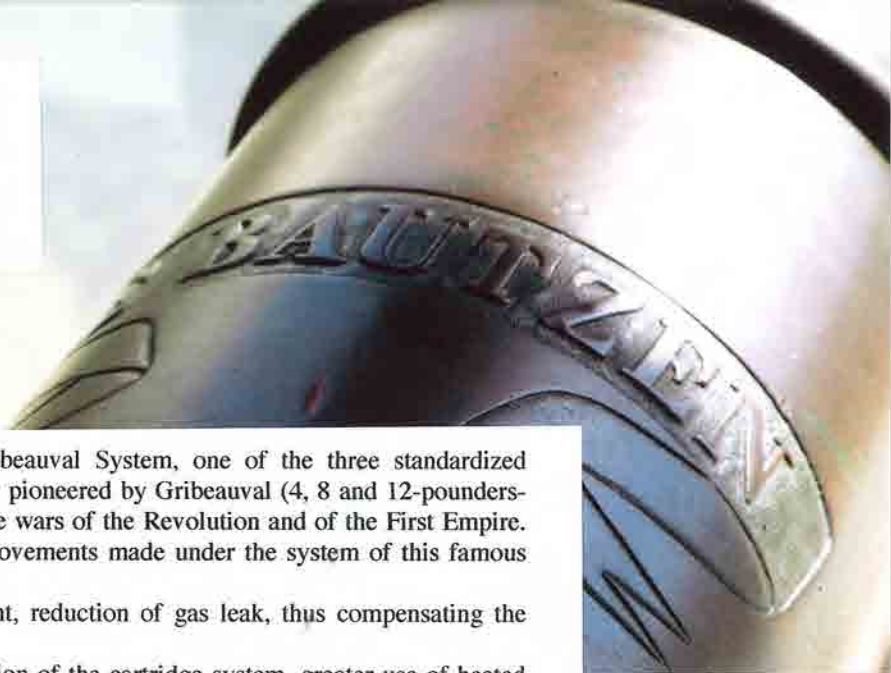
This gun was cast by Maritz in Strasbourg on October the 7th 1732.





Bronze cannon, similar to the just described one, by the name of "LE PASSAGER". Bears the name and coat of arms of Louis Charles de Bourbon, Comte d'Eu, Duc d'Aumale, "Grand-Maitre de l'Artillerie" from 1736 to 1755, surrounded by cannons and military artefacts. On his coat of arms he is entitled, as all the "Fils de France" (members of the Bourbon family and close family members to the King) to wear the "Couronne des Fils de France", which is fleur-de-lised and to bear three fleurs-de-lis on his shield, charged however with a short bend sinister, a distinctive mark on the fess point meant to indicate his exact kinship with His Majesty (a heraldic convention comparable to the ancient system of Cadency, marks on the family coats of arms of England).

This cannon is named "LE BAUTZEN" (the battle of Bautzen, in Saxony, saw the victory of Napoléon on the Prussian and Russian armies on the 20-21 May of 1813).



The 8-pounder cannon in the Gribeauval System, one of the three standardized calibres of the French field artillery pioneered by Gribeauval (4, 8 and 12-pounders-which were so successful during the wars of the Revolution and of the First Empire. This piece illustrates well the improvements made under the system of this famous artillery general:

- For the barrel: addition of a sight, reduction of gas leak, thus compensating the reduction in length of the tube.
- For the ammunition: implementation of the cartridge system, greater use of heated cannon balls, enhancement of the canister.
- For the carriage: an ammunition caisson is added and the axles are in iron.
- The shafts are replaced by beams.
- For the gun mount: an elevating screw replaces the traditional wooden wedge.

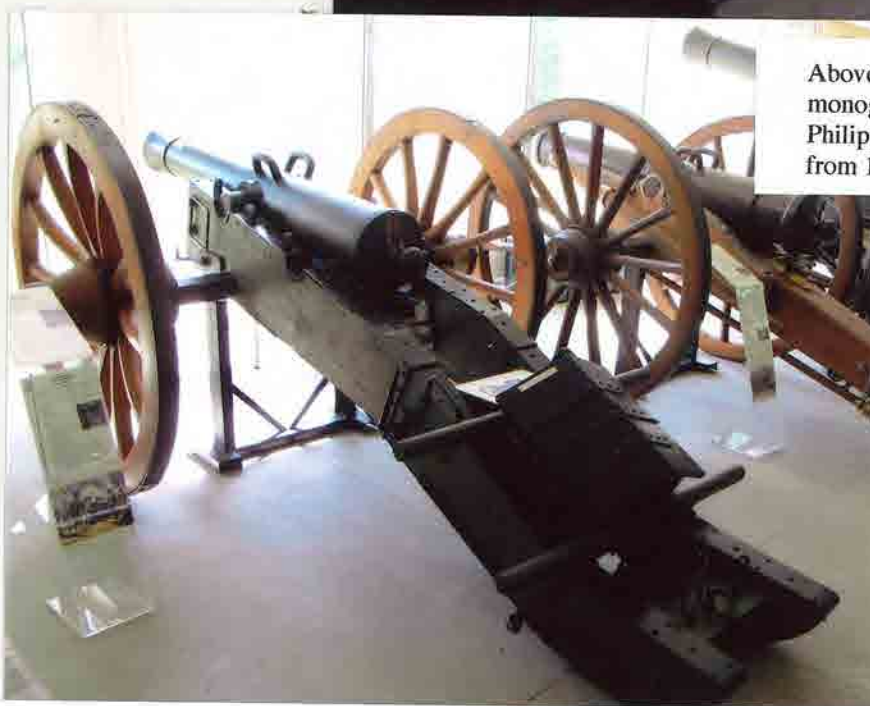
Gribeauval also succeeded in imposing accurate standards to the gun-founders and arsenals of the realm so that spare parts became interchangeable.

Gribeauval's main concern was to give the guns greater mobility on the battle field or on board ships.

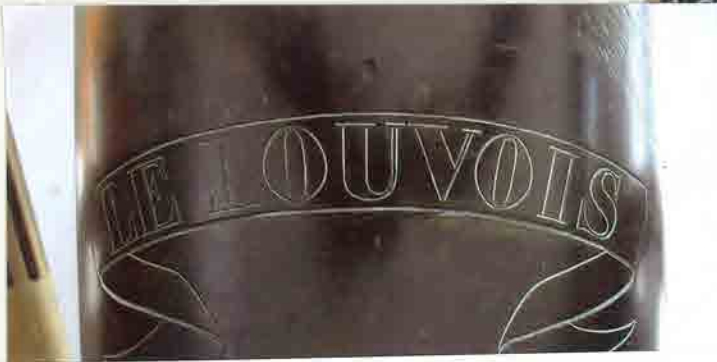
On the base ring, the inscription:
"TOULOUSE 30 AVRIL 1847".



Above the vent: the crowned monogram "LP" of King Louis-Philippe, "Roi des Français" from 1830 to 1848.



On Royal orders, Jean-Baptiste Vaquette de Gribeauval prepared his reform of the French artillery as soon as he was made "Maréchal de Camp" and "Inspecteur de l'Artillerie", in 1763. The reform was made official in 1765. Gribeauval was made "Inspecteur Général de l'Artillerie" in 1776. He died in 1789.



Michel Le Tellier, Marquis de Louvois (1641-1691), was the War Minister of Louis XIV who deeply reorganized the French Army and Navy.



The initials "RF" are for "République Française".



Howitzer "Le Louvois", a 1830 model piece of the Valée System. Dimensions of this smooth bore muzzle-loader: Length: 1.6m.; weight: 1,266lbs. or, as indicated on the face of the right trunnion: 584 kilos; calibre: 15.3cm. The piece had a maximum range of 4.2km., throwing 24lbs. projectiles.

Cast in Douai (Northern France) in 1849. The carriage has been reconstituted carefully, following the plans of the time.

General Valée (not to be mistaken for General Marquis de Vallière) improved in several ways the Gribeauval System, but mostly in what concerns field artillery. His great achievement was to increase the mobility of the field guns in their cross-country moves. Under his influence, the artillery became the "mounted artillery".



Calibre 27 Gomer mortar adopted in 1829 as part of the Valée System was one of the necessary improvements to the Gribeauval System revealed by the Napoleon campaigns. (Napoleon had started his military career as an artillery officer.) An army commission worked for years on the various problems to be resolved to improve the whole system of French artillery. The calibre 27 Gomer mortar, named after its inventor, was one of the results of the work of the commission. Weight of the piece: 2,030lbs; weight of the round: 40lbs.; calibre 27.4cm; rate of fire: 1 round a minute. Precision: With such a short weapon, the accuracy was not good. In fact, the mortar had been designed to fire on wide area targets: Still, the particularity of the Gomer System resides in a cone-shaped chamber, in which, when the mortar is ignited, the thrust of the exploding power is applied exactly along the axis of the bore, avoiding the usual rebounds on the inner walls of the cylinder. This allows for better accuracy. It has been reported that a French gunner, during the siege of Sebastopol, in 1855, succeeded in sinking two enemy vessels with three or four bombs only.

THE MENDEL L. PETERSON LGA

MONACO

**LA PALAIS PRINCIER
(THE PRINCES' PALACE)**



**BRONZE PIECES ON THE PALACE'S ESPLANADE
(ALONG THE FAÇADE)**

MENDEL L. PETERSON LGA

PRINCIPALITY OF MONACO

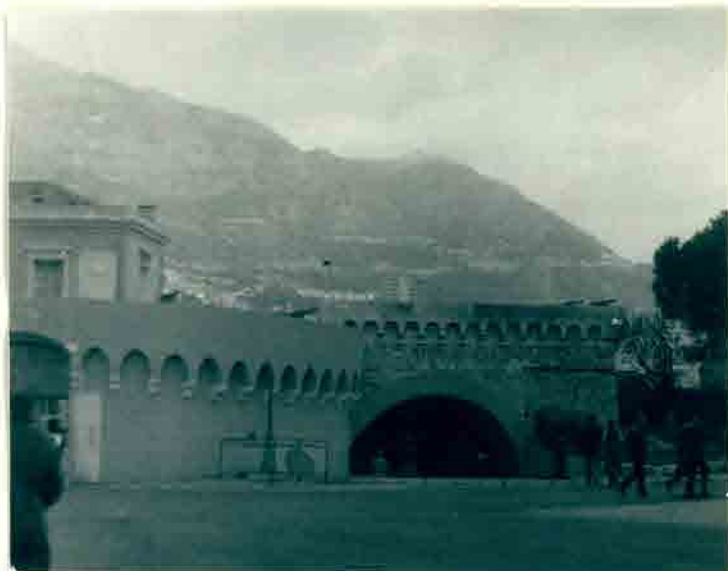
PRINCES' CASTLE ARTILLERY

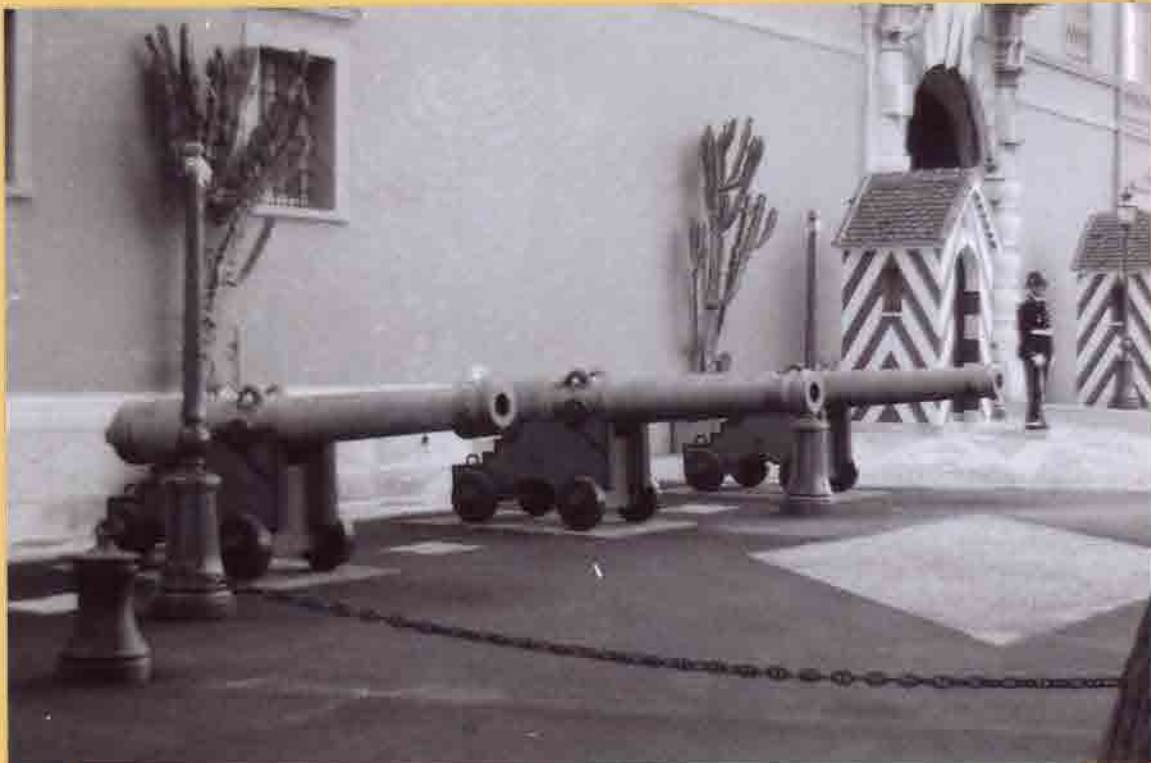
The terraces, ramparts and the Palace's Esplanade

MONACO

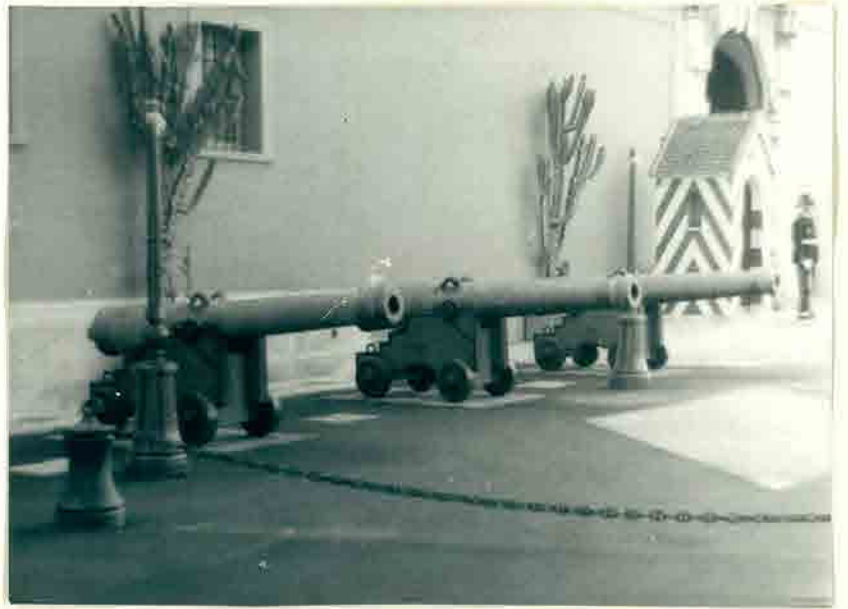


The Palace of the Princes of Monaco.

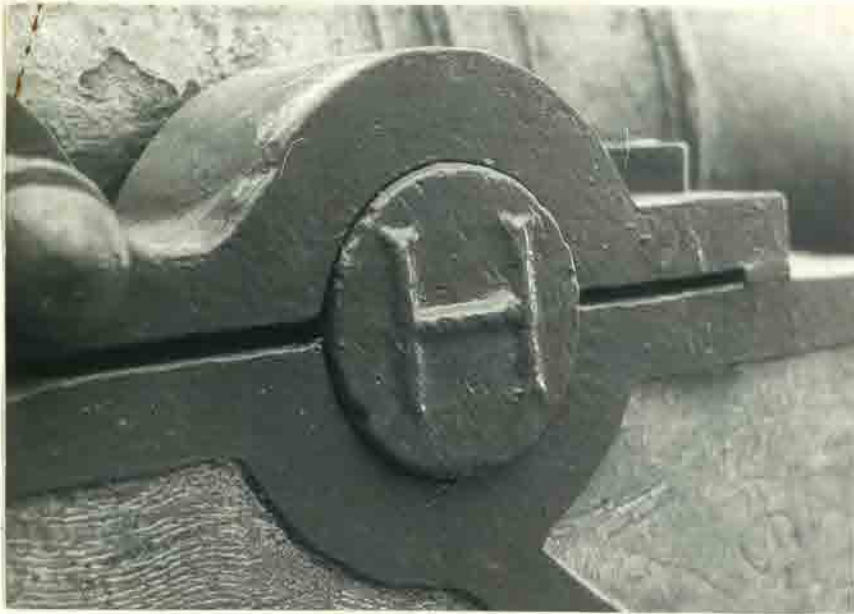
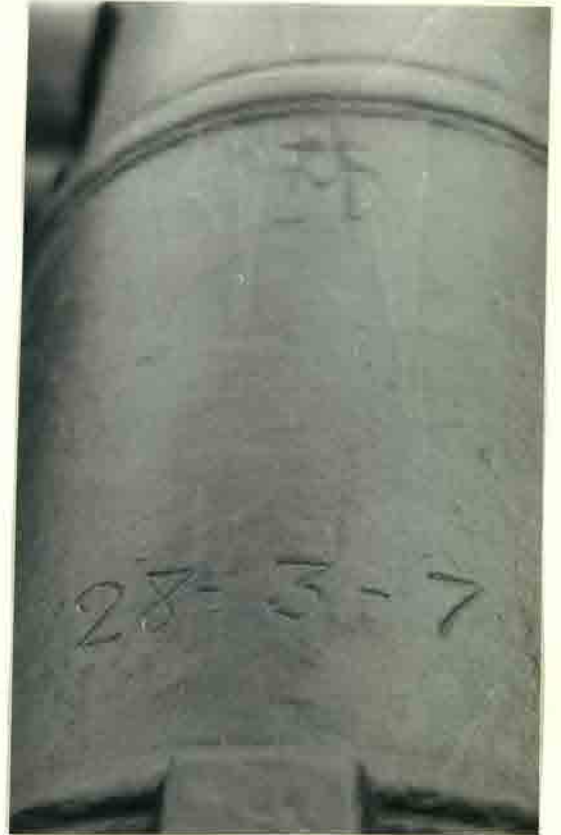




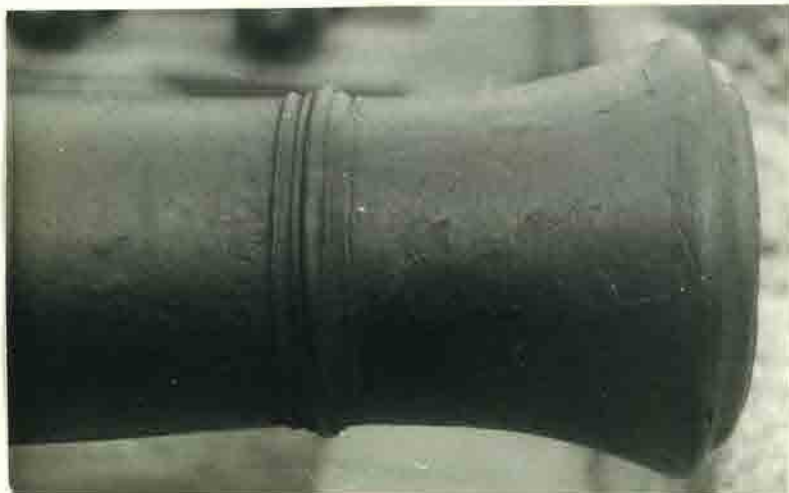
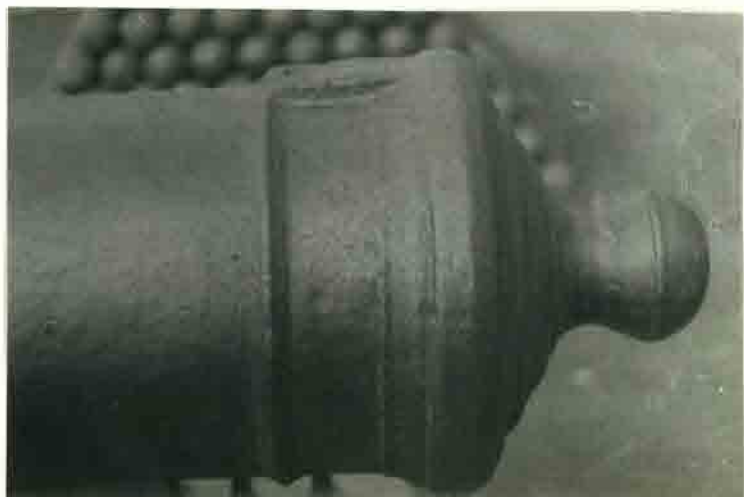
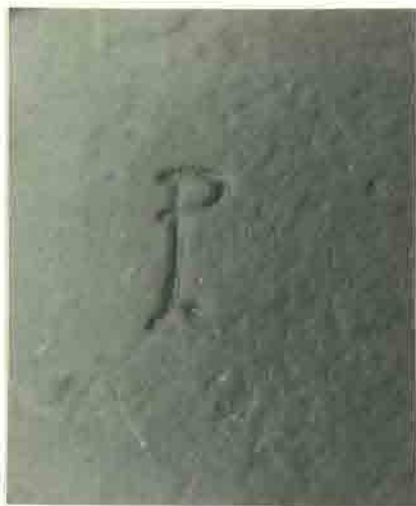
BRONZE PIECES ON THE PALACE'S ESPLANADE (ALONG THE FAÇADE).



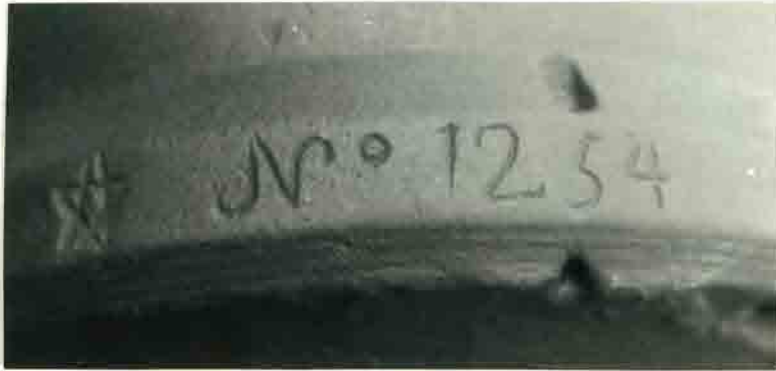
Monaco # 5 British iron ship or fortress gun
Cypher of George 2 Caliber 4 1/2" length 98"
1727-60



Monaco # 6 British iron gun
Caliber 5" Length 154"
Cypher of George 2 -1727-1760
Crowned M on first reinforce, chiseled
For Monaco?



Monaco # 7 French iron gun
Caliber $4\frac{1}{2}$ " Length 109"
"I.R." on 2nd. reinforce
Star and "No 1254" on base ring

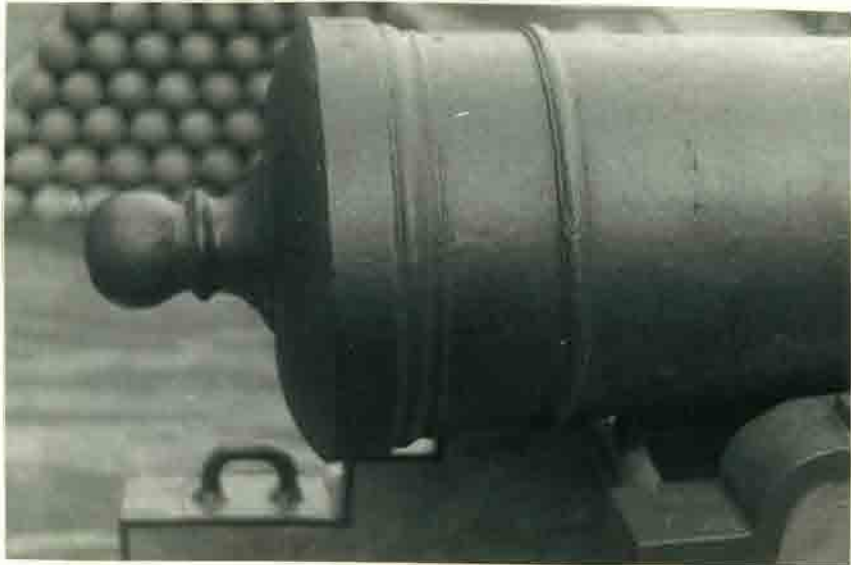


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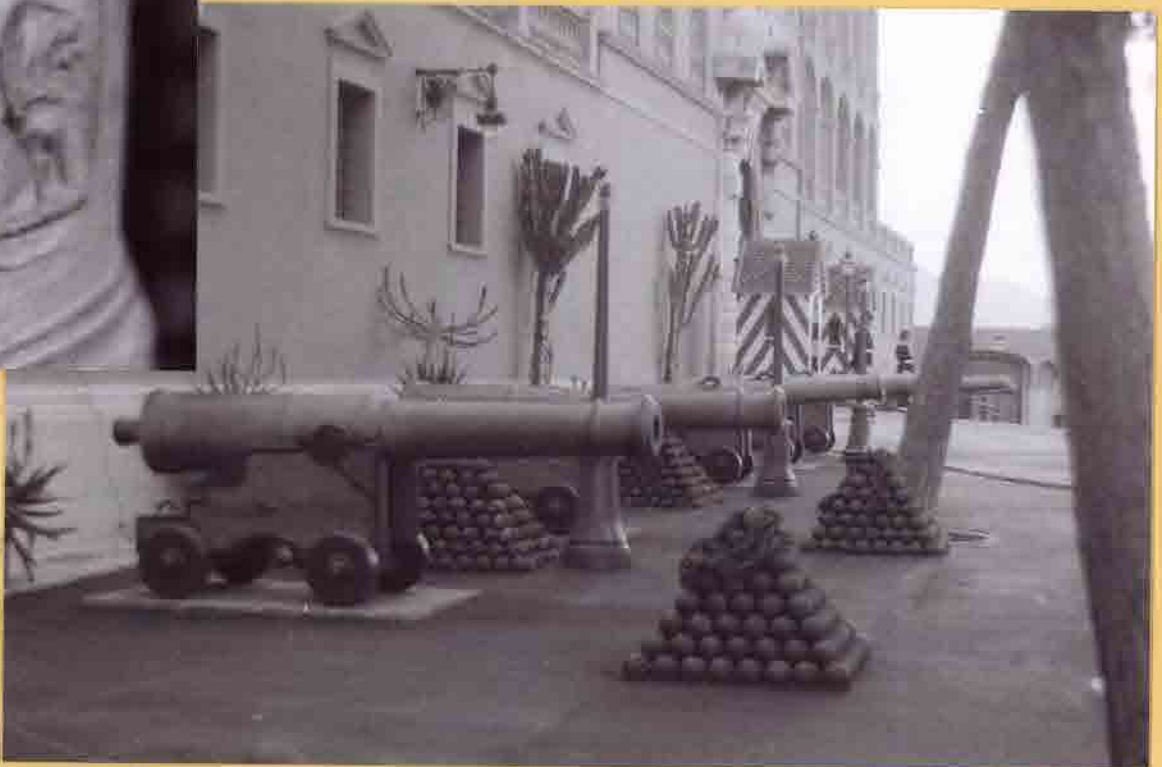
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Monaco # 8 Cast iron gun
Caliber 5" Length 101"
"F" on both trunnions



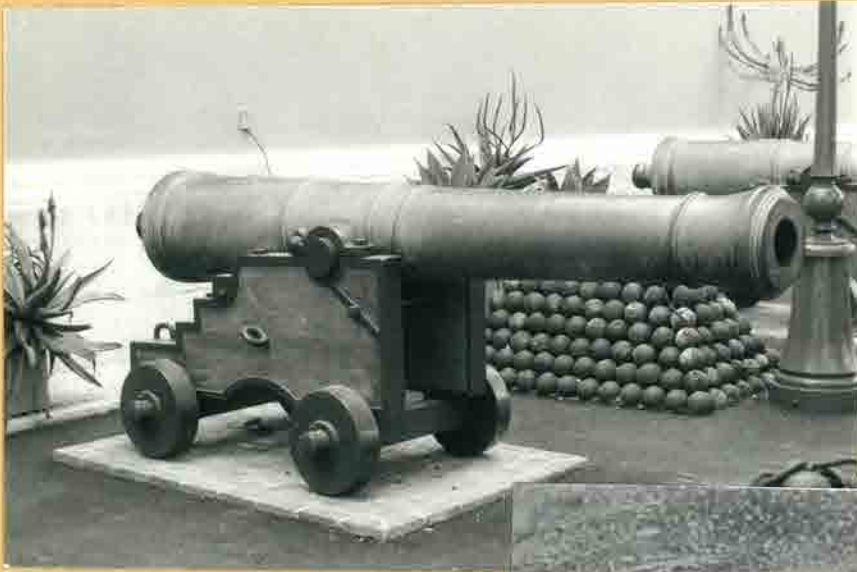


Details of the same Venetian bronze piece.



3
7

For M. 1005



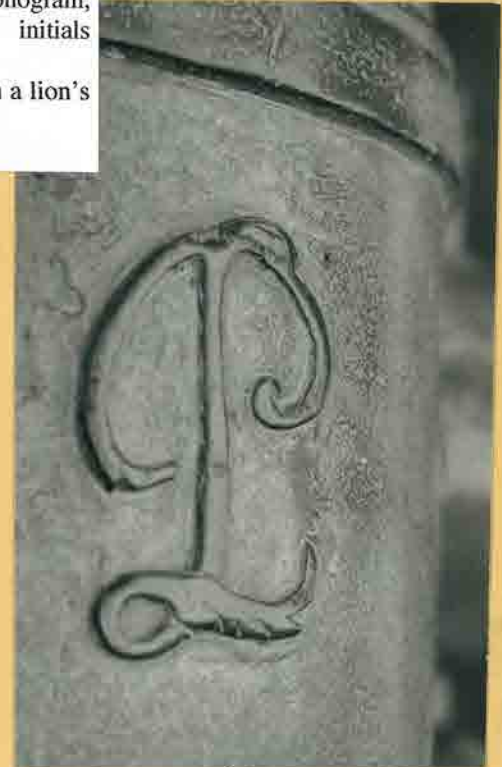
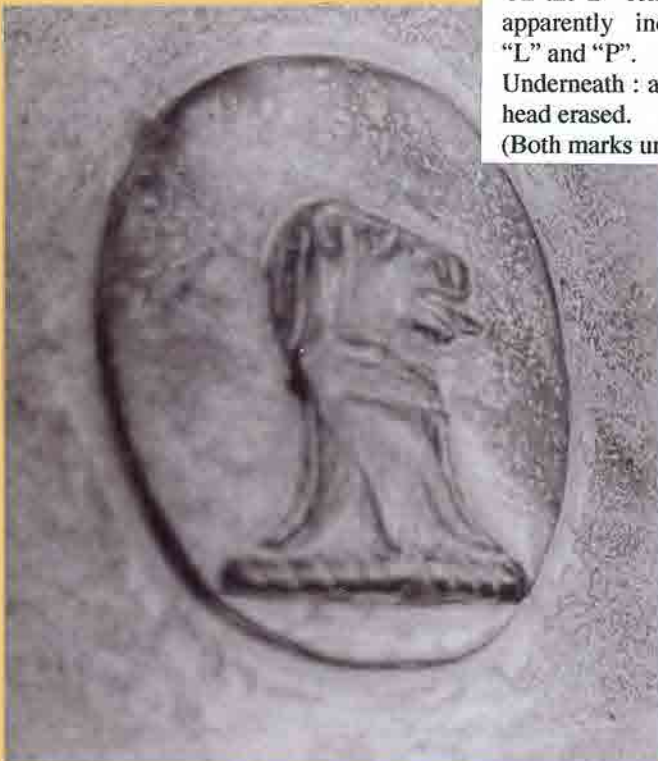
The following is a transcription from Mendel Peterson's field notes. (Editor)

Venetian bronze gun.
Bore: 6 1/4"
Length: 128"

On the first reinforce, the Lion of Saint-Marc.



On the 2nd reinforce, a monogram, apparently including the initials "L" and "P".
Underneath : a wreath with a lion's head erased.
(Both marks unidentified.)



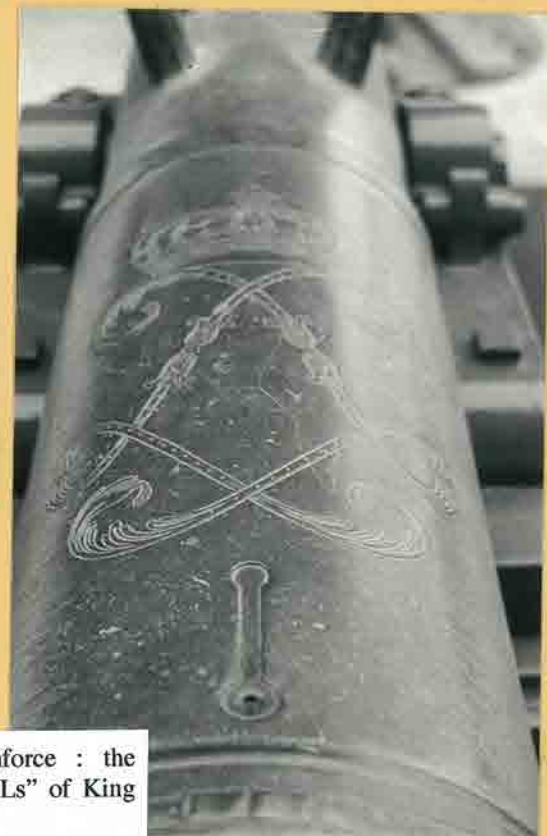


French bronze piece.
Calibre: 5 1/4"
Length: 142 1/2"



On the charging cylinder, the
"christian" name of the piece :
"L'AUDITEUR" (a military
magistrate).

(Continues →)



On the first reinforce : the
crowned crossed "Ls" of King
Louis XVI.

(Continues →)



Base ring bears the "certificate" of the piece: "PAR. I. FELIX IIII DARTEIN ECUYER COM^{RE} GENERAL DES FONTES DE STRASBOURG LE 9 NOV^{bre} 1782" (By I. Felix Dartein squire, General Commissioner to the Foundries of Strasbourg on November 9 1782).



Right trunnion bears:

"p
4112"

Left trunnion bears:

"N^o 25"

**MUSEUM OR CASTLE:
CHÂTEAU PRINCIER DE MONACO
PRINCE'S PALACE OF MONACO**

Location: The castle is built in the heart of the principality, on the "Rock of Monaco", a flat hilltop, 60 to 70 metres above the Mediterranean, which allowed the first occupiers, the Genoese, to control the protected harbour at its very foot. A strategic location which, by the way, had been recognized in ancient times and made good use of by the Phoenicians, the Greek and Roman seafarers.

Postal address: Château Princier de Monaco B.P. 518 — MC 98015 — Monaco Cedex

Telephone: ++377/93 25 18 31

Fax: Nil

Email: (for booking visits) visites@ppmc.mc

Website: www.palais.mc

Curator:

Contact person:

Services offered: A well-stocked bookshop (not in but in front of the Palace and fully separated).

Opening hours: The Palace Square and the surrounding park areas, the ramparts, etc., where most of the artillery pieces are displayed, are permanently accessible. The Court of Honour, inside the Palace, the Hercules and Mirror's Galleries and the rooms and State Apartments are open to visitors from March 29 to October 31 (10h-18h every day).

Recent catalogues and publications on the history of the building and its collections include:

Many brochures and books are available in the bookshop-souvenirs shop on the Palace Square, non-specially devoted to the artillery present at the castle. The official Historical Guide (70 pages and 150 photographs) is very good. It deals very briefly, however, with the Palace cannons and not too accurately.

Less touristic and more historical works on the history of Monaco are: Robert Jean-Baptiste, *Histoire de la Principauté de Monaco*, Collection *Que Sais-je*, Presses Universitaires Françaises, Paris, 1997; Reymond George et Dugand Jean-Edouard, *Monaco Antique*, les Belles Lettres, Paris, 1970; Novella René, *La Principauté de Monaco*, Editions Bonechi, Marseille, 2004.

History of the building: The tiny city-state of Monaco, on the Mediterranean, about half way between Nice and Menton (Italian border), has been ruled by the Lords and, later, the Princes of Monaco since 1297, when the first of the Grimaldis, François Grimaldi, seized the castle from its Genoese garrison (an episode of the feud between the Guelphs and the Ghibellines, in the

Republic of Genoa). The independence of this small sovereign state was recognized over the following centuries by the King of France and the German Emperor (which, at the time, meant Charles V, also King of Spain).

Originally built by the Genoese (in 1191) as a fortress of the Republic of Genoa protecting a fine, conveniently located harbour, half way to Marseilles and further Mediterranean harbours. The fortress, which was besieged and heavily damaged several times but never re-conquered by the Genoese, evolved from the 16th century on, into a fortified residential palace. The “old palace” with its four towers connected by a defensive wall is still extant, but it is hardly visible behind the new constructions, which transformed the original fort into what looks like a Renaissance palace with loggias, etc.

History of the museum and its collections: The galleries, rooms and state apartments which are, in part, accessible to the general public display a quantity of art treasures of all kinds, which are a tribute to the power, the wealth and the aristocratic pre-eminence in Europe of the successive Lords and Princes, including their present day Highnesses Serenissimes.

As for the collection of artillery now present on the rock, they are relatively modern if we consider that pieces of artillery, according to the archives of Monaco, were already defending the ramparts around 1450. Today, most of the finest bronze cannons are lined at the foot of the Castle’s main building on the Palace Square, on the rampart and on the fortified platform that looks towards the north-east. The cannons are mostly French and English. There are two pieces cast in Venice.

Although Monaco once had its own cannon foundry (with a powder workshop next door), it seems that none of the locally made guns are on display (2013).

THE EDITOR'S ALBUM

ORDNANCE PIECES

**MONACO
(2013)**

**PALAIS PRINCIER
(THE PRINCE'S PALACE)**



The Renaissance palace, which was once a fortified castle, then the Grimaldi fortress, now the home of Their Serene Highnesses, the Prince and Princess of Monaco.



The palace records seem to establish that the fortress possessed its first artillery pieces in the middle of the 15th century. Among the weapons conserved today, most date from the 18th and 19th centuries. The finest guns are on display at the Palace Square, others are at the Serravalle Bastion, at the north-west angle of the fortress rampart, on the terrace of the look-out post above the entrance, to the side palace section (the so-called "Petit Quartier"), on the Major's Terrace, which overlooks the north-east approaches, and in the Napoleonic Museum.



An impressive row of bronze guns, with ample ammunition, aimed at the Palace square.



The well-guarded Door of Honor of the Grimaldi Palace

One of the two Venetian guns on the Palace square, formerly the "Place d'Armes".

Bore: 6 1/2". Length: 130 1/2"

(The initials "LP" could possibly refer to Philip Latterellus, who was a noted decorator of guns in Venice in the last quarter of the 18th century, apparently the right period for the cannon.)

(Editor)



On the base ring :

"N° G6* Mp 2622 K 3"
including possibly a later indication of the weight in the metric system.

On the first reinforce : the winged Lion of Saint-Marc, holding the Gospel in its paw.
On the second reinforce : the back to back initials "P L" and, underneath, the head of a griffin.





French 16-pounder of King Louis XIV. In the standardized Vallière System, the Medusa on the breech mouldings and the flames identify the calibre of the piece, at first sight for the benefit of the gunner (and today, of the underwater archaeologists).

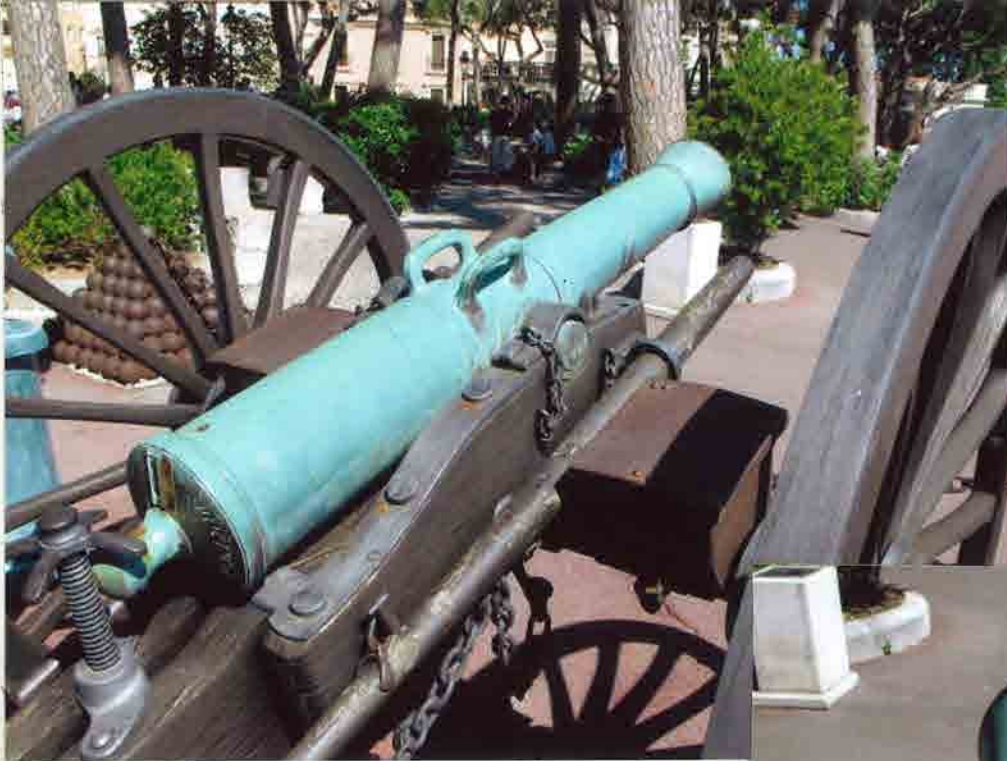


French, bronze cannon of the reign of King Louis XVI.

Calibre: 13.2cm. Length: 3.58 m. Bears on the first reinforce the crowned crossed "L" of King Louis XVI and, on the chase, its name: "L'AUDITEUR".

The base ring bears: "PAR. I. FELIX. IIII. DARTEIN. ECUYER COMM^{RE} GENERAL DES FONTES DE STRASBOURG. LE 9 N^{bre} 1782" →





French bronze gun of the Revolutionary period.
The chase bears the engraved initials: "A.N." for "Assemblée Nationale" and, on a scroll, the motto "LIBERTE EGALITE".
The left trunnion bears the number "393".
The back of the breech bears the name of the founders: "PERRIER FRERES".
The gun is shown on a land carriage, to which it was obviously not destined and that features some kind of a screw elevating device.





Row of seven iron guns (six English pieces, one French gun) neatly displayed on the old South rampart of the former Grimaldi fortress dominate today, the old Genoese anchorage (presently transformed into a marina). All are exhibited on the same, naval type (modern) carriages specially made in Toulon, apparently for display purposes. (As noted by MLP, these cast iron early 19th century British cannons, were popularly called “thunderers”.)





British thunderer. Calibre: 5in.; length: 154in.
It bears the engraved initials "MP" surmounted by a star-like double cross (eight branches) on the first reinforce and, on the second reinforce, the crowned initials of George Rex with the figure "2" (George II of Hanover reigned from 1727 to 1760). Just above the vent hole is an indication of the weight: "28-3-7".



The same gun.



On the second reinforce: "GR 2" (for King George II).

This English-made piece, as several others in the same battery, does not bear the engraved broad arrow. This shows that these cannons were made in England for export and never passed the proof of the Royal Artillery or the Royal Navy, and so were never used by the English Army or Navy.



Near the foot of the "Sainte-Marie Tower", on a small defensive platform overlooking North and East, are a bronze mortar and a bronze howitzer, both cast by Dartein in Strasbourg.



The heavy suspended Dartein mortar is dated ? of September 1769. It bears the initial "G" between the trunnions. It has a single handle and, above, features the almost erased crossed "Ls" of King Louis XVI. The right trunnion bears :
"P
2062"
And the left trunnion bears : "N 10"



Bronze howitzer bears, on the base ring, the signature "DARTEIN" and the date "MARS 1777". The crowned crossed "Ls" of Louis XVI (the crown is fleur-de-lised) are engraved between the handles and the mouth. The right trunnion bears:
"P
1019"
The left trunnion bears: "N 13".

MENDEL L. PETERSON
LARGE GREEN ALBUM

ITALY

UPDATED WITH THE CORRESPONDING
EDITOR'S ALBUM

MENDEL L. PETERSON LGAs

ITALY

In the spring of 1969, MLP made his first tour of the Italian artillery and army museums. The occasion was a convention organised in Naples, in the Filangieri Museum, by the “Centro Internazionale di Studi Numismatici”. Numismatics was another of his interests. During the same voyage, which will take him from the museums of Naples, Rome, Venice and Florence, he will attend another convention, a convention of military history specialists and army museums curators in which, as his field notes clearly indicate, he will meet and make friends with the directors of the Vienna Army Museum, of the Copenhagen museum, of the Stockholm Army Museum and of the Tower of London, with at least one Swiss curator, and apparently, curators from Turin, the Netherlands, Belgium and France. These cordial, early contacts will help him considerably, during his later research.

To be kept in mind about Italy

“Italy”, as a unified political entity (capital city Rome) existed only from 1870 on.

In brief, during most of the “Age of Artillery”, the peninsula consisted of (from south to north) the Kingdom of the Two Sicilies (under Spanish rule, Naples), the Papal States (Rome and much of the central part of the peninsula from sea to sea), the Republic of Florence, the Duchy of Modena, the Republic of Genoa, the Republic of Venice (“La Serenissima”), the Duchy of Milan (Spanish) and the Duchy of Savoy (Turin and the County of Nice).

All the rulers or governments in the peninsula did cast or purchased their made to order artillery.

TURIN – PART I

Turin Citadel

MUSEO STORICO NAZIONALE D'ARTIGLIERIA 1° (NATIONAL HISTORICAL ARTILLERY MUSEUM 1°)

This fabulous artillery museum is no longer exists. At the time of writing, no plans were being made for a new museum where such a unique collection could be exhibited. See editor's comments further on.

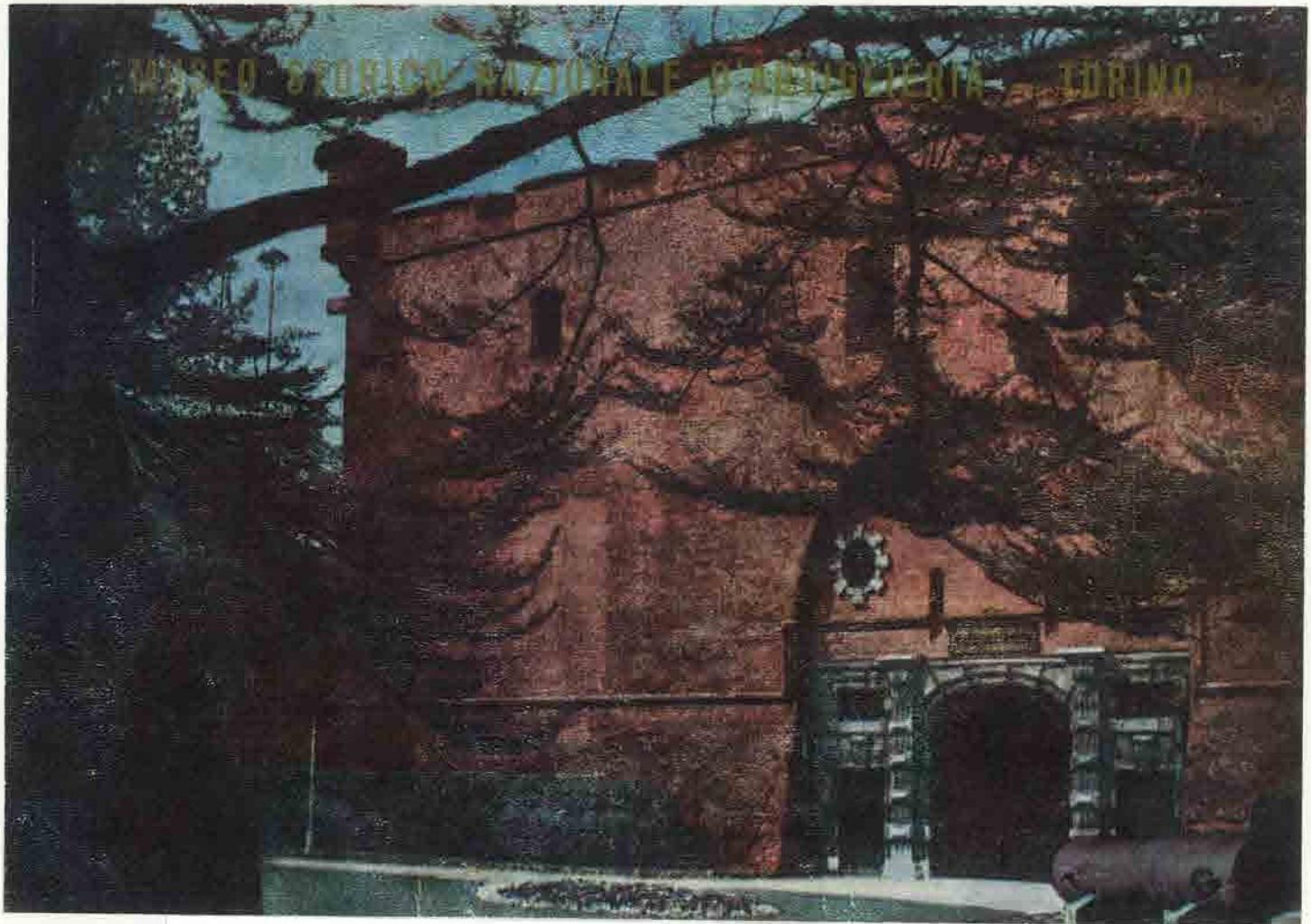
In July and August 1971, MLP made some 500 photographs in the museum. The following pages are a selection of what he considered as the most important pieces and details and are, as in so many other cases, a unique, irreplaceable testimony of important, no longer available, historical evidence. (The field notes of MLP concerning this museum are particularly clear, detailed and well ordered.)

MENDEL L. PETERSON LGA

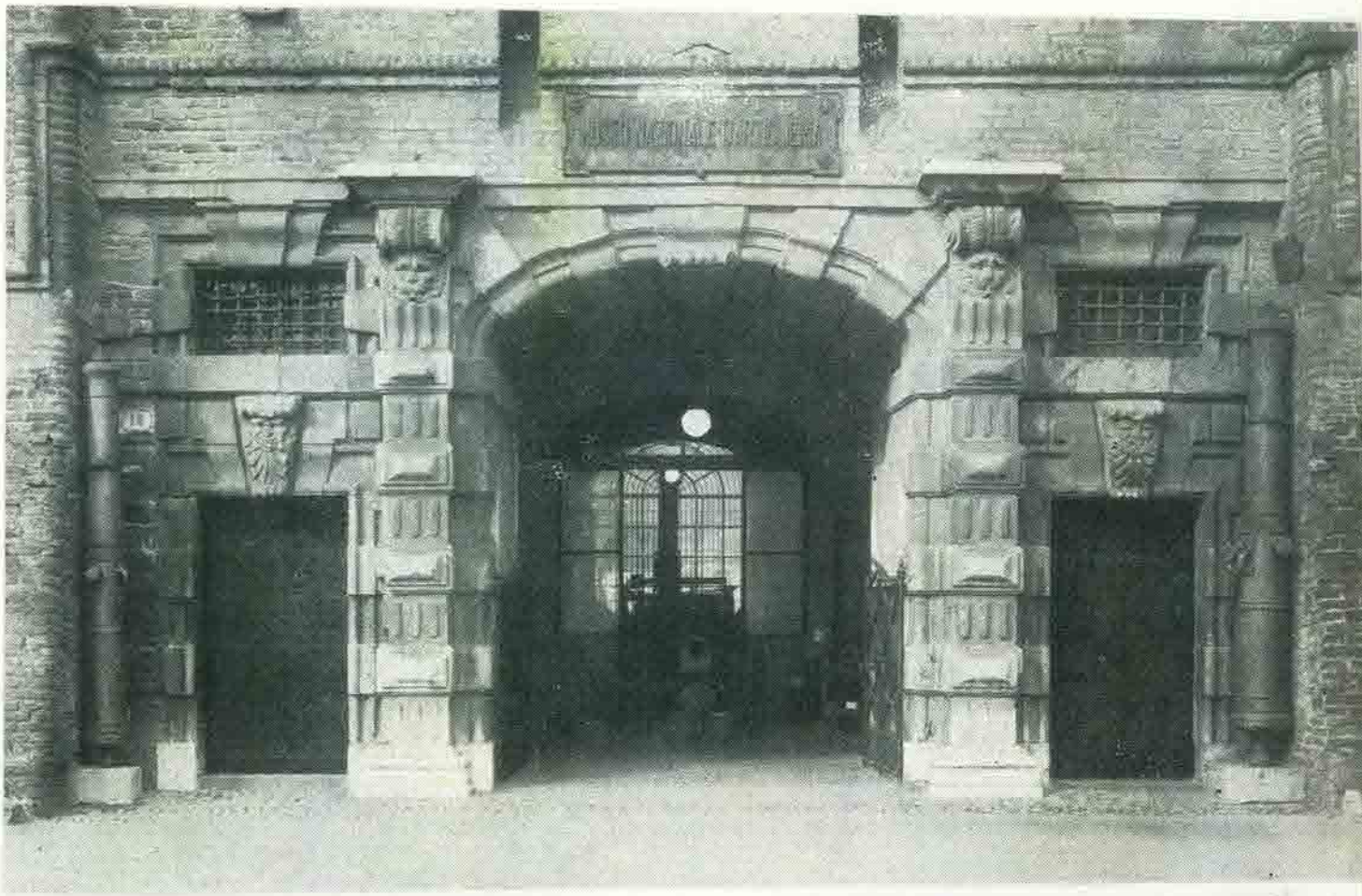
TURIN

**MUSEO STORICO NAZIONALE D'ARTIGLIERIA
(NATIONAL HISTORICAL ARTILLERY MUSEUM)**





The Citadel of Turin, built in the 16th century (under the Grand Duke Emanuele Filiberto of Savoy) has housed the National Historical Artillery Museum of Turin, since the later part of the 19th century.
The museum no longer exists.



The entrance to the Museo Storico Nazionale d'Artiglieria, Torino, as it was at the time of MLP's last visit in the late 1960s.



The entrance hall to the museum as MLP saw it in the 1960s.

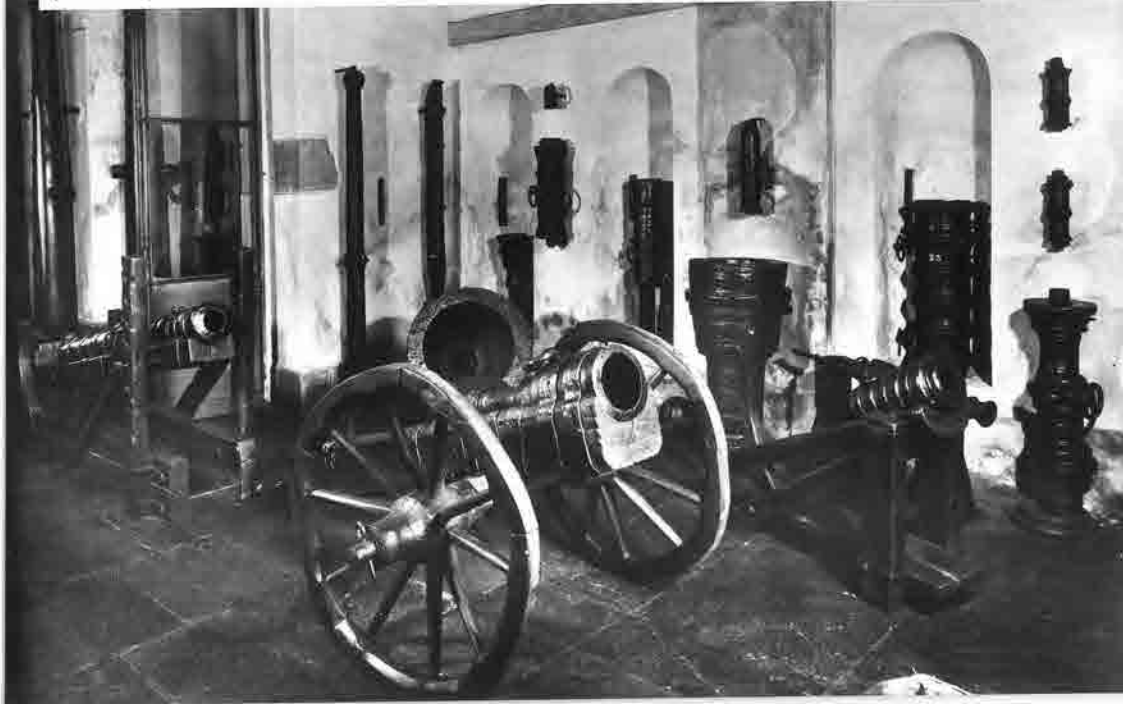


In the park in front of the "Cittadella" (that houses the National Historical Museum of Artillery Torino).

A huge Turkish piece of the 15th century, bronze bombard. Calibre: 70cm., length: 4.20m and weighs about 15,000 kilos. It was used to shoot stone balls at fortifications. This type of artillery was used by the Turks during the siege and conquest of Constantinople, which fell on May 29, 1453, marking the end of the Roman Oriental Empire.



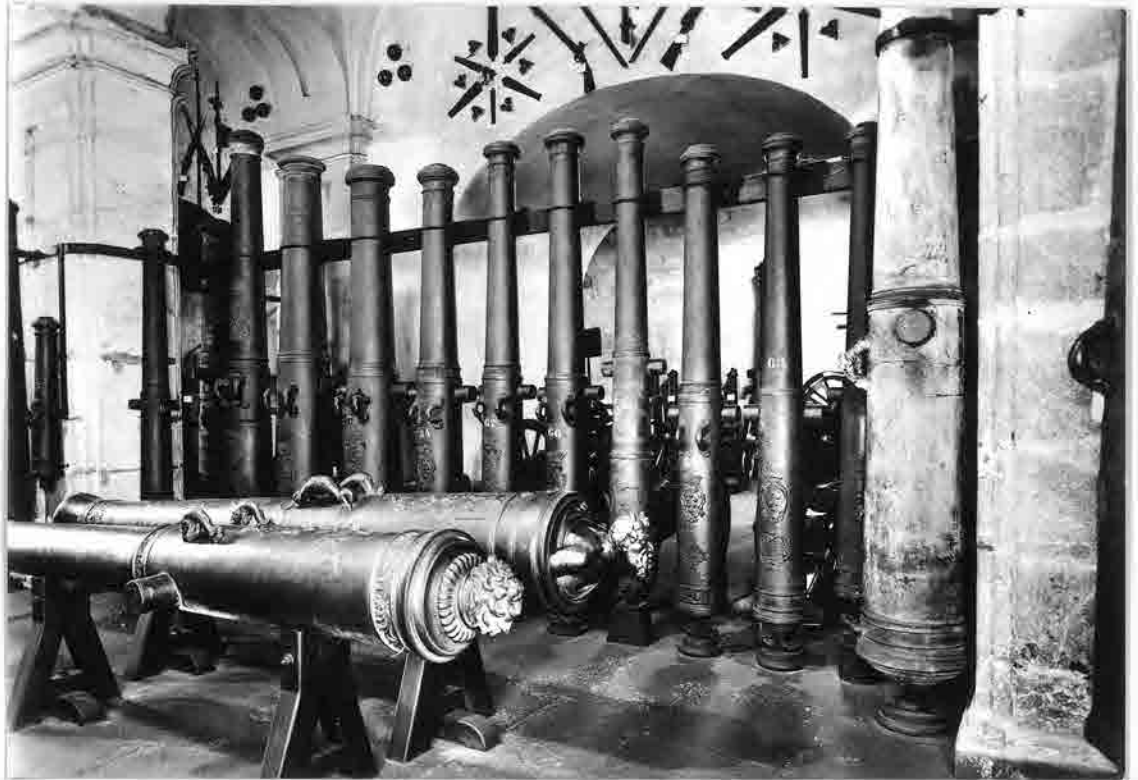
This and the 10 following photographs: @ Museo Nazionale d'Artiglieria – Torino (extinct).



In the entrance hall: Artillery pieces of the 14th and 15th century.



Culverin ("colubrina") cast in Venice in 1594 by Giulio Alberghetti. Abundantly decorated, it features on the chase the coats of arms of (from left to right): The Giustiniani of Venice, the Avogadro of Padua and the Donà dalle Rose (the Lady of the Rose).



In the longitudinal, central nave of the museum-fortress: Display of miscellaneous 18th century artillery.



Row of artillery pieces of the 17th century cast in and for the Grand-Duchy of Tuscany.



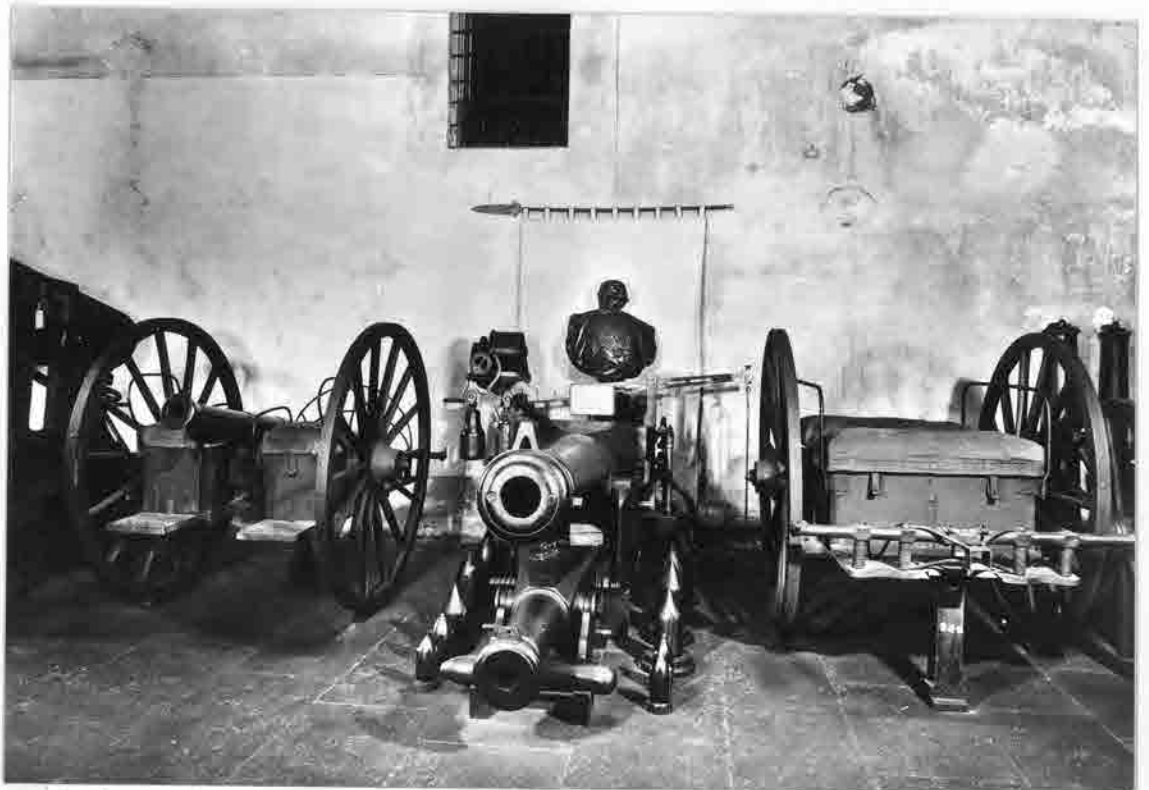
Row of bronze cannons, demi-cannons and mortars of the time of the Bourbon Kings of Naples and the Two Sicilies. 18th century.



The central, longitudinal nave: Group of 17th century bronze heavy artillery.



View of the transversal, west part of the museum's room. In the foreground, a quick firing field piece on a carriage "with protection" invented in 1875, by the then Captain Biancardi.



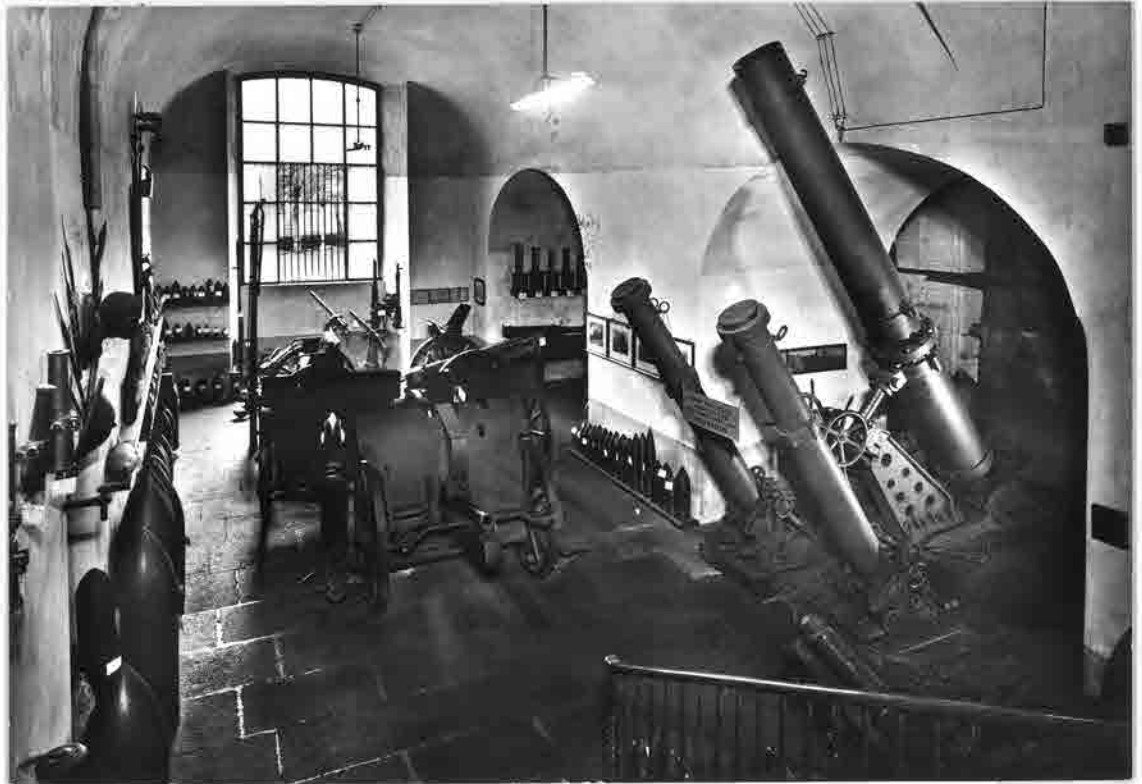
In the north part of the central, longitudinal nave: Bust of General Cavalli (19th century) with some of his main inventions: Breech-loading rifled canon, highly mobile artillery, also instruments to measure the resistance of the metals used in gun founding, etc.



20th century medium and large calibre artillery.



Medium and large calibre artillery pieces of the 20th century.



In the south part of the main nave: 20th century artillery and ammunition.



Left to right:

Italian "bombarda" of the 14th century, in wrought-iron, cast in one piece (a muzzle-loader). It is the oldest Italian bombard extant. It is of the type that is known to have been used by the Venetian in the summer of 1376, when they attacked Treviso. The piece is precisely described in the "Cronaca Trevisana". It was originally in the castle of Morro, (Iesi).

Tube of an old iron "bombarda", which has the engraved date 1405. The "mascolo" or breech-block is missing. (Comes from the city of Gradara (Pesaro).

Wrought-iron "bombardella" or "colubrina" of the 15th century. The oldest breech-loader in the museum. Calibre at the muzzle: 3.8cm.; calibre at the breech (for breech-block, 4.4cm.). Originally in the village of Iesi.

Turin # 5, p. 5 (8)

Wrought iron naval swivel
14th.-15th. cent.
Caliber 60 mm
Length 480 mm
Weight 40 Kg



Turin # 14, p. 14 (2)

Wrought iron "bombardella"
14th, 15th. centuries
Caliber 75 mm.
Length 400 mm.
On reproduced carriage



Turin #18, p. 17 (My Number 1)

Wrought iron bombard 14th.-15th.
cent. Caliber 520 mm

Length 1.43 meters

Weight 1085 Kg.



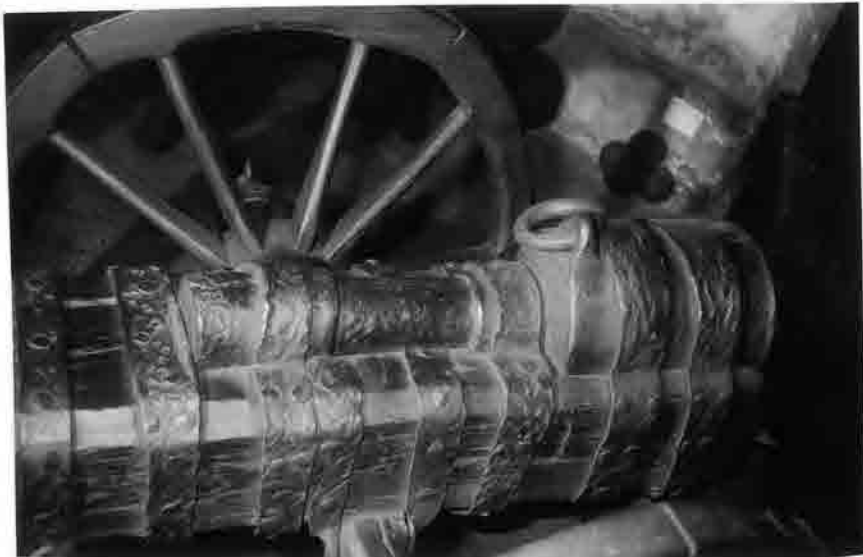
Turin #19, p. 18 (3)

Wrought iron bombard
15th. century
Caliber 358 mm
Length 1.07 meters
Weight 335 Kg.



Turin # 32, p. 31 (4)

Wrought Iron bombard
French
Caliber 180 mm
Length not given
Weight 730 Kg.



Turin # 34, p. 33 (7)

Wrought iron breech-loading "tedesca"

Caliber 110 mm

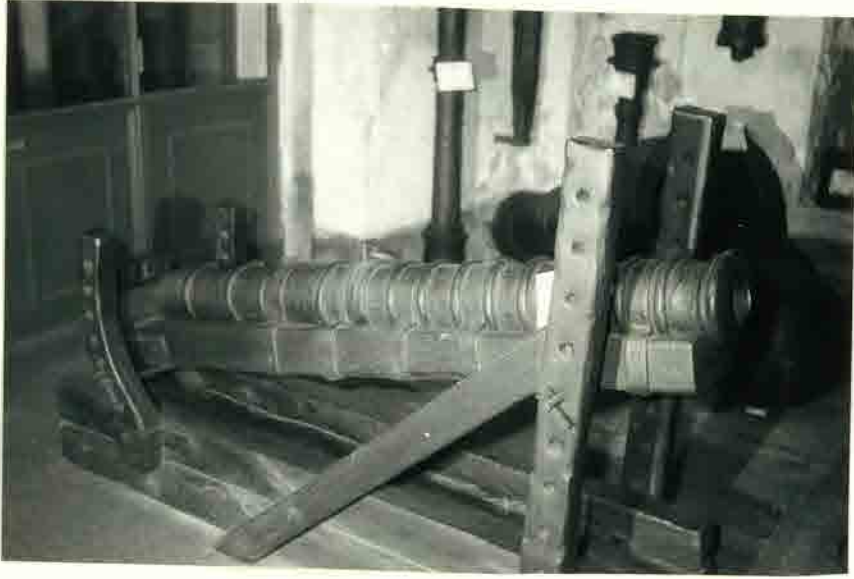
Length 99 mm

Weight 72 Kg



Turin #33 p. 34 (5)

Wrought iron gun
French - 15th. century
takes 1 kg. stone ball

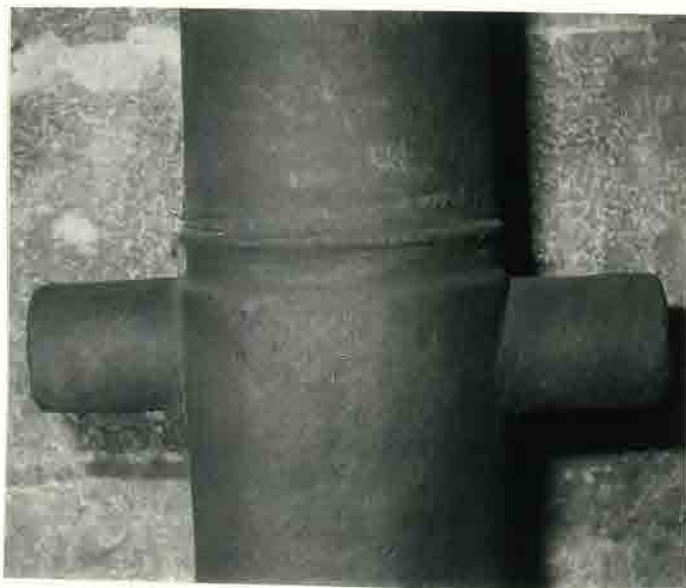


Turin # 36, p.49 (6)

Wrought iron breech-loading swivel
Italian- 16th. century
Caliber 35 mm
Length 1.55 meters
Weight 41 Kg.



Falcon, probably French *MADE*
Identified as Portuguese from
Somalia (French type breech)
16th. century, first quarter
Caliber 81 mm
Length 3 meters
Weight 432 Kg



Turin #42, p.35 (17)

French quarter-cannon

Cast 1520-25

Caliber 111 mm

Length 2.71 meters

Weight 980 Kg



Turin #43, p.36 (19)

Tuscan bronze campaign gun
cast 1537-8
Caliber 86 mm
Length 2.39 meters



Turin # 44, p. 37 (12)

Bronze cast in Venice for the
Duke of Urbino 1541

Founder- Alberghetto Alberghetti
Companion piece to # 45 but Unicorn
instead of dog in wreath



Bronze cast in Venice for the
Duke of Urbino in 1541
Founder- Alberghetto Alberghetti



Turin # 48, p. 4 (18)

French falcon cast in Parma

Signed "COLTURO G." 1553

Caliber 80 mm

Length 2.90 Meters

Weight 580 Kg



Turin #50 p. 42 (24)

Neapolitan bronze half-culverin
Cast by "IANIACOBO DE MOLFETTA" in
1557

Caliber 117 mm

Length 3.76 meters

Weight 1602 Kg





1969



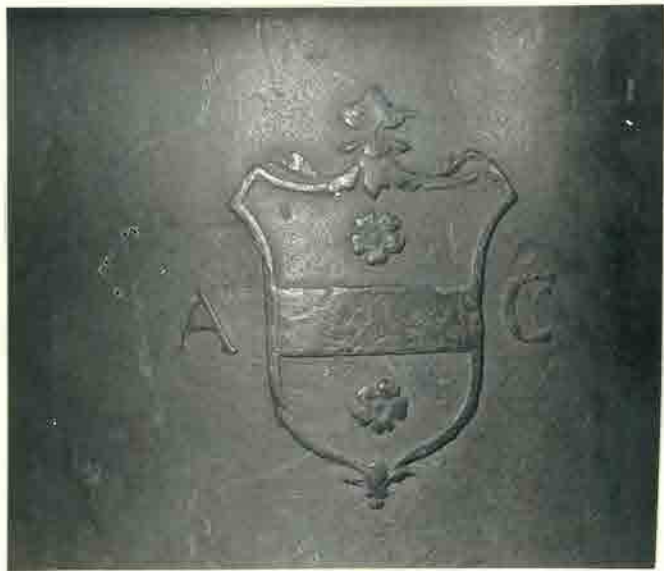
1969



1969

Turin # 51, p.43 (13)

Bronze quarter-cannon
Cast in Venice by Camilo Alberghetti
in 1560
Caliber 123 mm
Length 3.23 Meters
Weight 1210 Kg



Turin #53, p. 45 (11)

Bronze cast in Pesaro for the
Duke of Urbino, 1565

Founder-Annibale Borgognoni

Caliber 140 mm

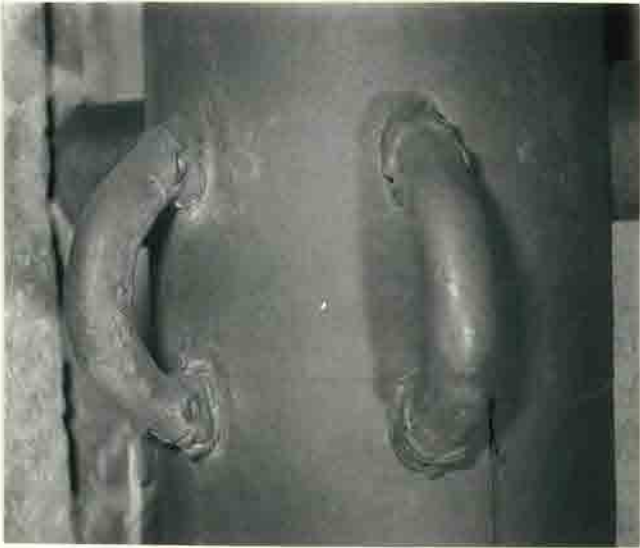
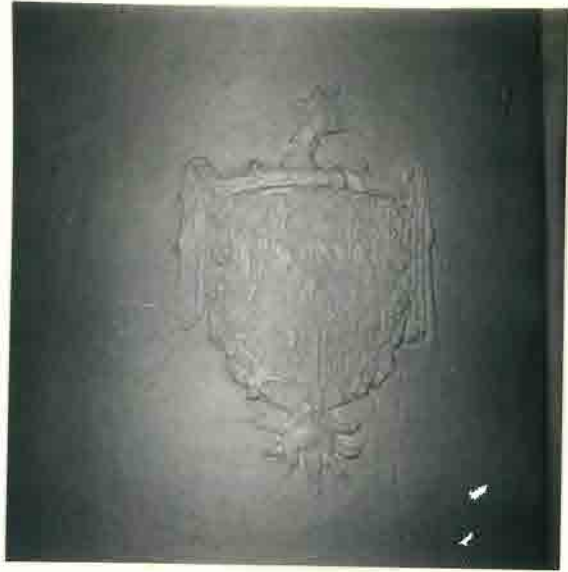
Length 3.15 Meters

Weight 172 Kg



Turin #54, p.46 (25)

Neapolitan bronze half-cannon
Signed; "SCARGIAPINO" , 1568
Caliber 110 mm
Length 3.19 meters
Weight 2050 Kg





1969

Turin # 49, p. 53 (14)

Bronze cast in Florence, 1574

Caliber 96 mm

Length 2.966 meters

Weight 968 Kg.

UNSIGNED



Turin # 56, p. 54 (15)

Bronze cast in Florence by **GIULIANO MORADO**
in 1587

Caliber 96 mm

Length 3.19 meters

Weight 898 Kg.



Turin # 59, p. 55 (16)

Bronze cast in Florence by
"GIOV. BATTISTA MORANDI" 1587-1600
Caliber 100 mm
Length 3.19 Meters



Turin #58, p.56 (21)

Venetian bronze culverin

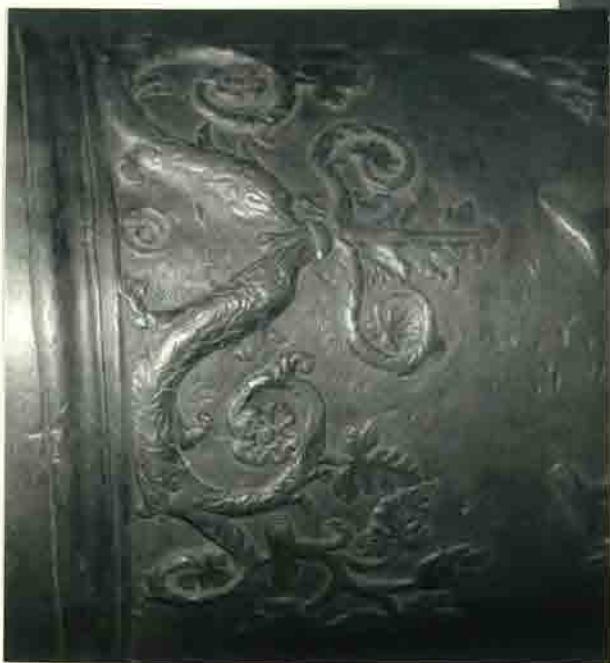
Cast in Venice, 1594 by

"EMILIO ALBERGHETTI"

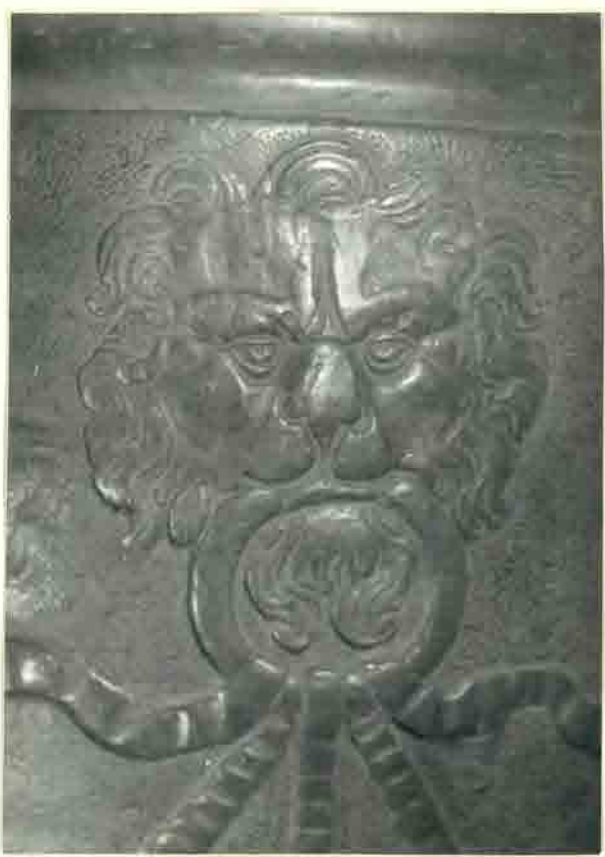
Caliber 132 mm

Length 4.20 meters

Weight 2474 Kg











Bronze Neapolitan half-cannon
signed "OPUS XPOPHORI NEAPOLITANI"
dated 1594
Caliber 134 mm
Length 3.95 meters
Weight 2232 Kg





1969



1969



1969

Turin #84, p. 58 (20)

Venetian bronze seige cannon
late 16th. early 17th. cent.
Caliber 173 mm
Length 3.33 meters
Weight 2582 Kg



Half-cannon cast in Naples
in 1600, no maker's signature
Caliber 134 mm
Length 2.98 meters
Weight 1986 Kg



Turin #41, p. 60 (10)

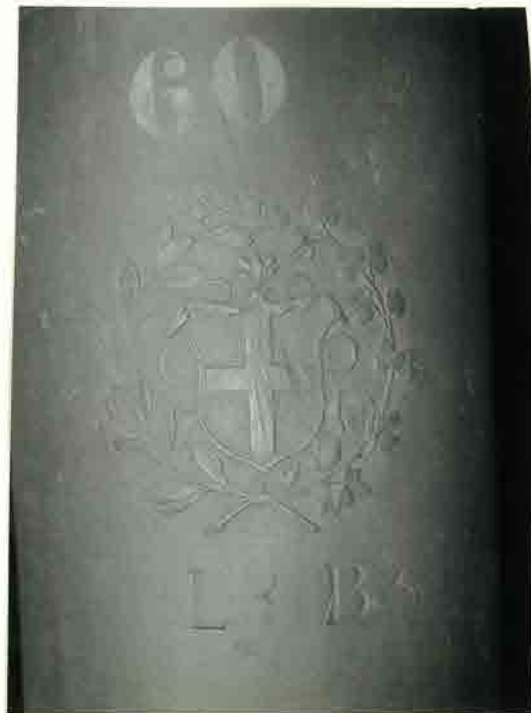
Venetian bronze half-cannon

Signed: IOCOBUS CONTI"

Caliber 125 mm

Length 2.9 meters

Weight 1175 Kg



"Cannon de Compaigna"
Cast in Florence by "IONES ALBERG VENETVS"
in 1610
Caliber 95 mm
Length 2.80 meters
Weight 628 Kg



Turin #69,p.62 (48)

Culverine cast in Messina (Sicily) in 1610
by GIO. MARIA CUPITO DE MESSINA

Caliber 138 mm

Length 4.42 meters

Weight 2700 Kg



Turin #70, p.63 (28)

Bronze sacre cast in Florence by
Cosimo Cenni in 1615
Caliber 97 mm
Length 2.68 meters
Weight 606 Kg



Turin # 71, p.64 (27)

Bronze falcon cast in Florence
by "COSIMO CENNI" in 1619
Caliber 75 mm
Length 2.48 meters
Weight 460 Kg





1969

Tuscan bronze half-cannon
cast in 1633 by "COSIMO CENNI", Florence
Caliber 130 mm
Length 3.10 meters
Weight 1532 Kg





#18, P.70 (CONT.)



Bronze sacre cast by
COSIMO CENNI in Florence
in 1635

Caliber 96 mm
Length 2.74 meters
Weight 593 Kg





1969

Quarter-cannon cast in 1637
by COSIMO CENNI
Caliber 100 mm
Length 2.45 meters
Weight 816 Kg.



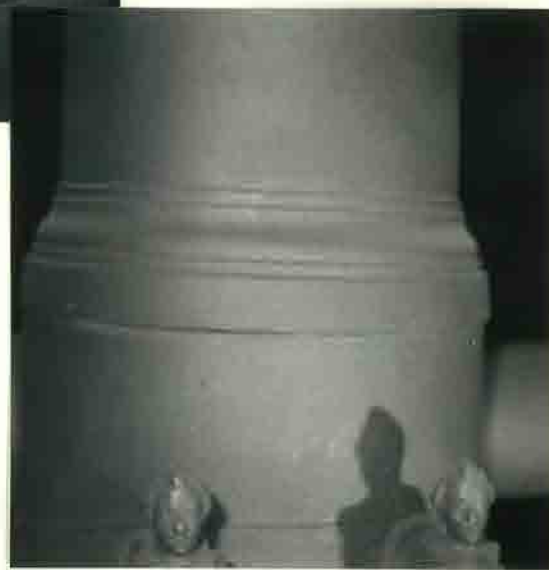
Turin # 82, p. 77 (35)

"Falcon leggero da montagna"
Cast in Florence by GOSIMO CENNI
in 1643
Caliber 76 mm
Length 1.26 meters
Weight 147 Kg



Turin # 83, p. 78 (32)

Half-cannon cast in Florence
by GIOVANNI MARIA CENNI, 1694
Caliber 149 mm
Length 2.97 meters
Weight 1704 Kg.





1969



1969



1969



1969

Turin # 104, p. 79 (62)

Field piece cast in Florence by
GIOVANNI MARIA CENNI in 1647
Caliber 61 mm
Length 1.77 meters
Weight 187 Kg



CONTINUED IN

TURIN – PART II

Turin Citadel

**MUSEO STORICO NAZIONALE D'ARTIGLIERIA
(NATIONAL HISTORICAL ARTILLERY MUSEUM)**

Turin # 72, p. 80 (49)

Falcon di Campagna
Cast in Florence in 1649
by "ION. MARINAE CENNI"
Caliber 71mm,
Length 1.91 meters
Weight 269 Kg.



Turin #74, p. 81 (33)

Half-cannon cast in Florence
by (no signature) 1627-70
Caliber 142 mm
Length 3.15 meters
Weight 2100 Kg



Turin #92, p. 81 (34)

French quarter-cannon signed
BRISACK dated 1686
Caliber 120 mm
Length 3.44 meters
Weight 1538 Kg



1968



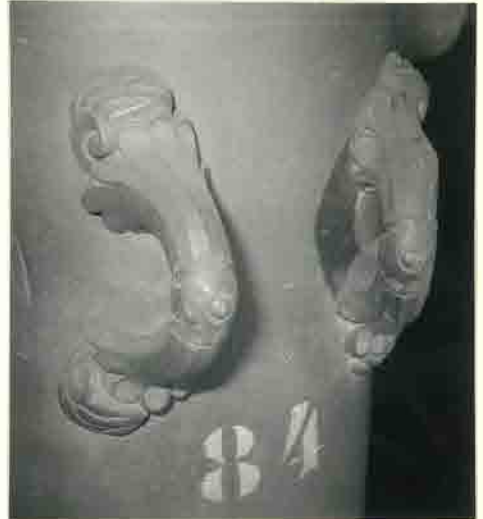


Turin # 86, p. 82 (45)

Half-cannon cast in Naples in 1650
by Joseph and Santoli IORDANI
Caliber 139 mm
Length 3.29 meters
Weight 2116 Kg



Quarter-cannon cast in Florence
by IONES MARIA CENNI in 1657
Caliber 124 mm
Length 2.89 meters
Weight 1101 Kg



Turin #90,p.86 (29)

"Cannon de Campagna"
Cast in Florence by
GIOVANNI MARIA CENNI in 1670
Caliber 95 mm
Length 2.65 meters
Weight 693 Kg





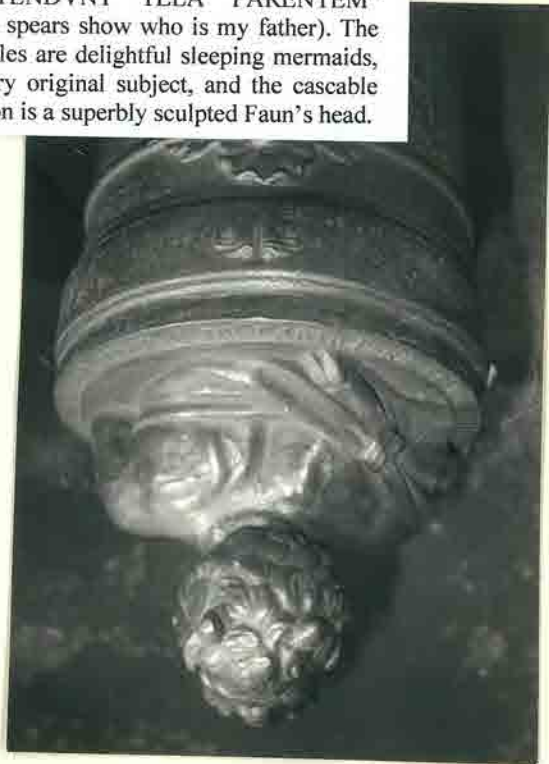
Quarter-cannon cast in Naples
by "IOSEPHI JORDANI" 1675
Caliber 117 mm, Length 3 meters Wt. 1422 Kg





Bronze. French. A naval cannon. Cast by Jean Baude at Toulon in 1677. Cal. 15.5cm, L. 3.62m, W. 2700kgs. (Formerly in Turin)

Bears the portrait, over an anchor, of the then very young Louis Comte de Vermandois, Admiral de France, and the date 1677. It is surmounted by a bunch of lighenings and flames. On top: "OSTENDVNT TELA PARENTEM" (The spears show who is my father). The handles are delightful sleeping mermaids, a very original subject, and the cascable button is a superbly sculpted Faun's head.





Turin # 93, p. 90 (47)

Canon de Muro (culverine)
Cast in Naples in 1692 by
DOMINICO ASTARITA
Caliber 127 mm.
Length 4.13 meters
Weight 2599 Kg



Y EL CAJÓN DE LA ART.
D. MARCIO ORILLA EN OVE
DE ABILANO

SE FUNDIÓ
SIENDO VIRREY Y CAP. GEN. DEL
REYNO EL EX.º SENOR CONDE DE
SAN ESTEBAN



Turin #95, p.91 (46)

Culverine cast in Naples in 1693

by DOMENICO ASTARITA

Caliber 135 mm, L. 4.15 meters Wt. 2757 Kg.





Venetian half-cannon
cast in 1667 by "CARLO ALBERGHETTI"
Caliber 124 mm
Length 2.94 meters
Weight-not given



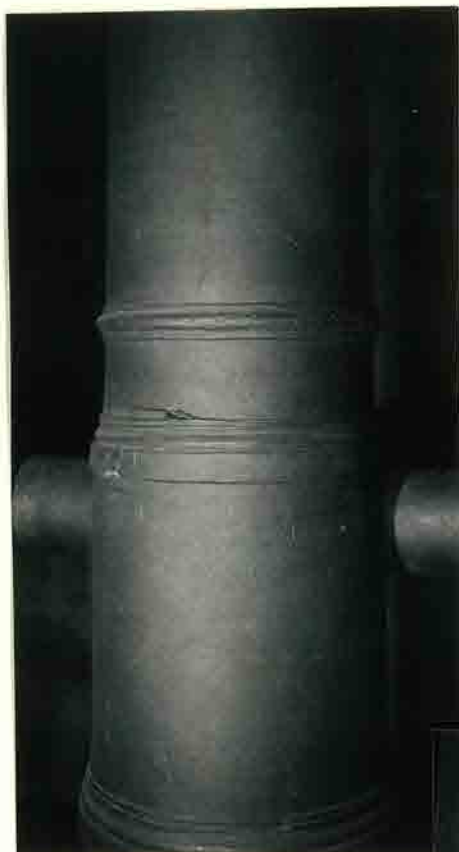
Turin # 96, p.92 (42)

Half-cannon cast in Venice
by "CARLO ALBERGHETTI" 1699
Caliber 141 mm
Length 3.10 meters
Weight 1992 Kg



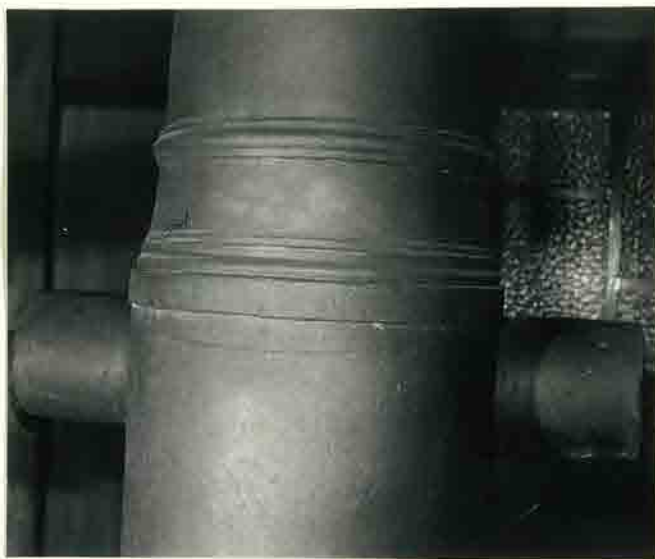
Turin #101, p.93 (41)

Half-cannon cast in Venice
by "GIUSTO EMILIO ALBERSHETTI" 1670
Caliber 123 mm
Length 2.96 meters
Weight 1558 Kg



Turin #102, p. 94 (43)

Half-cannon cast in Venice
by "CARLO ALBERGHETTI" 1699
Caliber 141 mm
Length 3.10 meters
Weight 1992 Kg



Turin # 110, p. 98, (60)

Half-cannon cast in Genoa in 1706
by IOCABUS ROCCA
Caliber 152 mm
Length 3.60 meters
Weight 2930 Kg





Turin # 111, p. 99 (58)

Half-cannon cast in Genoa in 1710

by IACOBUS ROCCA

Caliber 153 mm

Length 3.59 meters

Weight 2764 Kg





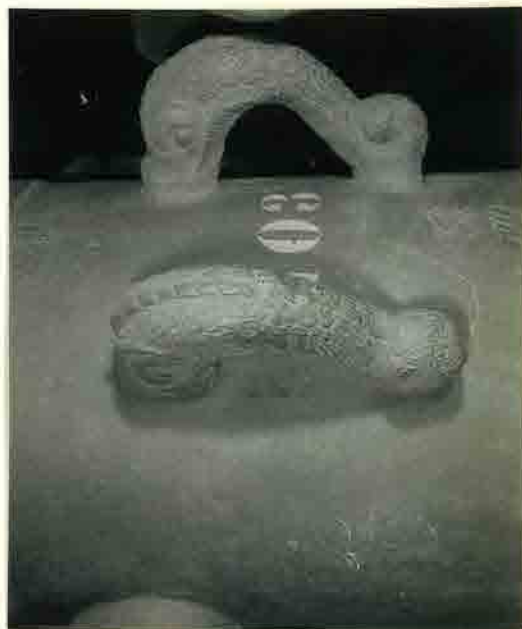
Turin #114, p. 102 (54)

Half-cannon cast at Palermo in 1718
by VINCENZO CASTROMOVO
Caliber 156 mm
Length 3.51 meters
Weight 3118 Kg



Turin # 115, p. 103 (55)

Half-cannon cast at Palermo in 1723
by VINCENZO CASTRONOVO
Caliber 155 mm
Length 3.58 meters
Weight 2970 Kg



Turin #128, p.116 (53)

Half-cannon cast in Naples in 1741

by FRANCESCO CASTRONOVO

Caliber 122 mm Length 3.19 meters weight 1785 Kg





Turin #132 p. 120 (51)

Half-cannon cast in Naples in 1745
by "GIROLAMO CASTRONOVO"
Caliber 136 mm
Length 3.20 meters
Weight 1969 Kg



Turin #139, p. 127 (57)

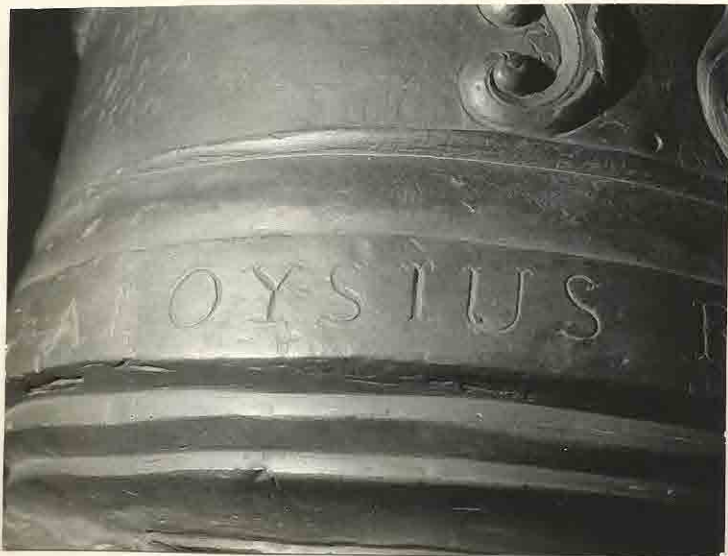
Half-cannon cast at Genoa in 1747
by ALOYXIVS ROCCA
Caliber 155 mm
Length 3.60 meters
Weight 3289 Kg



Half-cannon cast in Genoa in 1747
by ALOYSIUS ROCCA
Caliber 154 mm
Length 3.57 meters
Weight 3412 Kg.



Bust of Vincenzo Giustiniani, Marques of Bassano.



149A/II.90



Turin # 141, p. 129 (59)

Half-cannon cast in Florence in 1750

by ANDREA MORENI E FIGLI

Caliber 152 mm

Length 3.62 meters

Weight 3200 Kg





Turin #143, p.131 (61)

Small bronze naval gun cast in Naples
in 1754 by D. HEIR^{VS} CASTRONOVO
Caliber 81 mm
Length 1.27 meters
Weight 155 Kg



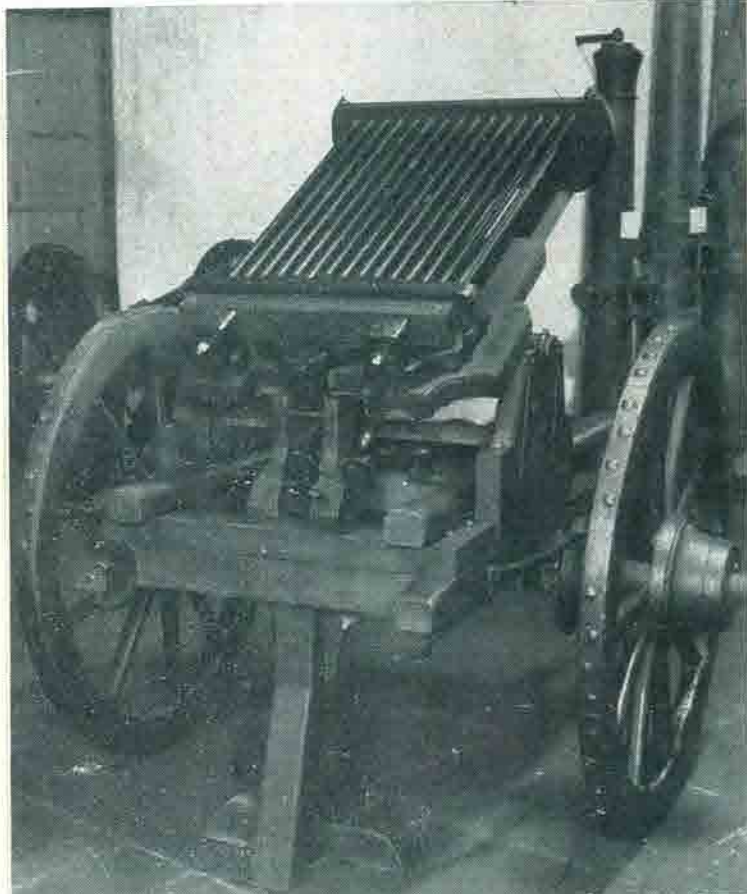


Turin # 148 p. 138 (52)

Half-cannon cast in Naples in 1757
by CASTRONOVO
Caliber 156 mm
Length 3.58 meters
Weight 2973 Kg



P. 263 — Organo piemontese a 30 canne del S. Ten. d'Art. Doria del Marò 1775



P. 89 — Smeriglio piemontese del XVII sec. su affusto a « collo d'oca ».

TURIN – PART II

Turin Citadel

**MUSEO STORICO NAZIONALE D'ARTIGLIERIA
(NATIONAL HISTORICAL ARTILLERY MUSEUM)**

**Cannons in Italy
2013**



EDITOR'S ALBUM

TURIN

**MUSEO STORICO NAZIONALE D'ARTIGLIERIA
(NATIONAL HISTORICAL ARTILLERY MUSEUM)**

**MUSEUM AND FORT:
MUSEO STORICO NAZIONALE D'ARTIGLIERIA, TORINO
NATIONAL HISTORICAL ARTILLERY MUSEUM, TURIN**

Location: In culverin range of Piazza San Carlo, in central Turin.
Postal address: Museo Storico Nazionale d'Artiglieria — Corso Galileo Ferraris — 10121 Turin — Italy
Telephone: ++39/011 562 92 23
Fax: —
Email: info@artiglieria.org
Website: www.artiglieria.org
Curator: —
Contact person: “Associazione Amici del Museo Storico Nazionale d'Artiglieria”, which rules the museum (President: Generale C.A. Luigi Stefani; Secretary: Dott. Giancarlo Melano)
Tel. contact person: ++39/011 560 33 152
Services offered: A library. (Temporarily inaccessible 2013) Keeps documents, publications and iconographical collections, about military history in general and artillery in particular.
Opening hours: Closed for conservation and restoration works since 2010. Still closed at the time of publishing (2013).

Recent catalogues and publications on the history of the building and its collections include: —

History of the building: The museum is located in the old gatehouse of the ancient citadel of Turin, the only remains of the fortifications built in 1564 on the orders of Emanuele Filiberto of Savoy (architect Francesco Pacciotto).

History of the museum and its collections: The collection was assembled in 1731, by King Carlo-Emanuele III of Sardinia, in order to support the training of its young army officers. It was first based at the “Scuola di Applicazione d'Arma” (Weapons Application School). It was dispersed in 1798, during the French occupation, and reconstituted in 1842 by King Alberto. In the end of the 19th century, the collection was transferred to the “Maschio della Citadella” (the Citadel's Keep), its present place. The museum displays weapons of all kinds, from Prehistory to present day) and from all over the world.



2010 – “2011” – 2013 - ... (?)





The centuries, old massive building of the Turin "Cittadella", the traditional house of the National Artillery Museum as it was in 2010-2012 during heavy stabilisation and rehabilitation works.

At that time, the museum had closed down and plans as to the former use of the building were still uncertain, including the possible use of some of the space for a sampling of the former collection, one of the most important ones in the world. The series of photographs that follow, made by MLP in the late 1960s, is therefore an irreplaceable document (as much of his work is).

**OTHER MUSEUMS IN TURIN
NOT VISITED BY MLP**

**ARMERIA REALE
or
REAL ARMERIA ANTICA**

EDITOR'S ALBUM

TURIN

**ARMERIA REALE
ROYAL ARMOURY**

and

**MUSEO MADAMA
MADAMA MUSEUM**



ARMERIA REALE

ARMERIA REALE

FONDAZIONE ICGT



MUSEUM / PALACE:
ARMERIA REALE, TORINO
ROYAL ARMOURY, TURIN

Location: In the right wing of the Palazzo Reale, in front of the Palazzo Madama, occupying the “Rotunda” and the “Galleria Beaumont”.

Postal address: Armeria Reale — Piazza Castello, 191 — 10122 Turin — Italy

Telephone: ++39/011 54 38 89

Fax: ++39/011 51 80 63

Email: armeriareale@artito.arti.beniculturali.it

Website: www.artito.arti.beniculturali.it

Curator: Dtt. Guerricci.

Contact person:

Tel. contact person: ++39/011 56 41 729 (information)

Services offered:

Opening hours: Tuesday to Sunday: 8h30-19h30. Closed on Mondays.

Recent catalogues and publications on the history of the building and its collections include: Venturoli Paolo, *L'Armeria Reale di Torino, Guida breve*, Torino, 2001.

History of the building: The Palazzo Reale in Turin was the palace of the House of Savoy. Its present architecture is the result of the modernization works ordered by Christine Marie de France (1606-1663), nicknamed “Madama Reale”. The “Rotonda”, the first room of the museum, was designed by architect Pelagio Pelagi. It is built in the characteristic Pelagi post-Empire style. It is not round but it replaced a circular room that connected three palaces at this point, hence its name. The large “Beaumont Gallery”, a splendid baroque interior, dates from 1733. Its first purpose was to link the main palace with the “Palazzo Madama”. It is the work of Filippo Juvarra. The gallery was named Beaumont after the painter of the ceiling. The large staircase at the entrance is by Benedetto Alfieri.

History of the museum and its collections: The museum was founded in 1833, under the name of “Armeria Reale Antica e Moderna di S. M. Carlo Alberto”. It was opened to the public in 1837. The collections include: 1) Prehistoric and protohistoric weapons; 2) Antique weapons and armours and modern weapons; 3) Models and various items having belonged to the House of the kings and princes of Savoy, from King Carlo Alberto to Victor Emmanuel III, trophies from the War of Independence and the unification of Italy, as well as oriental and exotic weapons, memorabilia from the Colonial Wars and Napoleonic treasures.

MUSEO MADAMA



The very fine, Museo Madama, in the Palazzo Madama, in the centre of Turin, holds no cannons in its collections but keeps a charming casket, for keeping military decorations, ornamented with a piece of ordnance and associated artillery items, dating of a period too little studied by scholars, the late mythological period in Piedmont.

By Luigi Prinotto – 1730 – Ebony and rosewood, brass, ivory and mother of pearl. (Detail of the lid).

MENDEL L. PETERSON LGA

NAPLES

Contain:

**MUSEO SANT MARTIN
(SAINT MARTIN MUSEUM)**

**MUSEO FILANGIERI
(FILANGIERI MUSEUM)**

**MUSEO CAPO DI MONTE
(CAPO DI MONTE MUSEUM)**

(There is no LGA for Capo di Monte, but only one brief field note stating that photographs have been requested from the Director of 1 mortar and 7 cannon models. These have not been found)

**MUSEO CASTEL ANGELINO
(MUSEUM OF THE CASTLE OF THE ANGELS)**

(The embryonic LGA begun by MLP for Castle Angelino consists only of architectural photographs, photographs of the impressive sculpted brass door, etc. Also photographs of heaps of cannon balls, but the photographs of the “bronze tube with a fleur-de-lis on the cascabel (may be French, unsigned, bore 9cm., probably 17th century)” have not been found.

MENDEL L. PETERSON LGA

NAPLES

**MUSEO SANT MARTIN
(SAINT MARTIN MUSEUM)**

NAPLES
MUSEO ST. MARTIN



Naples # 1

S. Martin

Bronze breech-loading Swivel

a petriero

dredged from Naples harbor May, 1921

Caliber 27cm Length (oa) 147 cm

17th. century

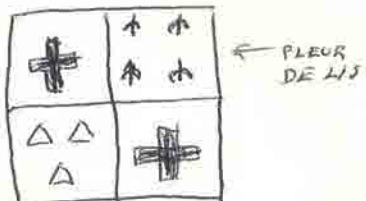




Naples # 2
S. Martin
Breach-loading swivel
bronze tube, iron breech
mounted in original yoke
17th. century
Caliber 9.5 Cm Length (oa) 121 Cm
Dredged from the harbor of Naples
May, 1921



Arms above breech:



Savoy?

Naples # 4

S. Martin

Bronze breech-loading swivel

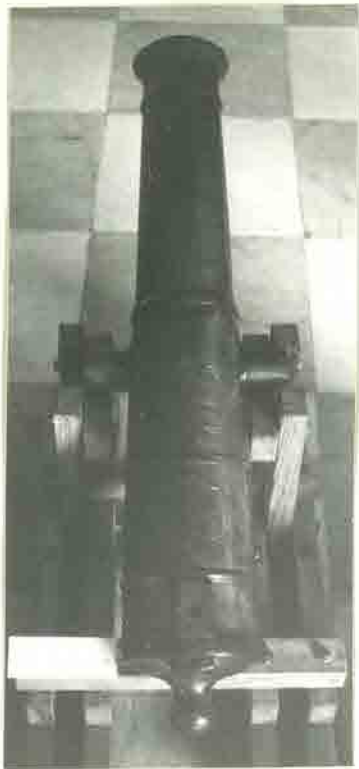
17th. century

Caliber 7.7 Cm Length 98 Cm

recovered from the mole San Gennarillo

May 1900





Naples #5
S. Martin
Small bronze naval gun
18th. cent
Caliber 8.0 Cm Length 100 Cm



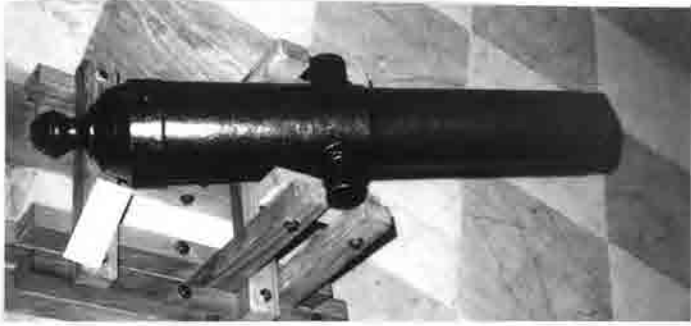
Naples #6 (S. Martin)
Neapolitan Bronze gun
late 17th. early 18th. centuries
Caliber 4.5 Cm length 101 Cm.
"N, R" in cartouche



Naples #7 (S. Martin)
Cast iron swivel gun
18th. Century
Caliber 4.7 Cm Length 80 Cm
Dredged from Naples Harbor May, 1921

Naples #8 (S.Martin)

Iron naval gun, 19th. century
Caliber 5.3 Cm Length 189 Cm



Naples #9 (S.Martin)

Neapolitan bronze naval gun

Model 1786

Caliber 6.0 Cm Length 189 Cm



Naples # 10 (S. Martin)

Bronze gun signed:

"CHRISTOFORO GIORDANO 1596"

Caliber 16.5 Cm Length 206 Cm

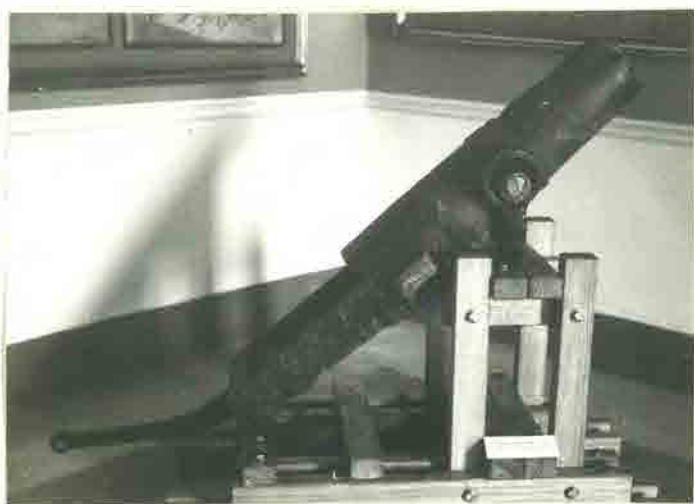
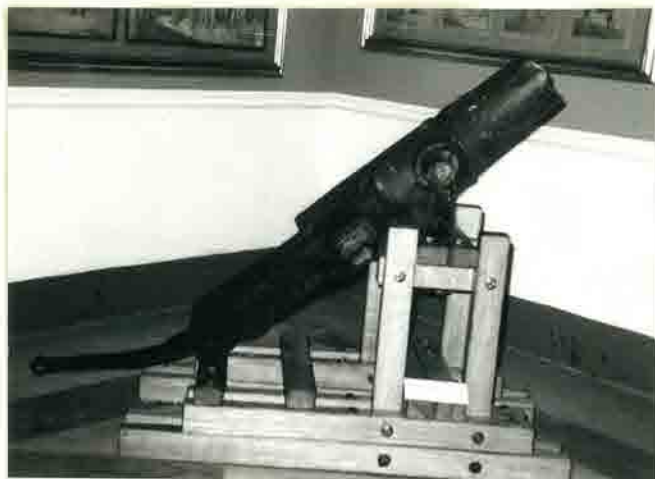
a stone gun

Weight mark "PES X--VIII"

Dredged from Naples Harbor May, 1921



Naples #11 (S. Martin)
Part of a bronze and iron breech-loading
swivel, first half 17th. century
Dredged from Naples Harbor May, 1921



Naples #12 (S. Martin)
Wrought iron breech-loading swivel
labelled "Aragonese"
Caliber 3 1/8 inches



Naples #13 (S. Martin)
Sienese bronze gun late 17th. century
Caliber 9.2 Cm Length 230 Cm
No marks





Naples #14 (S. Martin)
Small percussion naval swivel gun.
Ca. 1840-50
Caliber 5.3 Cm. Length 57 Cm.



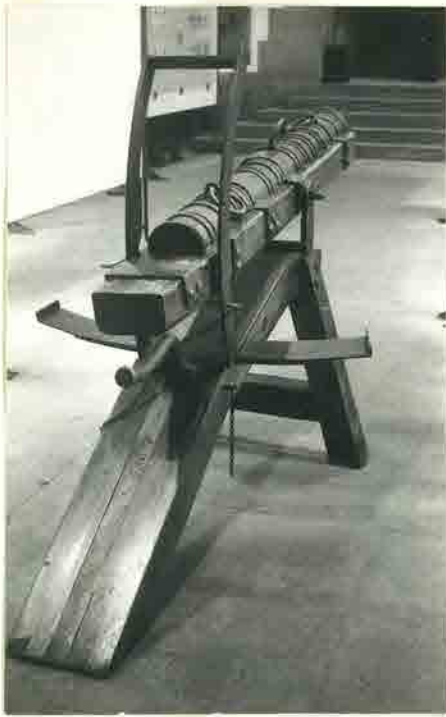
Naples #15 (S. Martin)
Bronze (Neapolitan) gun
17th. century
Caliber 16.5 Cm Length 241 Cm
Dredged from Naples Harbor May, 1921

MENDEL L. PETERSON LGA

NAPLES

**MUSEO FILANGIERI
(FILANGIERI MUSEUM)**

Naples #16 (Filangieri Museum)
Wrought iron gun (Bombard)
probably 15th. century
Labelled "Aragonese"
Caliber 5" Length 69"

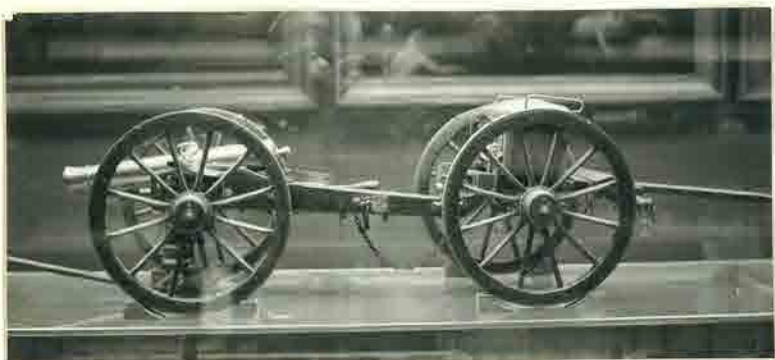
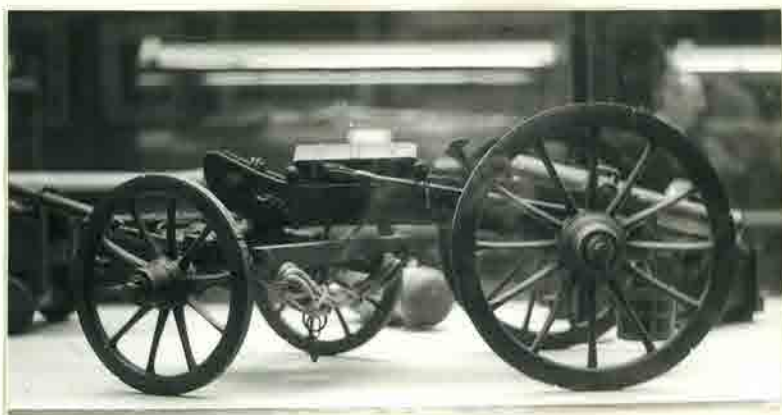


Naples #17 (Filangieri Museum)
Bronze mortar
Bore $4 \frac{7}{8}$ " length of bore $11 \frac{1}{2}$ "









MENDEL L. PETERSON LGA

ROME

**CASTEL SANT ANGELO MUSEO
(CASTLE SAINT ANGELO MUSEUM)**



On the top of St. Mark's Bastion, for decoration purposes only, a small collection of reproductions of ancient artillery pieces (in lead or in cast iron).

MUSEUM and FORT:
MUSEO NAZIONALE DI CASTEL SANT'ANGELO, ROMA
NATIONAL MILITARY AND ART MUSEUM, CASTLE SANT ANGELO, ROME

Location: The museum is located in the Castle Sant'Angelo, on the banks of the river Tiber, near the Vatican.

Postal address: Museo Nazionale di Castel Sant'Angelo — Lungotevere Castello 50 — 00193 Rome — Italy

Telephone: ++39/06 681 9111

Fax: —

Email: sspsae-rm.santangelo@beniculturali.it

Website: castelsantangelo.beniculturali.it

Curator: Maria Grazia Bernardini (Direttore)

Services offered: A book shop and cafeteria. A library and a documentation service, accessible on appointment, Tuesday and Thursday 9h-13h30:
sabina.parrichi@beniculturali.it ; miria.nardi@beniculturali.it

Opening hours: Tuesday to Sunday: 9h-13h30. Closed on Mondays, December 25 and January 1.

Recent catalogues and publications on the history of the building and its collections include: d'Orsi Mario, *Castle Sant'Angelo. Itinerary Guide*, Rome, 1968, illustrated, aimed at the visiting tourist but useful and well done. There are no publications on the ordnance pieces and for good reasons.

The catalogue of the general collections is consultable on Tuesday and Thursday, 9h-13h30, by appointment, with mariagrazia.bernardini@beniculturali.it
chiara.gironi@beniculturali.it

History of the building : The Sant'Angelo Castle has a history about as long as the one of the city, of which it is an icon. The first construction on this site (before the time of Christ) was conceived as a strong point in Rome's inner city defences, which included large storage chambers. During the 2nd century, the superstructure was modified to become the mausoleum of emperor Hadrian (built from 135 to 139 A.D.). During the mediaeval period, a fortress was erected on the ruins of the partly destroyed funerary monument. In the 13th century, an elevated causeway relating the Vatican to the castle permitted the Pope to quickly access the fortress in case of danger. Several radical architectural works were performed in the following centuries, the latest ones being completed in 1925.

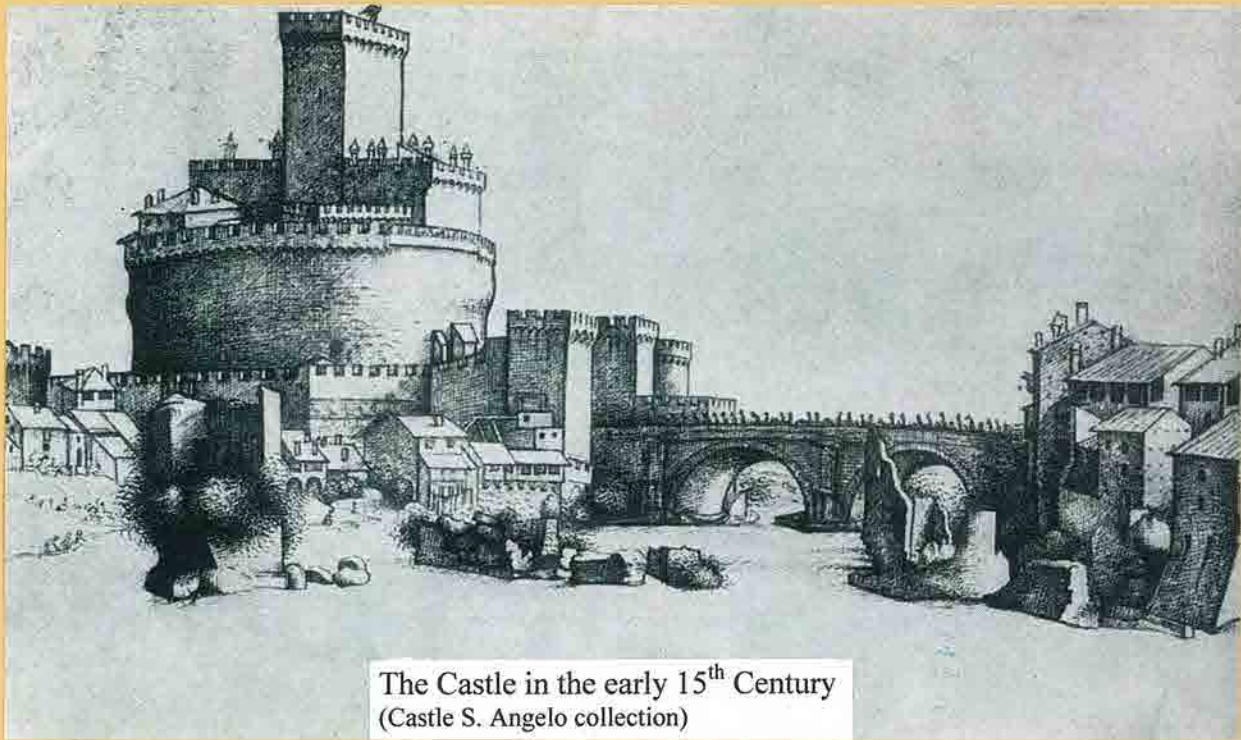
The name of "Sant'Angelo" comes from a legend of the time of Pope Gregory, the Great (6th century), telling the story of the apparition of an angel on top of the monument, putting an end to a plague epidemic, which was devastating the city.

History of the museum and its collections: The Museum was founded in 1925, by captain Mariano Borgatti, a passionate scholar of the castle history. The nucleus of the collection, which comprises namely all kinds of military and civilian arms and armour (15th-17th centuries), predominantly Italian, comes from the armoury of Gradara castle, in Romagna. The collection has increased later with medals, pictures of Italian uniforms, Renaissance paintings, furniture, etc.

The Castle S. Angelo is, in itself, one of the most fabulous places in a generally speaking fabulous city and it offers, mainly at dawn, unforgettable views of the Vatican and of Rome.

This being said (and as underlined in MLP's field notes of 1969), there are no genuine pieces of artillery in the open parts of the "cannons" display, where all pieces are reproductions, of indifferent quality, produced for evocative decoration purposes and wisely kept off limits by museum regulations. This is with the exception of a few rather common wrought iron swivel guns, inside the castle.

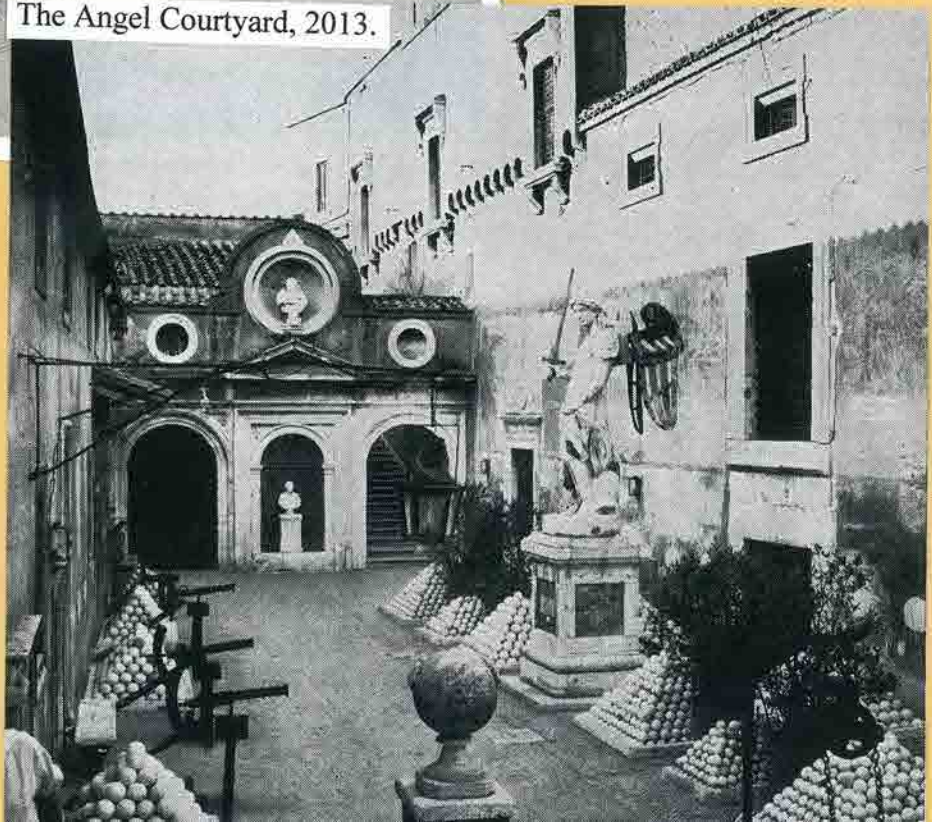
So, the artillery expert or student, if in a great hurry to finish research in Rome, will be forgivable if they skip the visit to the S. Angelo Castle, but will be the poorer for it.

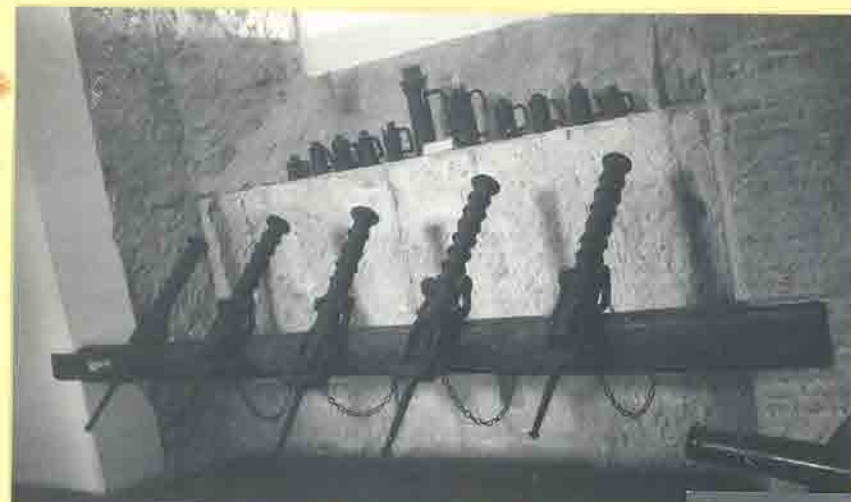


The Castle in the early 15th Century
(Castle S. Angelo collection)



The Angel Courtyard, 2013.





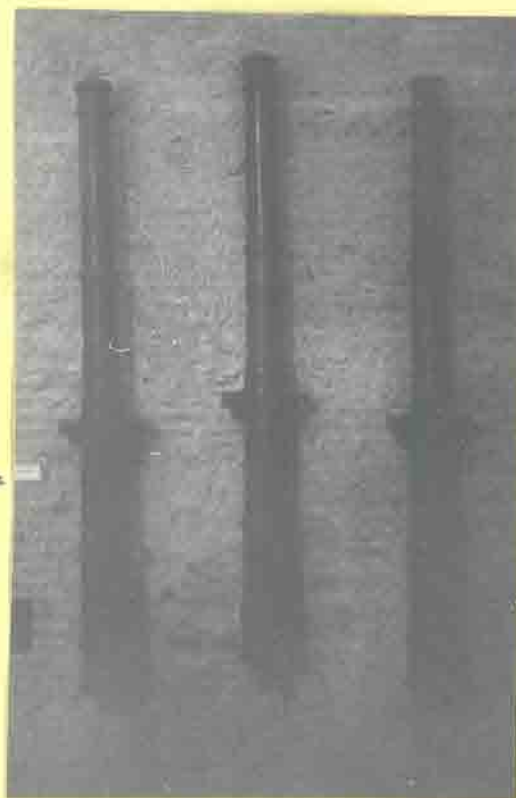
wrought iron swivels
originals, Bore - 2"



Bronze Swivels
Lautakas 9

Trunnion - 2 x dia
Bore could not be
measured

labeled - "18th Cent"
look like early 17th

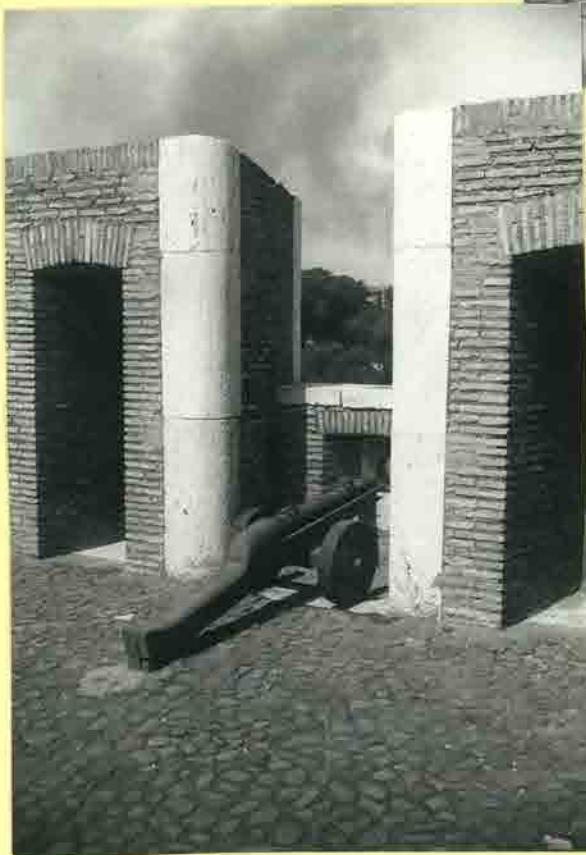




Reproductions - cast iron
Bore $2\frac{1}{2}$ "



Reproductions - Lead
Bore - $2\frac{3}{4}$ "



CAST IRON
Reproduction
Bore $2\frac{1}{2}$ "



The Angel that gave its name to the castle, in the time of Pope Gregory, the Great, after he appeared sheathing his sword (sword and sheath now missing) in signal of the Divine pardon that marked the end of an epidemic of the plague in Rome.

THERE IS NO EDITOR'S ALBUM

ROME

**CASTEL SANT ANGELO MUSEO
(CASTLE SAINT ANGELO MUSEUM)**

MENDEL L. PETERSON LGA

ROME

**MUSEO STORICO DELLA FANTERIA
(HISTORICAL INFANTRY MUSEUM)**

**MUSEUM:
MUSEO STORICO DELLA FANTERIA, ROME
HISTORY OF INFANTRY MUSEUM**

Location: Very near the “Basilica di S. Croce in Gerusalemme” and not very far from the “Cathedrale di Roma”, the “Basilica di S. Giovanni in Laterano”.

Postal address: Piazza S. Croce in Gerusalemme, 9 - Roma — Italy

Telephone: ++39/06 70 27 971

Fax: ++39/06 97 27 52 93 (This is the general fax of the “Musei Military” organisation)

Email: info@museimilitari.it (as about)

Website: www.museimilitari.it

Curator: The museum is a unit of the Armed Forces and is run by the Commanding Officer of the “Scuola di Fanteria di Cesanodi Roma” (the infantry school)

Contact person: ---

Services offered: A library and historical archives.

Opening hours: Mon. - Thu. : 09h to 13h30
Fri.: 09h to 12h
Closed on official holidays and the Christmas period.

Recent catalogues and publications on the history of the building and its collections include: —

History of the building: The museum has been installed in the rehabilitated former command centre of the Regiment of the Grenadiers of Sardinia, a large 19th Century building with a vast garden where cannons and tanks are set under an ancient roman arch. (The garden was one part of the antique “Palatium Sessarianum” house of the mother of Emperor Constantinus (IVth C.A.D.).

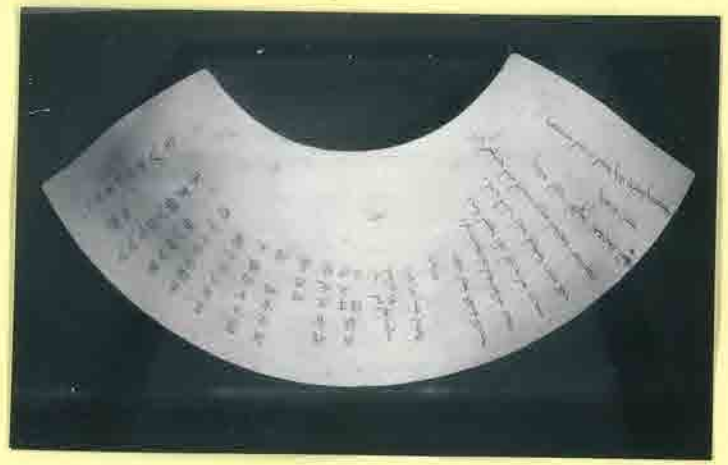
History of the museum and its collections: Founded administratively in 1948 although the first project dated back to 1918. Early collections destroyed during WW II. New collections assembled from 1956 on – inaugurated in 1959.
The collections display has been fully restructured in 1990 and the exhibits, in 35 rooms and 5 galleries, are organised on three topics: Weapons, flags and uniforms. The arms collection included artefacts dating from Roman times up to the present day.

Rome Museum of the Infantry

4 Bronze guns presented to the King of Italy by the Emperor of China, no date given
24 pounders (?)



1
2



3
4



← 1
← 2



← 1
← 2



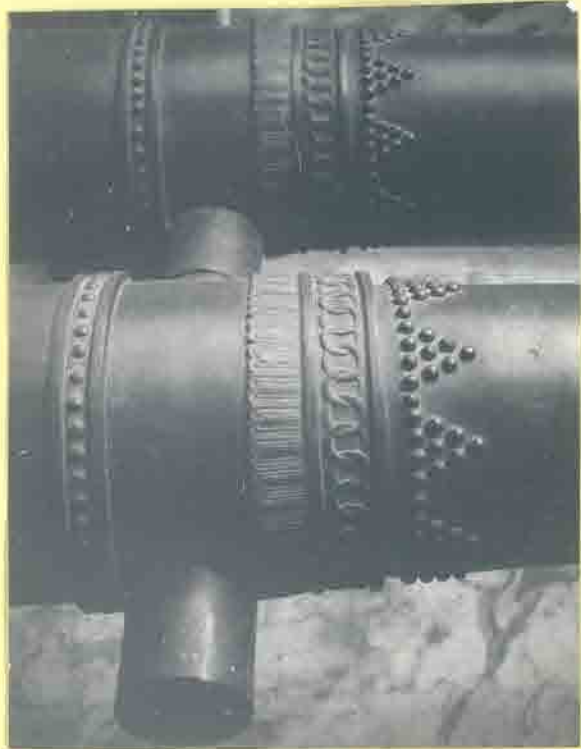
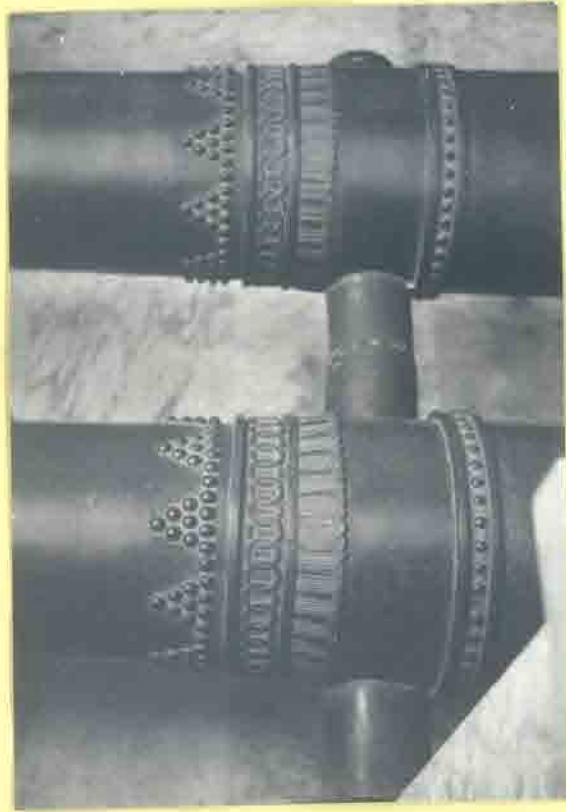
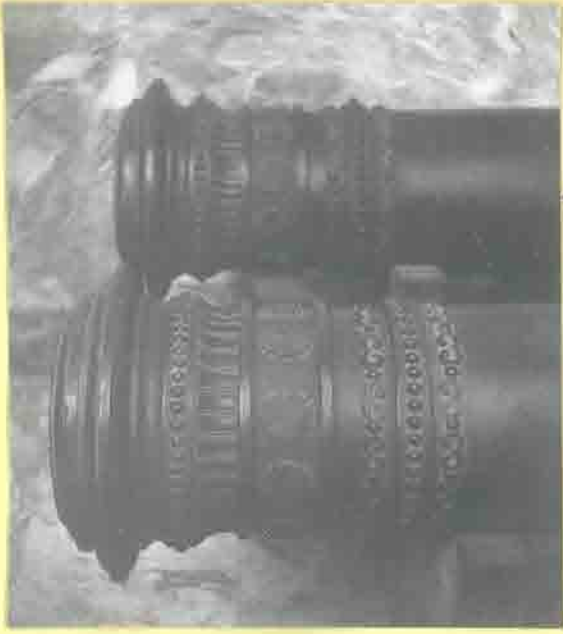
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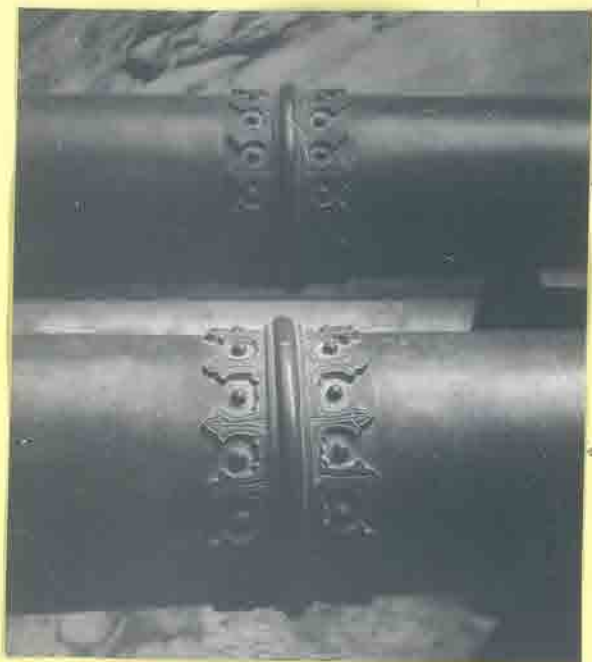


2, left. Tr.

CHASE RING

2nd Reinforce Rings





← 4

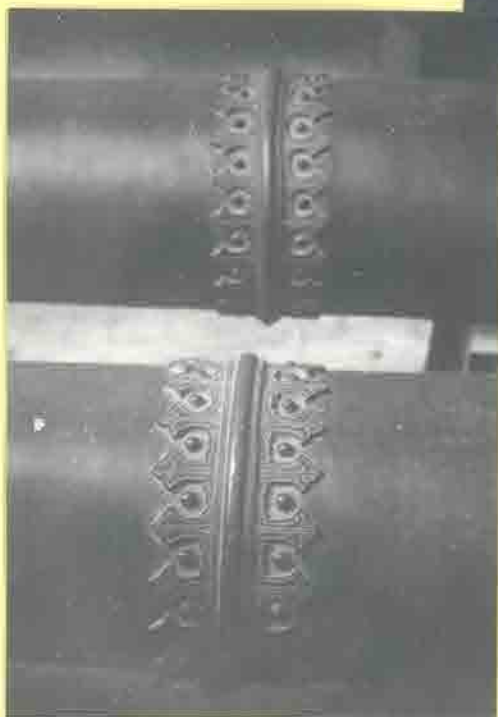
← 3

CHASE RINGS



← 4

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← 4

2nd Reinforce Rings

MENDEL L. PETERSON LGA

ROME

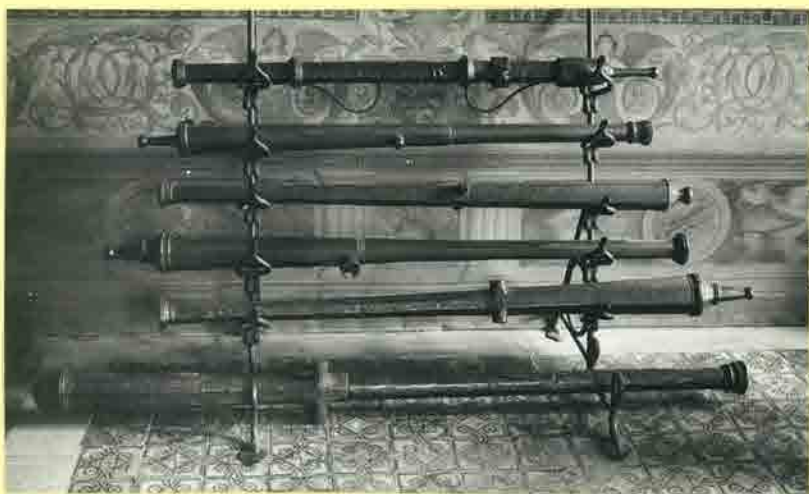
**MUSEO VATICANO
(MUSEUM OF THE VATICAN)**

THE BORGIA APPARTMENTS

ROME BOREIA APTS. - VATICAN

6 Robinettes early to mid sixteenth century

1. Iron, attached trunnions, Bore $1\frac{1}{2}$ " , length $58\frac{1}{2}$ "
No marks
2. Iron, $1\frac{1}{2}$ " bore, length 62" no marks
3. Iron, $1\frac{1}{2}$ " bore, length 64" no marks
4. Bronze, $1\frac{1}{2}$ " bore, length 70", marked
FRATIA on base ring I 54 X on top of cascabel
M.G.F on base of elongated button
- 5.*
o on button
P
5. Companion piece to #4, same marks
6. Iron, $1\frac{3}{4}$ " bore, length 83"
arms stipple punched on 1st. reinforce but
turned to wall and could not be identified or
photographed





1
2
3
4
5
6





- 1
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- 6



- 1
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- 5



- 4
- 5
- 6

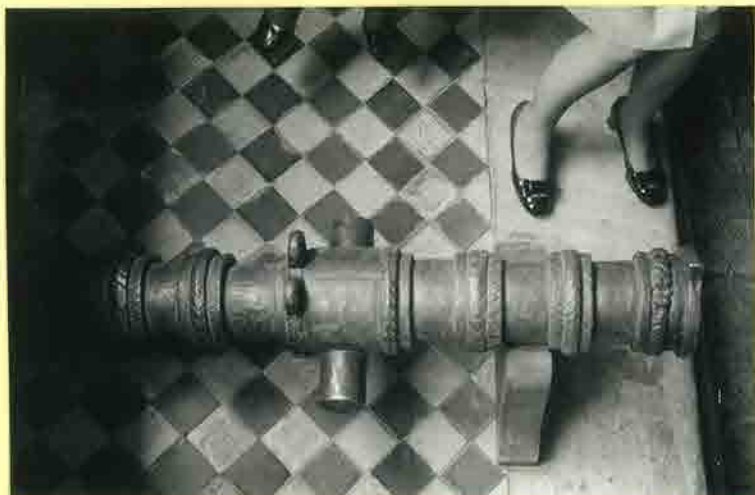


5

6

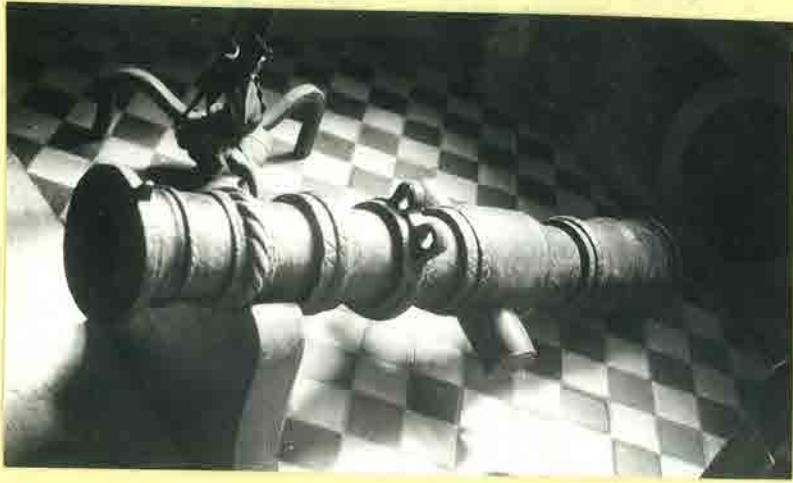
ROME - BORGIA APTS. - VATICAN

2 bronze tubes, cast in imitation of wrought
iron pieces bore $3\frac{1}{4}$ " length 4'



#1





#5



NO EDITOR'S ALBUM

ROME

**MUSEO VATICANO
(MUSEUM OF THE VATICAN)**

THE BORGIA APPARTMENTS

**WHERE THE DISPLAY OF ANCIENT FIRE ARMS AND SMALL ARTILLERY
PIECES HAVE CHANGED LITTLE SINCE THE VISIT BY MENDEL L. PETERSON.**

MENDEL L. PETERSON LGA

FLORENCE

FLORENCE

The passage of MLP through Florence when touring Italy - one of his first trips to Europe, in 1969 -, has left few traces in his personal records. Possibly, because his field note taking and record keeping methods, were not yet well organized.

The editor has found only brief field notes titled "Florence" and the following short list of museums:

**FORTEZZA DA BASSO
MUSEO BADINI (PIAZZA DE MOZZI)
MUSEO STIBBERT (VIA DE MONTUGHI)
MUSEO NAZIONALE (VIA DEL PROCONSOLE)
PALAZZO VECCHIO**

The same notes (4 pages total) immediately indicate that there are no weapons in the Palazzo Vecchio.

The Museo Nazionale is reported to contain "one cannon, the magnificent cannon of St. Paul". "Buy the picture", MLP immediately wrote, and so he did (see further on). Then follows a list of the "magnificent collections of the museum in a number of artistic fields." MLP's detailed field notes concerning the "magnificent St. Paul cannon" are on the next sheet with the photograph of that famous piece. (MLP appears not to have taken any photographs in the National Museum and certainly no photos of any detail of that piece).

The field notes do not mention in any way the contents of the "Fortezza da Basso".

The following sheet of MLP's field notes for Florence refers to the "Badini collection of arms, shields and iron cannons". The particularly difficult to read notes would seem to indicate that the museum, at the time of MLP's visit, contained 6 small bore wrought-iron cannons, mostly breech loading swivel guns and one verso, as well as 2 wrought-iron mortars of small size also, the bore being 13.5cm. and 15cm. Regrettably, the editor after sifting through thousands and thousands of un-annotated or cryptically referenced rolls of negatives and batches of photographs has not identified any indication that the photographs of those few wrought-iron pieces are present in the mass of material.

MENDEL L. PETERSON LGA

FLORENCE

**MUSEO NAZIONALE
(NATIONAL MUSEUM)**

MUSEO NAZIONALE (VIA DEL PROCONSOLE)



Magnificent “canonne ditto de S. Paolo”, cast in the 17th century by the great Cosimo Cenni, in the Museo Nazionale of Florence. There are no lists of photographs concerning the National Museum in Florence and it is believed that MLP was not allowed to take his own photographs. His field notes, however, contain the following descriptions of some of the details of the piece: Cannon of St. Paul: On the base ring, incised: “N°407 II (libras) 27,500”. The name of the founder in a cartouche: “OPERA DI COSIMO CENNI FIORENTINO”. In another cartouche: “FER. II. HETRV. / MAG. DUCE MDCXXXVIII”. On the first reinforce, the coat of arms of the Grand Duchy of Florence (arms of the Medici’s) with MLP’s drawing:

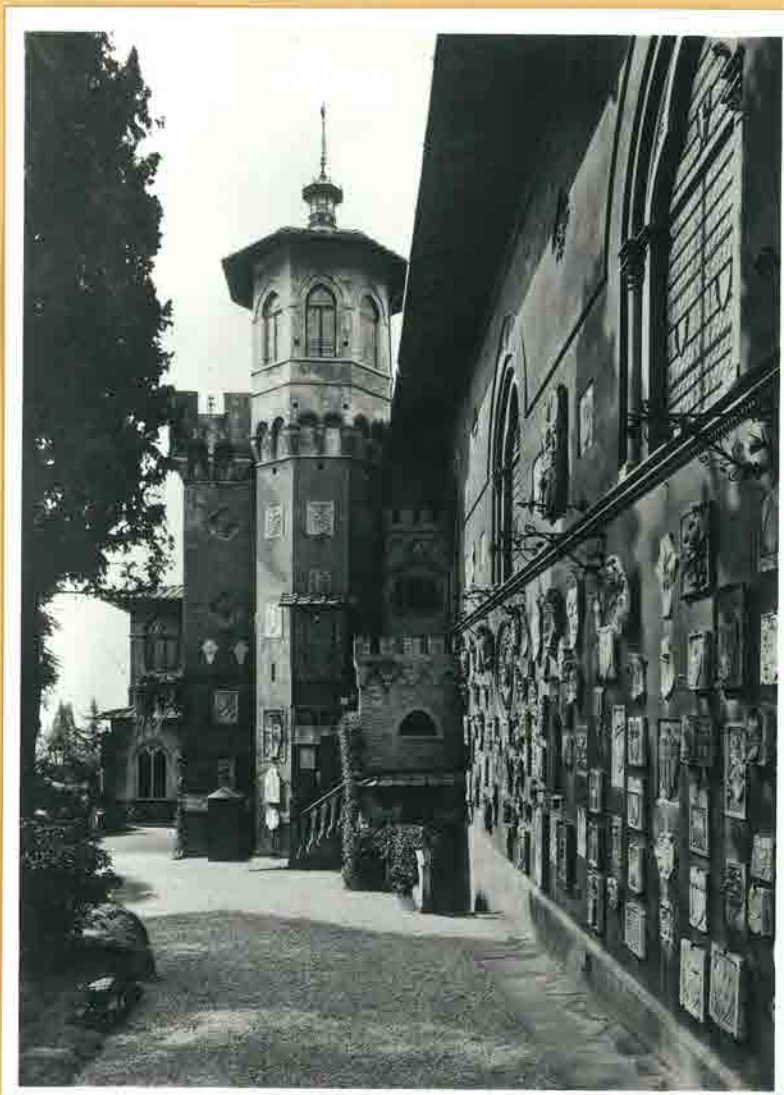
Length: 14ft. Calibre: “bore width of page + half” corresponds to c. 30cm.

MENDEL L. PETERSON LGA

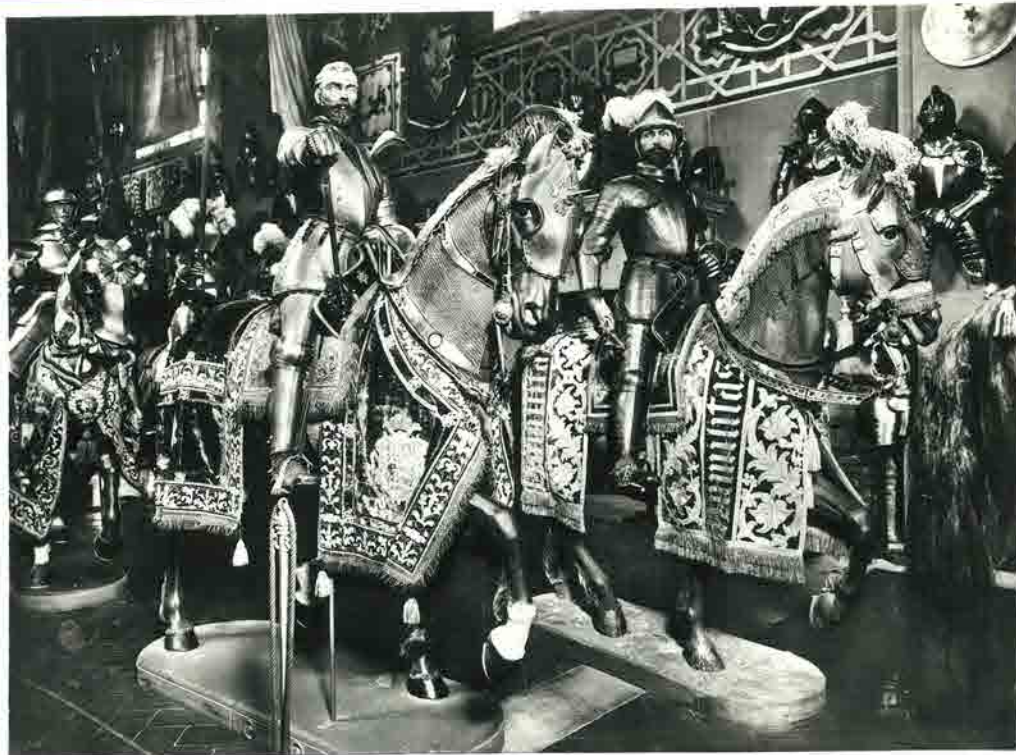
FLORENCE

**MUSEO STIBBERT
(STIBBERT MUSEUM)**

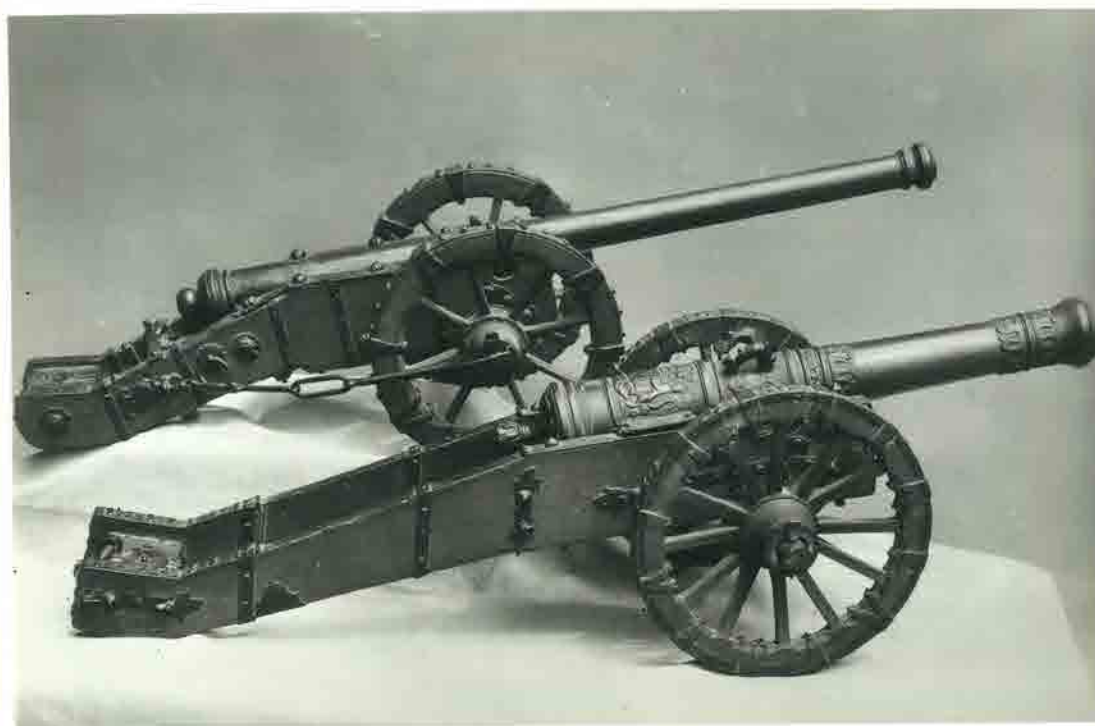
MUSEO STIBBERT (VIA DE MONTUGHI)



“Villa Stibbert” houses the museum, created by its past owner Frederik Stibbert (1838-1906).



In the "Salone della Cavalcata", some of the important XVIth century armour of the museum's collections.



EDITOR'S ALBUM

MILAN

**MUSEO POLDI PEZZOLI
(POLDI PEZZOLI MUSEUM)**

And

**MUSEO NAZIONALE DELLA SCIENZA E DELLA
TECNOLOGIA LEONARDO DA VINCI
(NATIONAL MUSEUM LEONARDO DA VINCI
FOR SCIENCE AND TECHNOLOGY)**

MUSEUM:
MUSEO POLDI PEZZOLI, MILANO
POLDI PEZZOLI MUSEUM, MILAN

Location: On the very heart of the city, actually in view of the Teatro de la Scala.

Postal address: Museo Poldi Pezzoli — Via Manzoni, 12 — 20121 Milan - Italy

Telephone: ++39/02 796 334 or 39/02 794 889 (museum);

Fax: ++ 39/02 454 73 811

Email: info@museopoldipezzoli.org

Website: www.museopoldipezzoli.it

Curators: Analisa Zanni (zanni@museopoldipezzoli.org); Andrea Di Lorenzo (Curator for Arms)

Services offered: A museum shop. A library accessible by appointment, Monday to Friday from 9h to 13h (tel. ++39/02 454 73 800 or ufficioconservatori@museopoldipezzoli.it).
A newsletter (not specialized in artillery).

Opening hours : Wednesday to Monday: 10h-16h. Closed on Tuesdays and public holidays.

Recent catalogues and publications on the history of the “Sala d’Armi” of the museum include: Di Lorenzo Andrea, *La Sala d’Armi. Museo Poldi Pezzoli*, Milano, 2000; Slavich Paola, *Musei e Galleria di Milano. Museo Poldi Pezzoli, Armeria II*, Venezia, 1986

History of the building: The 17th century palace in which the museum is housed was bought at the end of the 18th century by an ancestor of Gian Giacomo Poldi Pezzoli, who inherited it from his father, together with a huge personal fortune. The building was first rearranged in the Neo-classical style by architect Simone Cantoni (1736-1818). In 1846, Gian Giacomo had his apartment refurbished by two renowned interior designers of the time: Luigi Scrosati (1815-1869) and Giuseppe Bertini (1825-1898), who transformed the first floor into a series of rooms, each one inspired by a style of the past. The house-museum was heavily destroyed during WWII and was then rebuilt, as much as possible, “where it was and as it was”. It was reopened in 1951. The present Armoury room has been re-designed in the year 2000, by sculptor Arnaldo Pomodoro.

History of the museum and its collections: The Poldi Pezzoli museum is a house-museum, founded by a private collector, Gian Giacomo Poldi Pezzoli (1822-1879). Following his will, it was opened to the public two years after his death. The collection consists of Italian paintings (14th to 18th century), jewellery, Murano glass, porcelain, tapestry and carpets, furniture, archaeology and, also, arms and armour, which were the first passion of Gian Giacomo Poldi Pezzoli. The Armoury was the first

room of the museum to be rearranged, in the year 2000. It contains Italian Renaissance pieces of armour and weapons, mainly from Milan and Brescia, as well as 16th and 17th century German firearms and one small cannon.

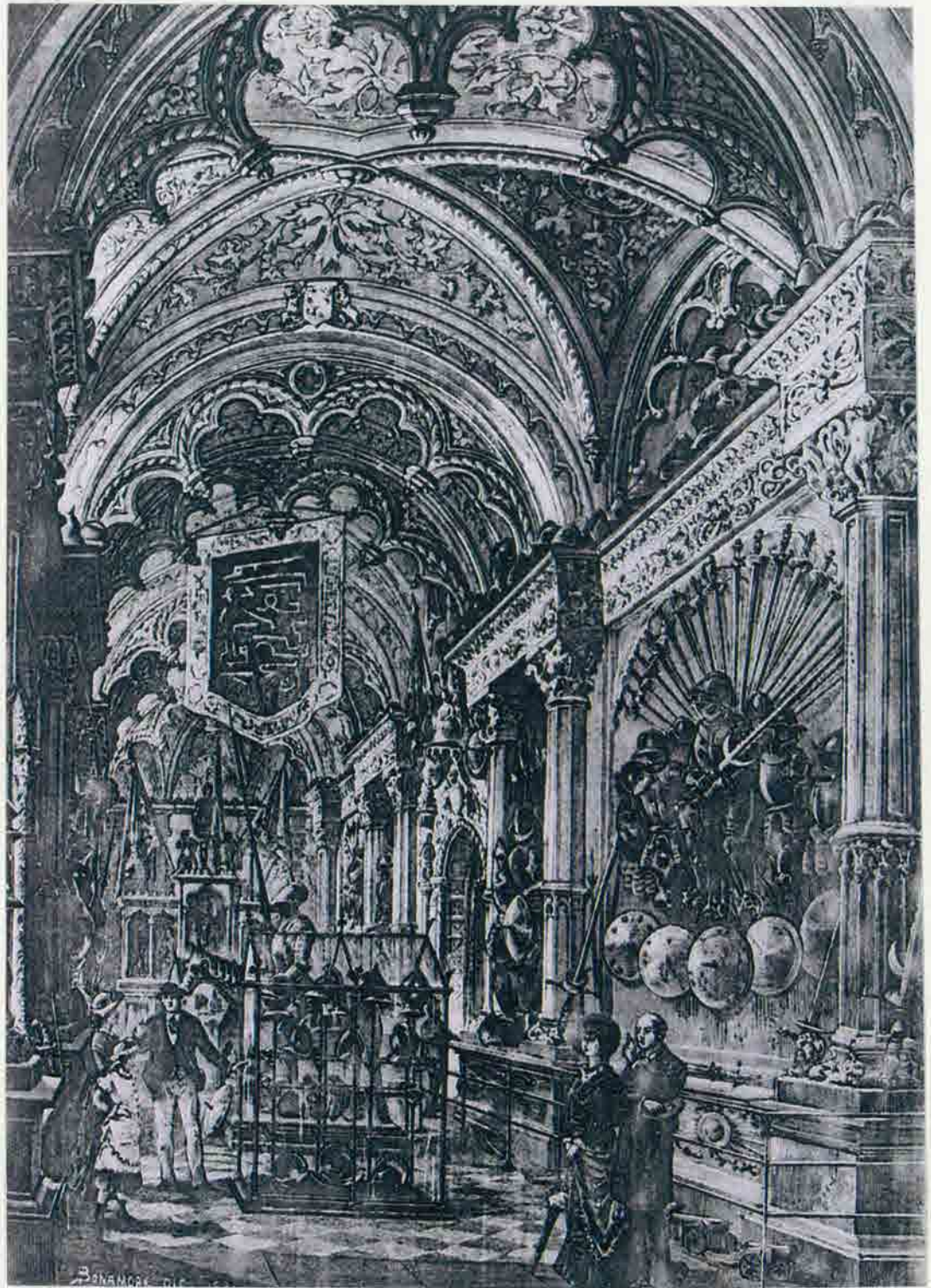
The general aspect of this new so called “armeria” is disappointing. A curator has written the following words. “The renovation of the armoury has been the work of a contemporaneous artist, Arnaldo Pomodoro. What we have here is a strongly innovative intervention, the first of that type ever executed in a 19th century House-Museum. In creating this room, Arnaldo Pomodoro has produced a work that interpretes, in a visionary and fantastic manner, the themes of the war, of the heroes and of the myth in a profound and direct dialogue with the works in the antique weapons collection of the Museum

More than half the space available for display is left unused.

- The overcrowding is such that, of all the armours that are packed together at the far end, only the front row can be seen as it hides from view the second row.
- The breast-pieces of armour with their helmets have had to be raised three metres above the ground on a cornice with the result that they are largely out of sight of the viewer.
- Of all the volume on both sides, only a small number of cramped windows can receive exhibits.
- On the floor, there is only one, glass showcase causing the curators to select one of the smallest pieces of artillery of the collection and then partly cover it with pistols and/or powder horns. The showcase is floor level, making it difficult to view the collection.



Entrance of the Poldi Pezzoli Museum, in the heart of Milan.



Armoury of the Poldi Pezzoli Museum, as it was in the 19th Century.



The new armory, as renovated in the year 2000.

At this time, much of the existing volume of the room having been wasted "in a highly innovative way", only a small number of narrow windows can receive exhibits. One glass showcase only has been allowed, the one and only small gun exhibited, with pairs of pistols and the little remaining volume with various sorts of artefacts. As the show-case lies at floor level, visitors need to kneel down for close inspection.



Difficult to see, under a group of miscellaneous pistols and further obscured by the close vicinity of unrelated shot guns, fowl shooting guns, powder barns, cannon balls, etc.: Late 15th century interesting cast iron “spingarda a mascolo”, a light, long, swivel gun (missing its breech block or powder chambre). Cal: C. 4cm.; L: C. 2m.



The same “spingarda” in earlier days (catalogue).



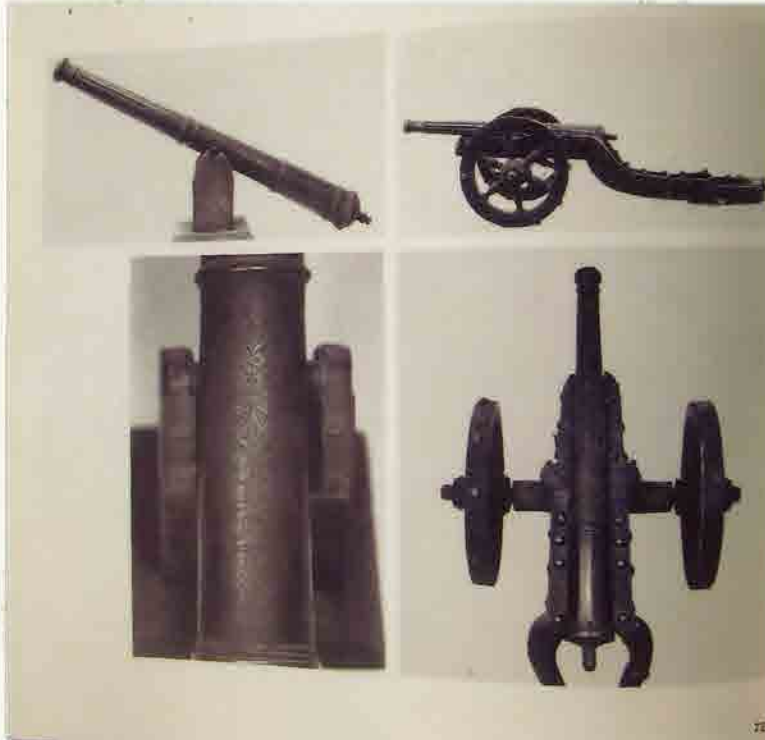
Construction details and simple incised decorations on the same "espingarda a mascolo".

Due to a lack of space, at this time (2013), most of the collection of artillery pieces and scale models of the Poldi Pezzoli museum are in the reserves. Photographs from the collection's catalogue show some of these pieces (courtesy of the current curators).



“El Pulpo”, a small Spanish swivel gun, a naval piece. This short breech-loader, which lacks its “recamara” and wedge, was cast in 1744 in Barcelona, by José Barnola. The inscriptions and decoration are:

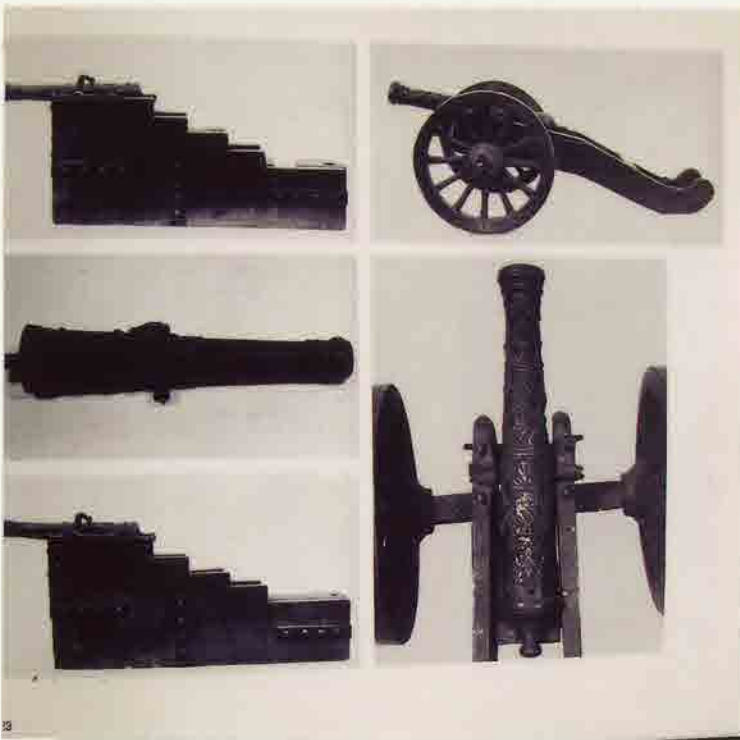
On the base ring: “JOSEPHUS. BARNOLA. FECIT – BAR^{NE} 1744”; on the first reinforce: The Royal Arms of Spain (noticeably without the “fleur de lis” of the Bourbon and the collar of the “Ordre du Saint-Esprit”); on the face of the right trunnion: 121 L^A (Libras or local pounds and underneath “P^o C^o” (“Peso Casto”, meaning weight cast); on the face of the left trunnion is an indication that the gun was cast with “bronces de recuperación” (re-used metal); on the chase: The gun’s name: “The Octopus”, “El Pulpo”.



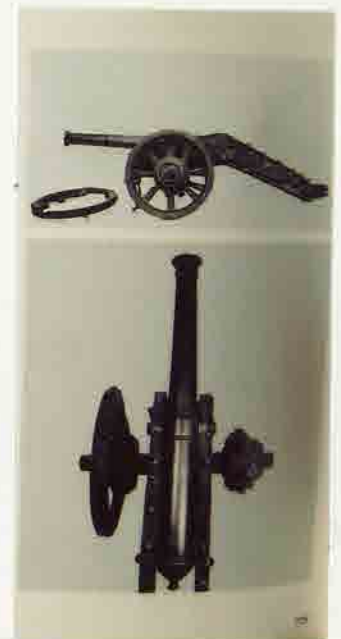
Left: Model of an English saker. Thomas Pitt, London, 1594.
Right: Model of an Italian (?) half-culverin, early 17th Century.



Model of a French 12 pdr., as cast by Jean Bérenger in Douai, in 1960.



Left: Model of a German early 17th century "short gun".
Right: Two models of Venetian field-guns. Above: Of the 2^d half of the 17th Century. Below: Of the late 18th Century.



Model of a siege-gun, Europe, late 18th Century.



Left: Model of an Italian (?) bronze mortar of 1700.
 Centre: Model of a bronze German (?) 18th century mortar.
 Right: Model of an Italian bronze mortar of 1729.



Left: Model of a bronze Italian mortar of 1759.
 Right: Model of a field carriage (Europe? 18th Century?)

MUSEUM:

**MUSEO NAZIONALE DELLA SCIENZA E DELLA TECNOLOGIA
LEONARDO DA VINCI, MILANO**
**NATIONAL MUSEUM OF SCIENCE AND TECHNOLOGY LEONARDO DA
VINCI, MILAN**

Location: In downtown Milan.
Postal address: Museo Nazionale de la Scienza e della Tecnologia Leonardo da Vinci — Via San Vittore 21 — 20123 Milan — Italy
Telephone: ++39/02 485 551
Fax: ++39/02 480 100 16
Email: info@museoscienza.it; servizi.pubblico@museoscienza.it
Website: www.museoscienza.org
Curator: Fiorenzo Galli (Director); Marco Iezzi (Curator cannons) : iezzi@museoscienza.it
Services offered: A museum shop. The museum organizes conferences and science events and can also be rented for private events.
Opening hours: Tuesday to Friday: 9h30-17h. Weekends: 9h30-18h30. Closed on Mondays, December 25, January 1.

Recent catalogues and publications on the history of the building and its collections include: None relating to the artillery pieces.

History of the building: The museum is located in the ancient monastery of San Vittore al Corpo, an Olivetan monastery dating from the early 16th century. During the Napoleon Wars, the building served as an army hospital and then as barracks. It was much damaged during WWII.

History of the museum and its collections: The museum was opened in 1953. Said to be one of the largest science and technology museums in Italy. The museum displays an important collection of machine models based on Leonardo da Vinci drawings. Collections on transport, energy, communication, link between art and science and on the new frontiers between science and technology. Also displayed are the training ship EBE, the bridge of the transatlantic CONTE BIANCAMANO, the submarine ENRICO TOTI and a number of maritime items, formerly part of the collections of the former “Civico Museo Navale Didattico”, which has been absorbed by the Museum of Science and Technology, in recent years.

The museum’s collection of ordnance pieces (and/or reproductions) is small but of some didactical interest. It is unfortunate that some of the cannons descriptive notices should be incorrect and others so vague as to be almost meaningless (2013). None indicate which “pieces” are reproductions and which are real guns.

**MUSEO
NAZIONALE
DELLA SCIENZA
E DELLA
TECNOLOGIA
LEONARDO
DA VINCI**



“The Museum aims to bring together Leonardo’s trio of art, science and technique. It wishes to disseminate an awareness of the astonishing conquests of scientific research and of its practical applications in order to enhance individual development and to create a real civil and technical consciousness in the Country”.

GUIDO UCELLI di NEMI (1964)
Founder of the Museum.



Reproduction of a bronze swivel gun of uncertain date and origin.
The breech block is incorrect.



Reproduction of a wrought iron bombardella of the 15th century.
A breech loading naval swivel gun.



Two “Falconetti de Murata” or “Bulwark falconets”. These bronze small calibre muzzle loaders were actually used on ships, as well as fortifications. The cabled breech, the floral decoration and the typical wide and flattened mouth seem to ally these pieces with the Lanteka family. The notice plausibly indicates that “they probably come from Goa”



Very strange piece, described on the museum's descriptive notice as "A cast iron carronade with an applied muzzle, late XVIII century". The functional purpose of the outsized, added muzzle swelling is not explained.



Common howitzer of the XIXth century battery.



Small, fancy "cannoncino da giardino", a Florentine garden mini-cannon in bronze (used in ceremonies or private celebrations), cal: 2.5cm. The muzzle swelling is shaped as a lion's head, the charging cylinder is decorated with the figure of a medieval warrior. On the "first reinforce", two "angiolette" (little angels) bear on escutcheon with the crest of the Medici, the cascabel is an old man's head.



Small, short bronze naval gun. A muzzle loader, the barrel smooth. The naval carriage seems original and has an elevation system and gear included. Nationality unknown, probably XIXth century.

MUSEUM NOT VISITED BY MLP

Name: **Museo della Pusterla di Sant' Ambrogio**
Museum of the Saint Ambroise City Gate (a “pusterla” was a minor fortified gate in the city walls in the Middle Ages)

Location: In Milan.

Postal address: Via Giosué Carducci 41 - 20125 Milan - Italy.

Telephone: —

Fax: —

E-mail: —

Remarks: This museum is (or rather was) somewhat peculiar. It was founded in 1848 and occupied an imitation (a reconstruction) of a defensive gate in the ancient walls of the city of Milan, the walls dating to the years 1170. This “reconstruction”, or rather pastiche, was actually built in 1939. Many huge stones and bricks were reused that were brought from several other city gates which had been, regrettably, just demolished. This Middle Age revival building consists of two large square towers of unequal height, joined by a double arch with a protected passage on top.

Originally, the museum was “a military museum housing 15th to 17th century armaments”, reportedly edge weapons and personal firearms, but few pieces of ordnance. It later became a “martyrdom and torture museum” and was lately describing itself as the “museo de la Pusterla”, housing “a permanent collection of criminology and antique weapons”.

The museum however has been closed for several years (2014) and reliable information is not available as to a hypothetical reopening in the future.

*

* *

MENDEL L. PETERSON LGA

ITALY

VENICE

MENDEL PETERSON LGA

VENICE

MUSEO STORICO NAVALE
(HISTORICAL NAVAL MUSEUM)

Old Arsenal of the Galleys of the Senerissima

MUSEO PALAZZO
(MUSEUM OF THE PALACE OF THE DOGES – The Armeria section)

MUSEO CORRER
(CORRER MUSEUM)

NB: The LGA MLP prepared for his commented photographs taken in the city of Venice are stored and organized in a way “different” from the other albums. It gives an impression of disorder, repetition and lacunas. There are probably two reasons for this. First, MLP made at least two voyages in Venice, in 1969 and in 1971 (as indicated by his field notes and by his correspondence with the photo laboratory of the Smithsonian in Washington). During these two voyages, he seems to have duplicated some of his photographs, and also to have changed his method of working and his approach to the construction of his photo albums. On the other hand, very little has changed, which is a rather exceptional case, in the display of the artillery pieces of the three museums he visited (the Naval Museum, Museum of the Palace of the Doges and Correr Museum) between his two voyages and the editor’s voyage to Venice.

Therefore, after the hesitations this circumspect editor always goes through when he believes he may have reasons to change or adapt the somewhat disparate, unfinished and un-reviewed components occasionally found in MLP’s personal files, he has decided to make an exception, in the present case to his standard editing method (as used up to now): Leaving MLP’s work as it was and adding his own work next to it. In this present case, on the contrary, he has merged MLP’s original black and white photographs with his own editor’s, later colour photographs when it seemed advisable, keeping in all cases MLP’s original captions (with some occasional additional details or precisions).

This was not done of course with the hope to make the LGA “better” but in order to produce, in the end, a work closer to the original intent of the author

MENDEL L. PETERSON LGA

VENICE

**MUSEO STORICO NAVALE
(NAVAL HISTORY MUSEUM)**

Consists of 36 folios.

The guns are sequentially numbered with a reference to a museum catalogue number. There appears to be no logical order in the sequencing of the cannons, types and centuries, being largely mixed. Such a lack of order appears to be a consequence of the grouping of the pieces in the different rooms or halls of the museum, at the time when MLP visited the museum.

This order, or lack of order, has been respected by the editor.

Editor's note: In some cases, in order to avoid duplication between the LGA and the EAs, some of the recent editor's photographs have been pasted together with the original MLP's photographs of 1971.

NAVAL MUSEUM



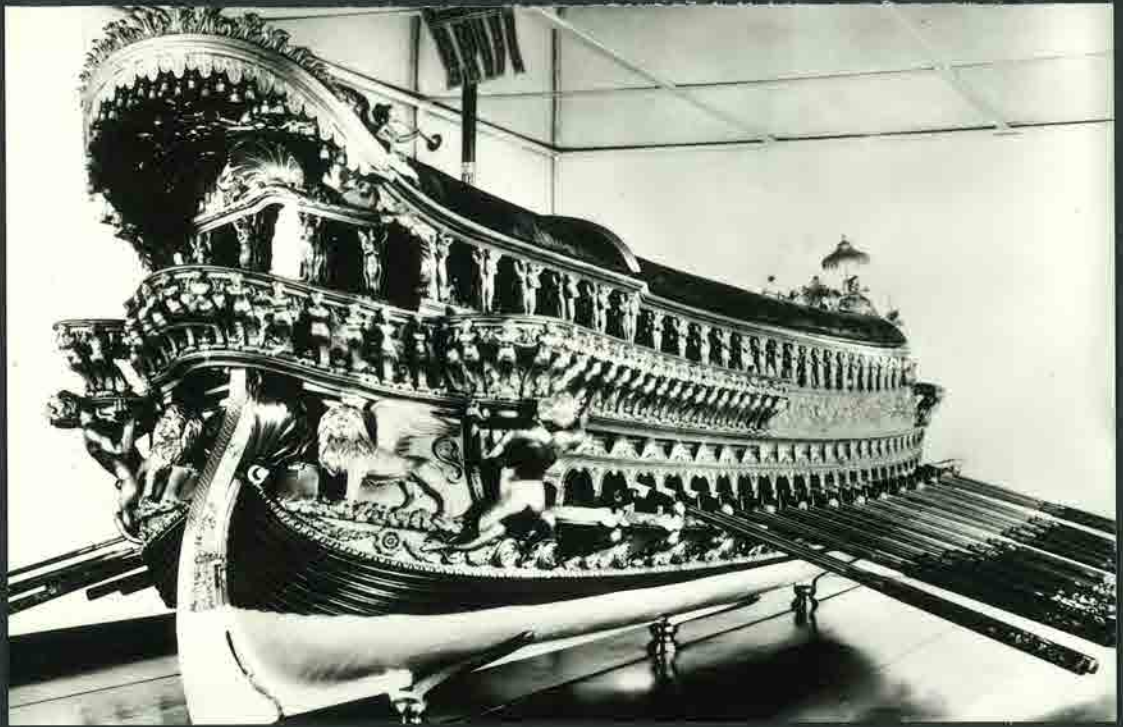
THE VENICE NAVAL MUSEUM
(when visited by MLP)



The Arsenal of Venice in 1790.



Mendel Peterson's visit, in the summer of 1971.
(Editor)



19th century model of the last "Bucintoro", the ceremonial galley of the Doges of Venice on which, since the end of the year 1000, the Doges used to be rowed out of the port of the Lido in company with all the authorities, the clergy and the people of Venice, on the day of the Ascension, in order to preside the blessing of the Adriatic Sea (as a thanks giving for the Venice recent supremacy over Dalmatia).

From the 12th century on, the ceremony involved a large splendidly sculpted and gilt galley from the stern of which the Doge in power would ceremoniously throw in the sea a blessed gold ring (it had to be worth at least 6 ducati) with the words: "Disposamus te mare in signum veri perpetuique domini" (I marry thee, O Sea, in sign of true and perpetual domination".

The last "Bucintoro" (model) was launched on January 12, 1728. Length: 4.8m., width: 7.31m., 42 oars, with four men on each. The rowers were workers of the Arsenal. This superb vessel was demolished, the carvings taken as war booty and the remains of the ship burnt on the orders of Napoléon, when his armies occupied Venice.

Venice # 1 (#1110)
Bronze breech-loading swivel in yoke
Caliber 7.2 Cm Length 102 Cm
17th. century
Recovered from "Canale de Fasana d'Istria"



Venice no number (#1112)

Composite bronze and cast iron swivel gun complete with its breech-block and remains of the wedge. Recovered from the sea near Lido, Venice, in 1893. It bears on the chase the arms of the Republic of Genoa. More decoration, between the trunnions, too eroded for identification.



Venice # 2 (#53)

Bronze breech-loading swivel with iron
tiller 17th. century

Caliber 7.5 Cm Length 151.5 Cm

Captured at Tripoli in 1911



Venice # 3 (no local number)
Bronze saluting gun on iron carriage
19th. century
Caliber 4 Cm Length 55.5 Cm



Venice # 4 (no local number)
Bronze breech-loading swivel with iron breech
and tiller probably 17th. century
Caliber 4.4 Cm Length 135 Cm

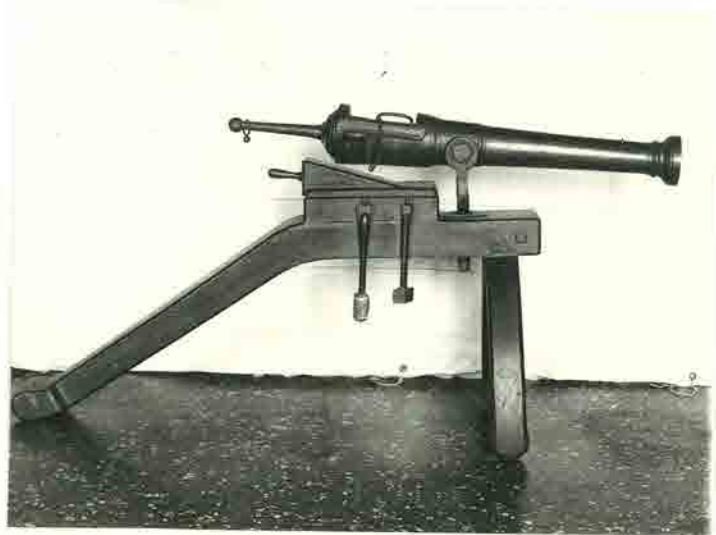


Venice #5 (1004)

Bronze breech-loading swivel with iron tiller

17 th, century

Caliber 7.0 Cm Length (oa) 129.5 Cm



Venice #6
Tube of bronze and iron breach-loading swivel
breech and tiller gone 17th. century
Caliber 4.5 Cm Length 85 Cm



Venice #7 (1124)

Part of bronze breach-loading swivel with
iron tiller, muzzle broken off
Identified as 15th. century, probably 16th.
century, octagonal tube is rare
Caliber 5.2 Cm Length 133 Cm (oa)



Venice #8 (#947)

Bronze breech-loading swivel with iron
tiller, yoke attached 17th. century
Caliber 6.8 Cm Length 131 Cm



Venice#8A (#947)
Breech-loading bronze swivel with iron tiller
Caliber 7.00cm Length 126 cm



Venice #8B (No local number)
Bronze foot mortar
Italian with crest of Napoleon as King
Dated 1809 Galiber 19 Cm Length-



Venice #80 (#1007)
Mortar of cord and leather
Caliber 37 Cm



An extremely rare example of a mortar made of copper wire, rope and leather (14th century). The piece is said to have been used by the Venetians during their war against Genoa (1376-1381). The "carriage" and its elevation setting system is the museum's suggested reconstitution.

VENICE #9 (#54)



Venice #9 (#54)
Venetian bronze piece
17th. century. (1615?)
Caliber 5.5 Cm Length 137 Cm



The cannon bears the arms of the Pasqualigo family.

Venice # 10 (#3329)

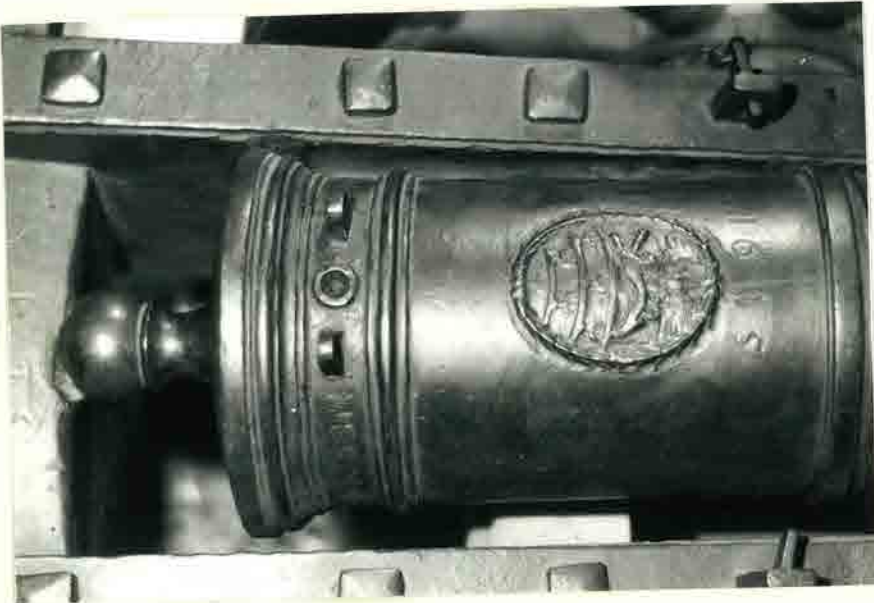
Bronze "colubrina"

"Fu rinvenuto negli scavi della riva di
S. Biagio"

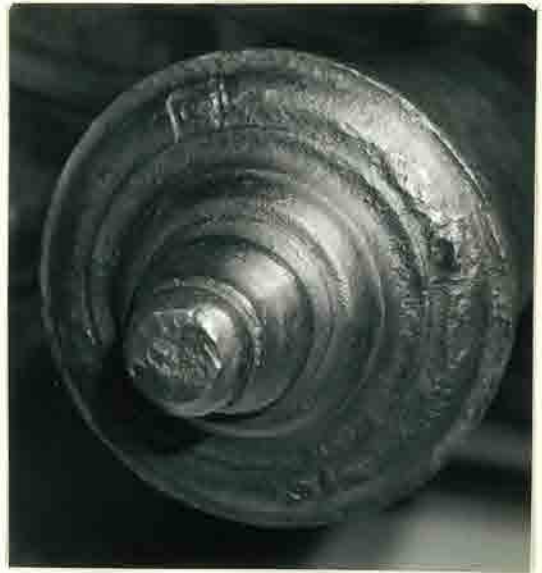
Caliber 6.3 Cm Length 139 Cm



Venice #11 (#1006)
Regimental bronze gun dated 1615
Caliber 5 Cm Len gth 98.5 Cm



Venice #12 (#141)
Bronze "Aspide" 12 pounder,
used at Famagosta in 1571. Cast by
"GALFACIUS ALBERTGHETTI"
Caliber 10 Cm Length 185.5 Cm



NB: The Battle of Famagosta, once a large fortified city — 12th century to ca. 17th century — on the east coast of Cyprus, was fought between the Christians and the Turks.

(Editor)





Venice #13

Bronze cannon of 100 used at Famagosta in 1571
Caliber 17.5 Cm Length 439 Cm Wt. 3570 Kg



Venice #13 continued.





12-pounder, a brass "sacro" or saker, the work of Iacopo di Conti. Recovered from the sea in the net of a trawler off Ravenna. It bears the following decoration, from the muzzle down: the "X" for the Venice Council of the Ten, the arms of Venice (lion with wings), a shield between the initials "AC" and the initials "IC" for Iacopo di Conti. Other decorations and/or marks eroded.

Venice #14 (#1231)
Bronze cannon
Caliber 14.30m Length 333 Cm
Cast in 1543 by "HIERONYMUS ALBERGETTI"



Near the trunnions:
The name of the
smelter, Geronimo
Alberghetti, and the
year, 1543.
On the first reinforce:
The barely readable
arms of the Moro
family and the initials
"IM".



Cannon was on the
bastions of Candia
(Heraklion, in Crete)
during the siege of
1648-1669.





50-pounder, muzzle-loader weighs 2,132kgs., (4,048 Venetian pounds). The barrel is decorated with a pair of eagles, the lion of San Marco surrounded by a crown of oak leaves and the "X" seal of the Venetian Council of Ten.

Venice #15 (no local number)
Bronze breech-loading swivel recovered from
the sea, iron tiller corroded away
Caliber 7.5 Cm Length 110 Cm



VENICE #16 (#1227)



VENICE #16 (#1227)

120-pounder culverin with the muzzle cut. Recovered from the fortress of Famagosta (Cyprus). Signed by the founder, Camillo Alberghetti, 16th century.

The weight is indicated on the base ring as 11,011 (pounds of Venice).



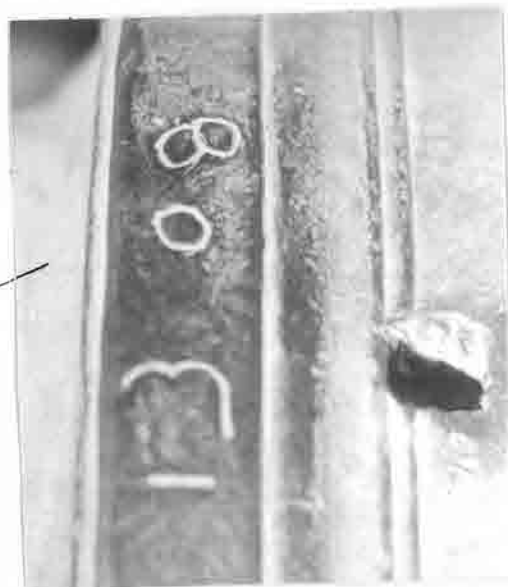


Venice no number (#1274)

Large culverin, the muzzle cut. Was part of the artillery that defended the fort of Famagosta in 1571. The piece was cast by Fabio Alberghetti. It was presented to His Royal Highness, the Duke of Aoste, by the Sultan of Turkey.



Venice no number (#1274) continued.

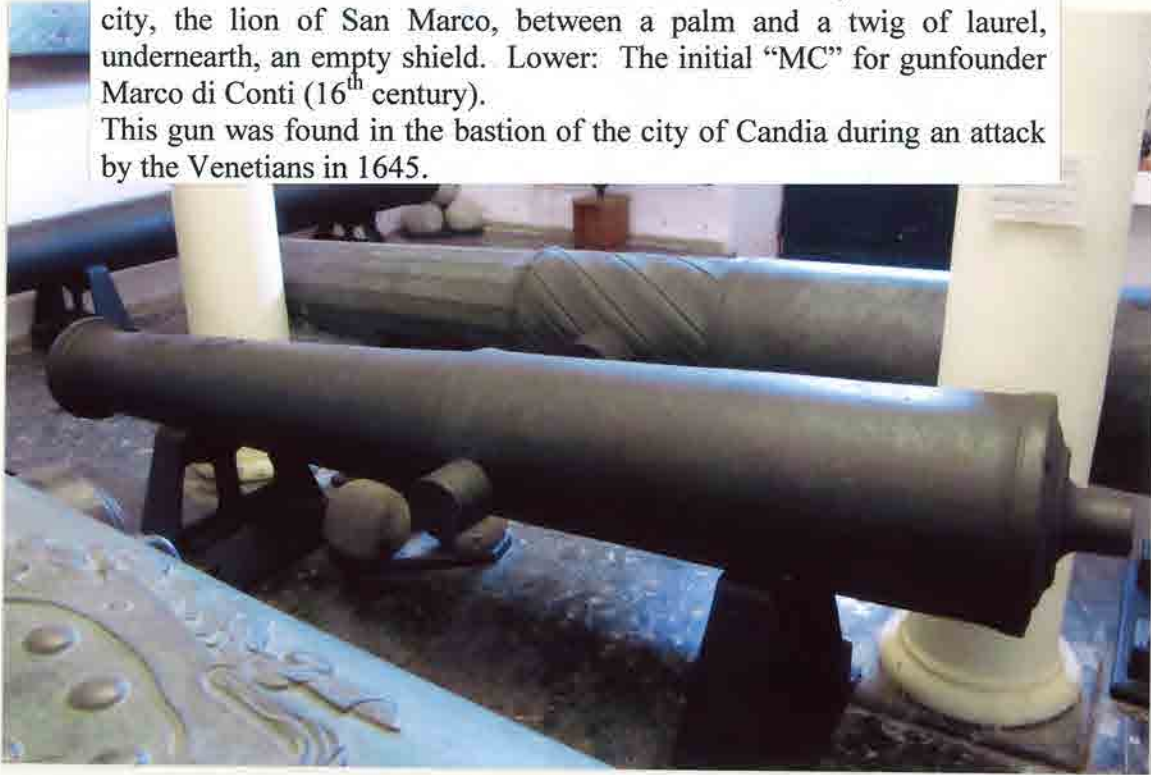


Venice #18 (#1232)

Bronze 60-pounder cannon. Length: 308.5cm., calibre: 175cm., weight 2,575kgs.

On the chase: The "X" for the Council of Ten of Venice, the arms of the city, the lion of San Marco, between a palm and a twig of laurel, underneath, an empty shield. Lower: The initial "MC" for gunfounder Marco di Conti (16th century).

This gun was found in the bastion of the city of Candia during an attack by the Venetians in 1645.



Venice #18 (#1232) continued.



On the chase: The "X" for the Council of Ten of Venice, the arms of the city, the lion of San Marco, between a palm and a twig of laurel, underneath, an empty shield. Lower: The initial "MC" for gunfounder Marco di Conti (16th century).

This gun was found in the bastion of the city of Candia during an attack by the Venetians in 1645.



Venice # 19 (#1223)
Florentine bow chaser for a galley, bronze
Cast by Cosimo Cenni in 1643
Caliber 18.5 Cm Length 530 Cm

See Editor's album:
Venice Naval Museum
for a model of a
Florentine, 17th century
"galera grossa".



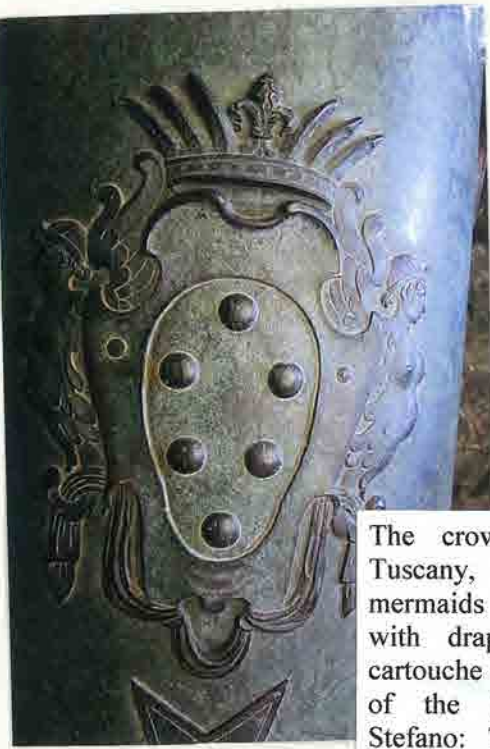


The sight on top of the muzzle crown is a she-angel, one of the four that decorate the muzzle.

The handles (or dolphins) are in the shape of two seated lions.

The breech button is in the form of a lion.

VENICE #19 (#1223)



The crowned shield of Tuscany, flanked by mermaids and garnished with drapes and, in a cartouche within the cross of the Order of San Stefano: The name of the Grand Duke of Tuscany, Ferdinand II, and the date 1643.



Saint Barbara or Sainte Barbe, the patron Saint of all artillerymen since the 14th century. Identified by the tower and/or the palm she is holding.



The signature of the founder: "The work of Cosimo Cenni of Florence".



The weight of the piece in Florentine pounds (about 7,700 kilos).

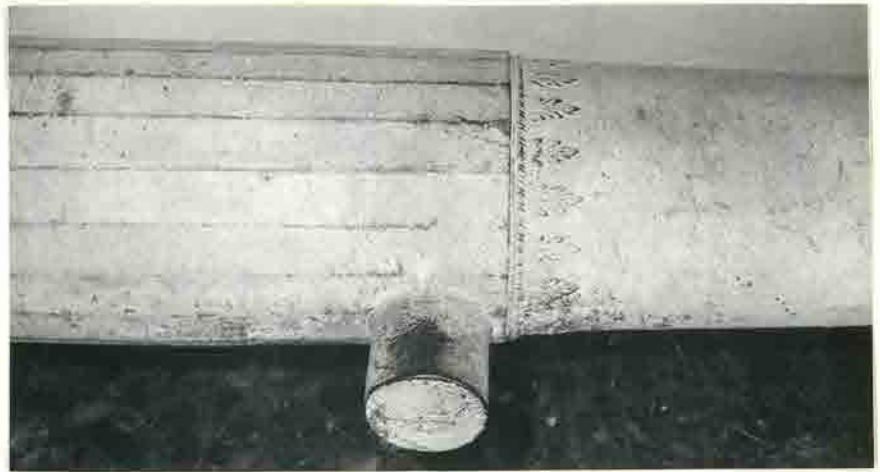
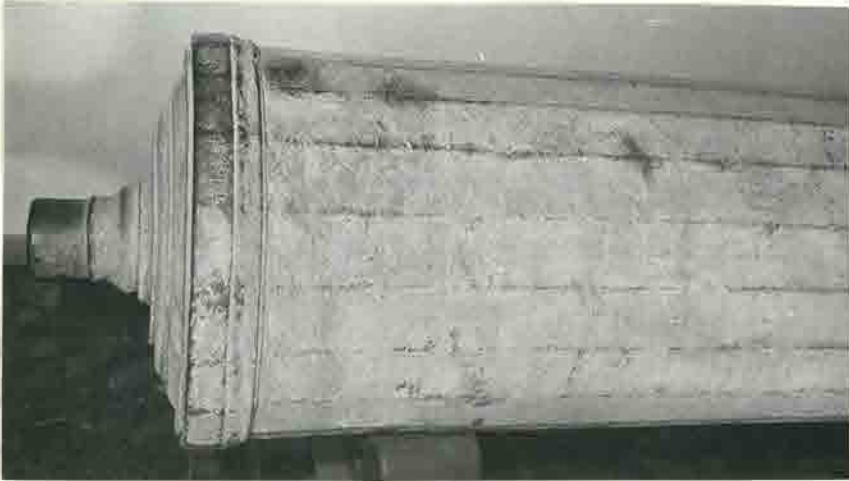
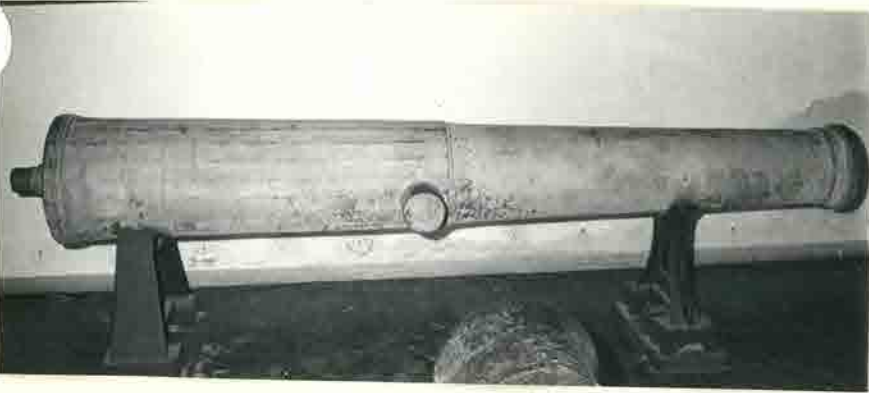
Venice #20 (#1230)



Venice #20 (#1230)
Bronze cannon
Caliber 18 Cm Length 309 Cm

Muzzle-loading, bronze cannon. Calibre: 18cm., length: 309cm. Bears the arms of Venice and the "X" for the Council of Ten.

The initials "MC" stand for the name of the founder, Marco di Conti. The gun comes from the fortress of Suda, in the island of Crete. 16th century.





On the right trunnion
and on the base ring,
the weight of the
piece: 4,774 Venetian
pounds.

Venice #20 (#1230) continued.



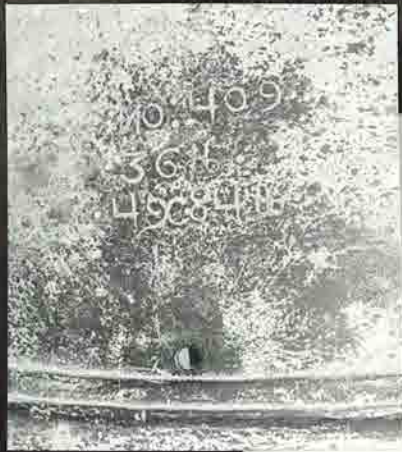
Venice #21



Venetian bronze cannon. Calibre: 17.5cm., length: 329cm. The date 1669 on the chase, behind the muzzle. No dolphins. The lion of Venice on the girdle. At the level of the trunnions: a scroll bearing: "FRANCISCO MAZZAROLI Ω .F." carried by two angels. On the first reinforce, just before the vent, a number of letters and figures scratched (see photo). On the base ring, the indication of the weight: 5,857.



VENICE #21 continued.



Venice #22

"Falcone da 6"

Signed "J.A." (Julius Alberghetti)

Caliber 7.4 Cm Length 280 Cm.

Used at Famogosta in 1571





Venice #22 continued.



Venice #23 (#3646)
French iron naval gun
Dated "An 12" cast at Creusot works
Caliber 14 Cm Length 285 Cm





Venice #24
Bronze Venetian mortar
Cast by "ALBERGHETTI" in
1711
Caliber 20 Cm
Later iron carriage



Venice #25
Bronze Turkish mortar
Caliber 27.5 Cm



No Number

Heavy cast iron mortar. Calibre:
33cm.

A fortress piece, made at the
Carron foundry, Scotland in
1828.



Venice #26
Venetian Bronze Mortar
Circa 1710
Caliber 20 Cm
On later iron carriage

Similar to #24.



No Number

Turkish mortar captured
in the War of Libya from
the fort in Tripoli (1911-
1912).



No Number (#28)



Two cannons given by the British, to Giuseppe Garibaldi in 1860.

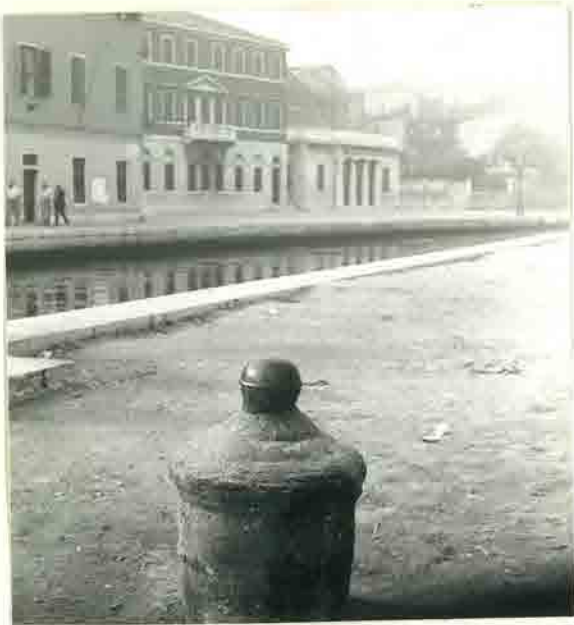


Venice # 27
Group of Breech-loading wrought iron guns
Salvaged from the sea

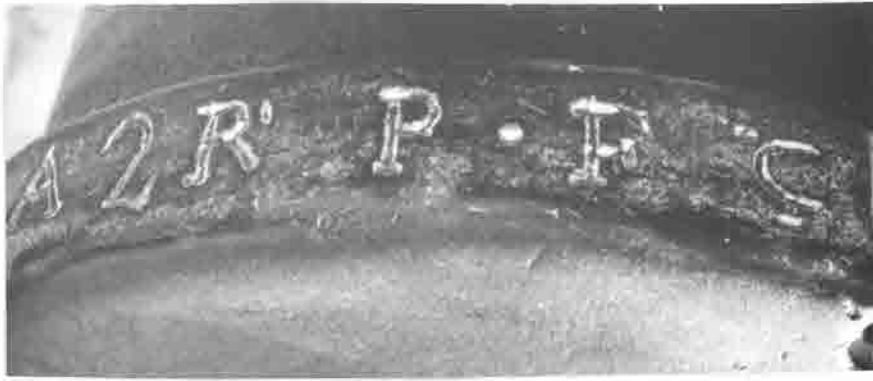


Venice #28

Cannon bollards on quay at channel to Naval Arsenal
opposite Naval Museum



Venice #29
Cannon bollard
French iron naval gun on Rive Schivoni near
Ducal Palace
"X" cut on cascabel (crossed?)



Venice # 30

Bronze cascade abels cut from 17th. century guns and
set in the wall of a house at gate to Naval Arsenal



Venice #31

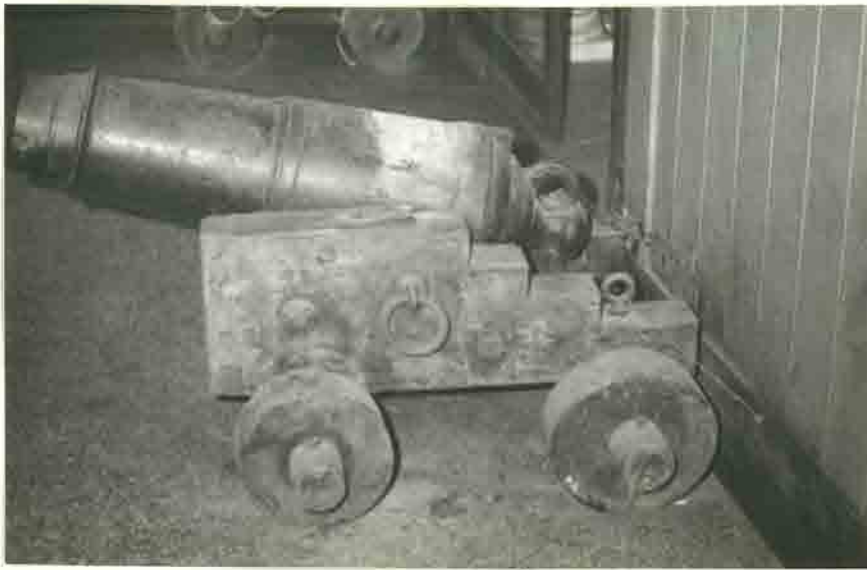
Toggle mounted carronade in regular truck
carriage outside door of Galleria Cesana
Calle Larga S. Marco

Inscribed on first reinforce

"G & J OLIVER

WAPPING

LONDON"



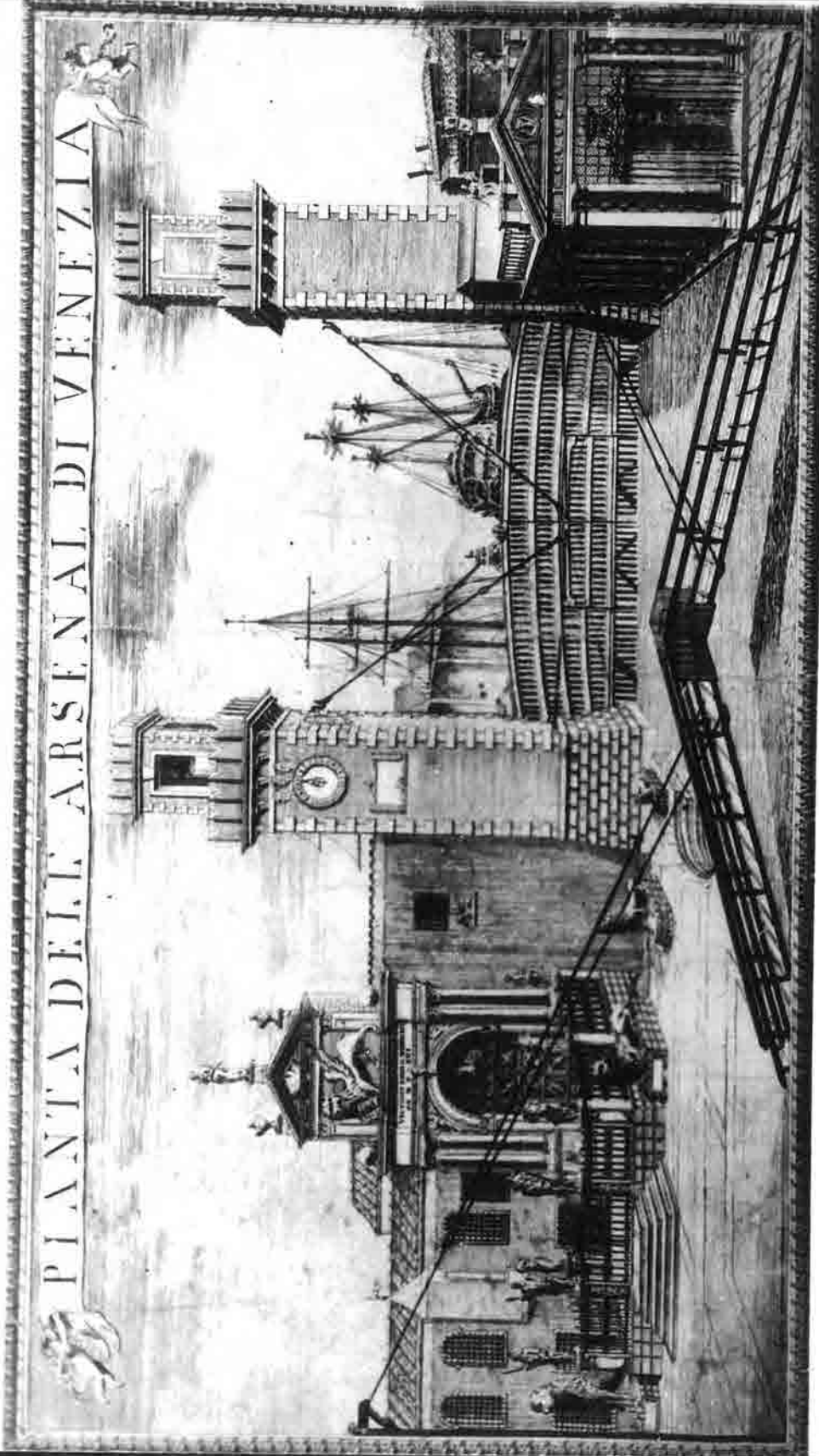
VENICE – No number.
In Naval Museum?



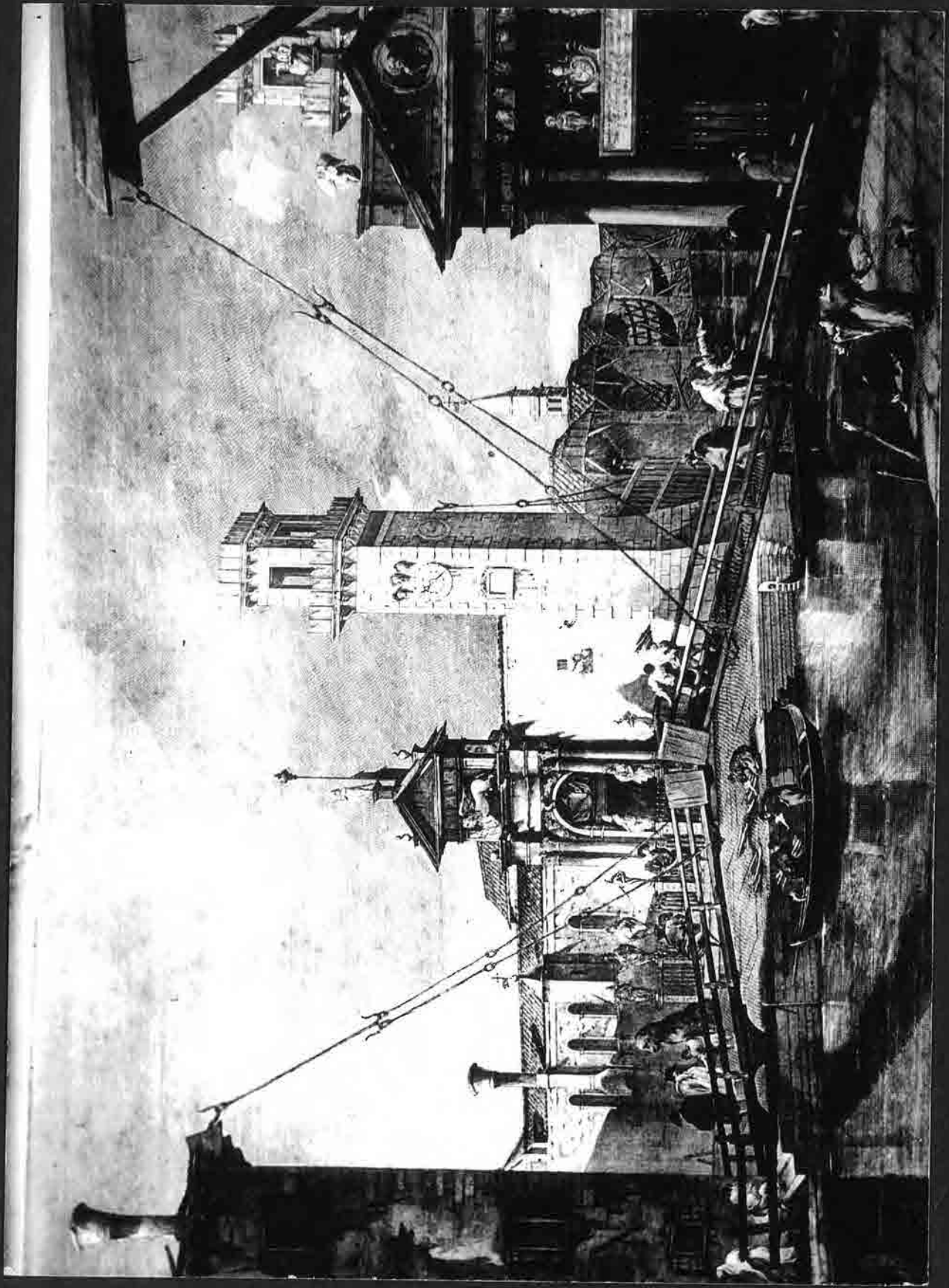
Bronze 16th century swivel gun. Complete with its original breech-block and some remains of its iron tiller. The initial "A" may refer to the foundry of the Alberghetti family. The engraved weight (200) is in Venetian pounds.



The piece's, 5 pound original bronze "mascolo".



The entrance to the Arsenal of Venice in the 18th century. (From a 1790 engraving by the "Abate Maffioletti".)



MUSEUM:
MUSEO STORICO NAVALE DI VENEZIA
NAVAL HISTORICAL MUSEUM OF VENICE

Location: Adjoining the old Arsenal of the Serenissima, on Campo San Biagio.

Postal address: Museo Navale Storico di Venezia — Castello, 2148 — 30122 Venice — Italy

Telephone: ++39/041 520 02 76

Fax: ++39/041 277 74 81

Email: segretaria@museonavale.191.it

Website: www.marina.difesa.it/storiacultura/ufficiostorico/musei/museostoricove/Pagine/IlMuseo.aspx

Curator: C.V. Marco Sansoni

Services offered: A small library, accessible on previous agreement.

Opening hours: Monday - Friday: 8h45-13h30. Saturday: 8h45-13h. Closed on Sundays.

Recent catalogues and publications on the history of the building and its collections
Include: Casoni, *Guida por l'Arsenale*, Venice, 1829; Ufficio Storico della Marina Militare, *Guida Catalogo del Museo Storico Navale di Venezia*, Venice, 1965 and later editions.

History of the building: The building which houses the museum, dates from the 15th century. It is the ancient Granary of the Serenissima. It includes today a “Ship Pavilion” and the Church of San Biagio (11th century, restored in the 18th century).

History of the museum and its collections: The Naval History Museum was founded in 1919. The origin of the collection is a series of ship models that were collected in the 18th century and preserved at the time in the “Casa del Modelli” (the House of the Models). The present day collections are displayed on five floors: The Ground Floor, the First and Second Floors present artefacts related to the Italian Naval Fleet, as well as to other ancient maritime republics, the master piece being the BUCINTORO, the ceremonial barge of the Doges of Venice. The Third floor exhibits models of ships that were in use in the Venetian lagoon, including, gondolas. Models of junks and other oriental items from China can also be seen there. The Fourth Floor, called “the Swedish Gallery”, illustrates the links between Venice and Sweden navies. It ends with a worth-seeing collection of sea shells.

The “Ship Pavilion” was originally the oar workshop of the Arsenal. It houses antique Venetian boats, naval vessels and a part of the engine room of Guglielmo Marconi’s yacht ELECTRA.

The Church of San Biagio (11th century), also part of the building, preserves the body of Admiral Angelo Emo and the heart of H.I.M. Archduke Francis Frederik of Hapsburg.

The Museo Storico Navale of Venice, 2013.



The building that now houses the Museo Storica Navale in Venice was, in past centuries, the granary of the Serenissima Repubblica.



The stern lantern, with three lights, of a large Venetian galley of the 16th century. The two lateral lights (signal lights) are borne by carved wood cornucopias. (Documented in the 16th century already in the Palazzo Contarini.)

The three lanterns were lit only to indicate the presence of the Admiral on board the flagship.

Detail: The Vanes that top each of the three lights of the triple lantern. They show the winged Lion of St. Mark, holding in its paw the Saint's Gospel. St. Mark's Lion is the ancient and present day symbol of the city of Venice.





Row of bronze swivel guns, some with part of their original yoke, all of them breech-loaders, all breech-blocks or "mascolos" missing, but with their original iron tiller (for easier aiming).

Note: The second piece from the left combines a bronze tube with a cast iron breech.

Model (in the Museo Storico Navale of Venice) of a “galea grossa” (the heaviest type of galley at the time) of the Order of Santo Stefano, Tuscany, 17th century.

And:

Possibly the finest piece of naval ordnance in the museum: the main, central bow chaser for exactly that type of “galea grossa”.



Florentine bronze bow chaser for a galley, cast in 1643 by Cosimo Cenni. Calibre: 18.5cm., length: 530cm.

The decoration is outstanding.

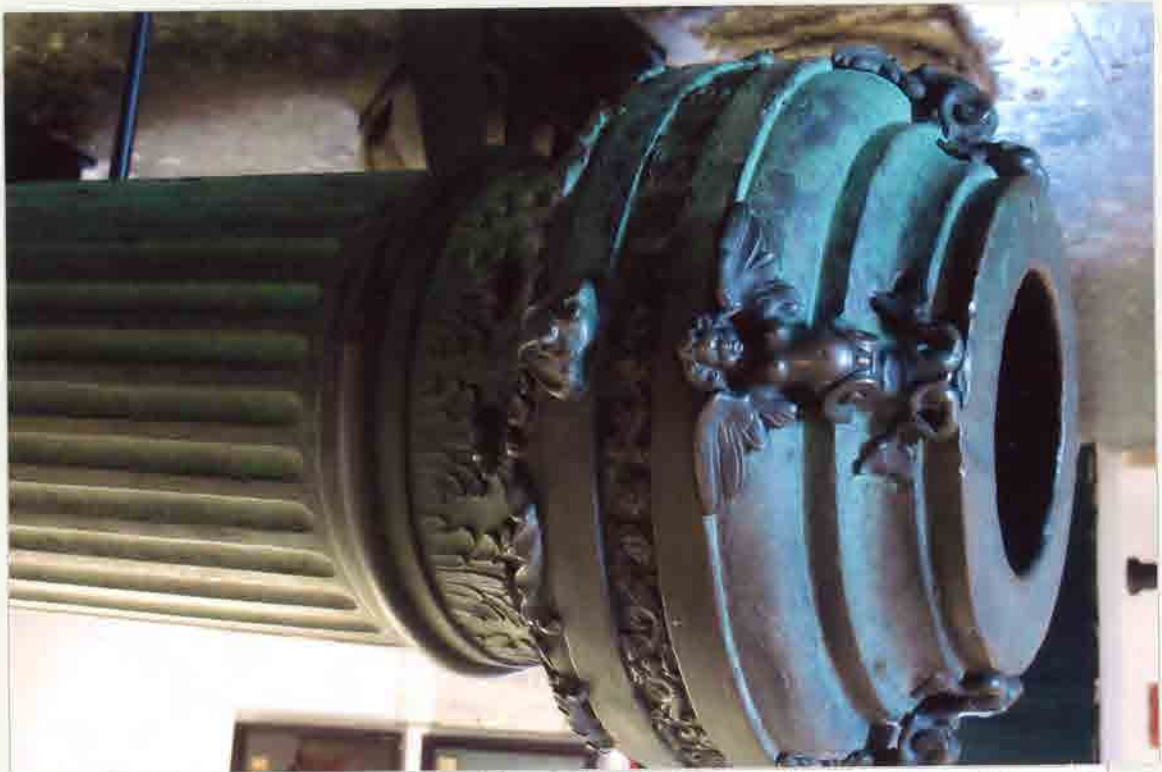
This piece was cast to serve as the main bow chaser on the heavy galleys (“galeas grossas”) of the Duchy of Tuscany.



The breech button, holed to serve as a ring, and the “dolphins” are in the shape of lions.



Continued.



Four winged, two-tailed mermaids graciously decorate the muzzle swelling and moulding.



The lion-shaped "dolphins".

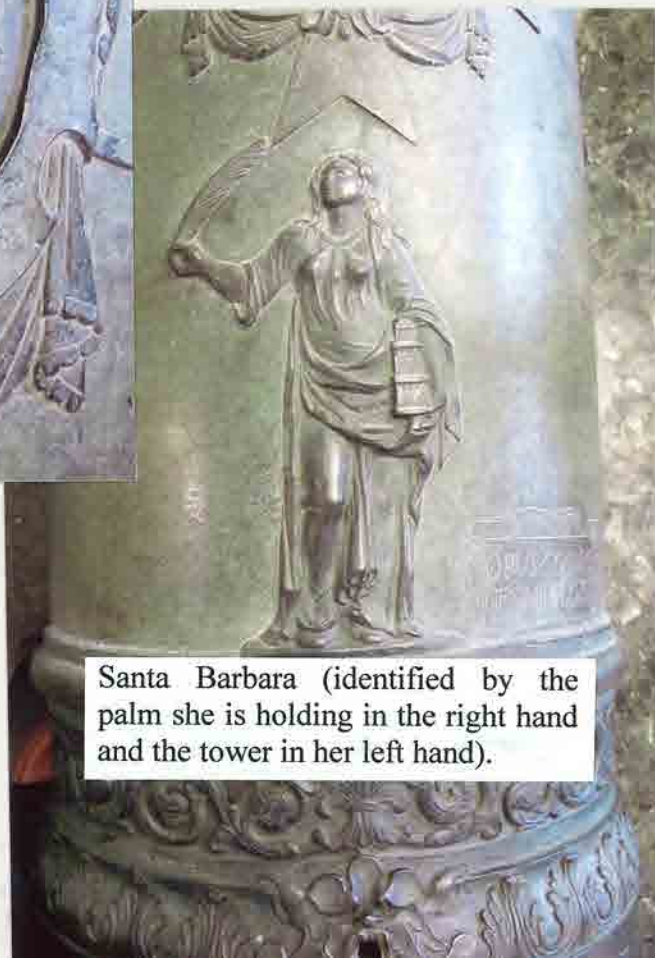
Decoration on the first reinforce.

Crowned coat of arms of the Grand Duchy of Tuscany (capital city: Florence) at the time: Grand Duchy of Etruria.



On a draped heart-shaped cartouche, set on the Cross of the Order of Santo Stefano: FER (DINANDUS). II GRAND DUKE OF (H) ETRURIA – 1643.

(Ferdinand II of Medicis, 1610-1670, became the Grand-Duke at age ten. Etruria is called today “Tuscany” and has been since 1809 when Napoléon created the “Grand Duché de Toscane” for his sister, Elisa Bonaparte (1777-1820).



Santa Barbara (identified by the palm she is holding in the right hand and the tower in her left hand).



The remnants of three iron breech-loaders being “petriere” or perriers (throwing stone cannon balls.) Found during the digging of the port of the Lido, in 1910. In use, in the 15th century. The reinforcing rings are remarkable.

Two iron 15th century swivel guns raised in 1910 from the waters of the Lido, Venice during harbour works.

One is a muzzle-loader; the other is a breech-loader with its original iron breech block. The wooden "carriages" or rather stocks have been reconstructed by the museum. Both were perriers or "petriere" (throwing stone cannon balls).





Small muzzle-loading portable gun. 19th century. Percussion system.

MENDEL L. PETERSON LGA

VENICE

**MUSEO CORRER
(CORRER MUSEUM)**

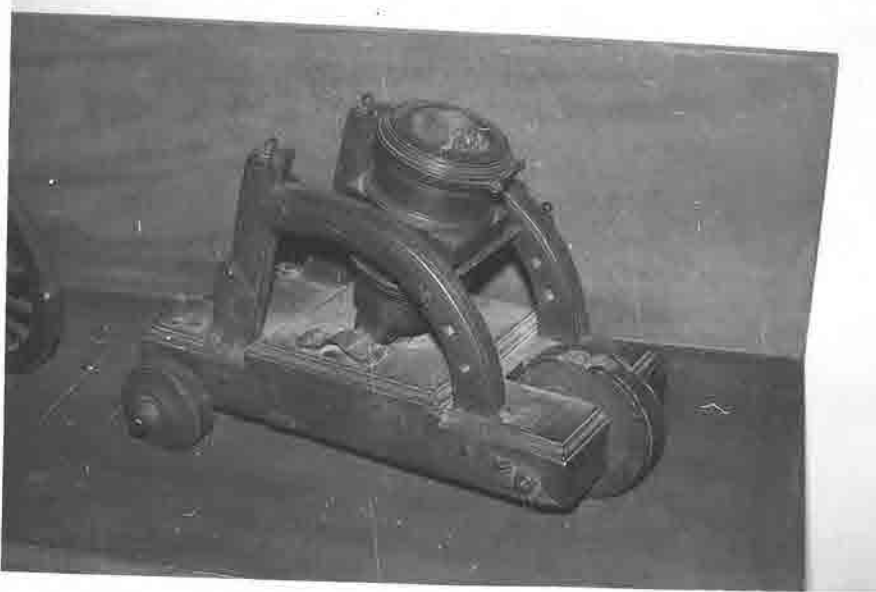
This short LGA consists of 4 folios assembling, 24 photos of apparently very accurate small scale models of many pieces of artillery.

The photos are very good and sharp, but no field notes have been found (if MLP made any). The photos were not made by him but, at his request, by a Venetian friend of his, Marco Morin, in 1971 (2nd visit of MLP to Venice, he had made a first research trip, in 1969). The photos bear no captions.

4



5



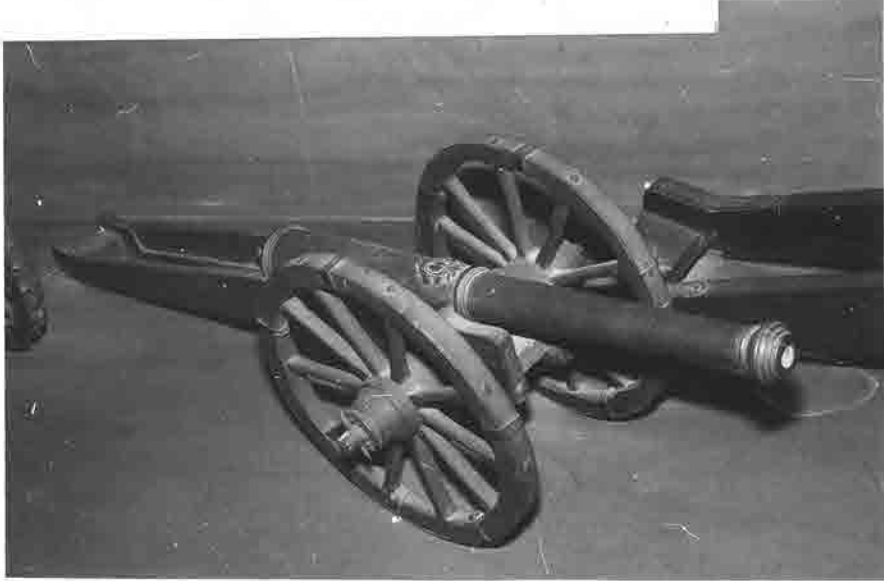
10



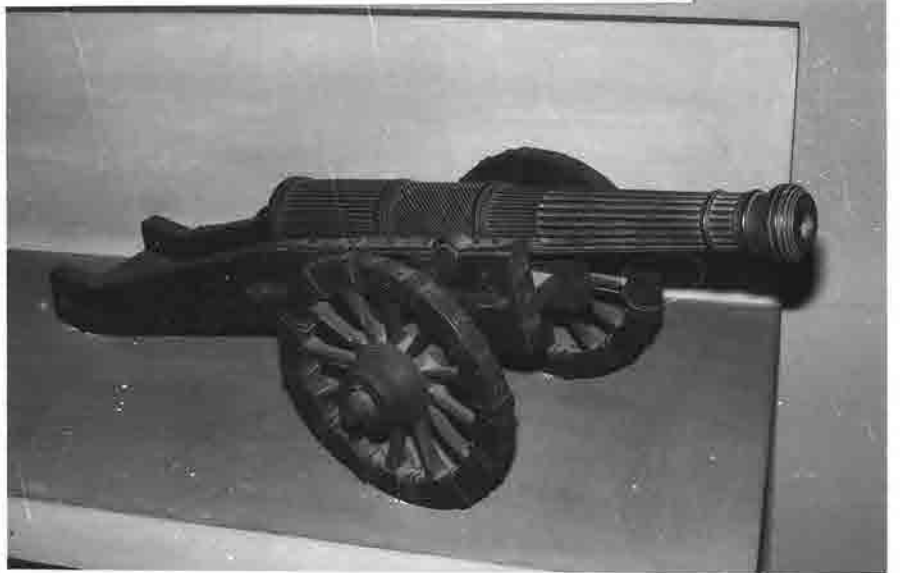
3



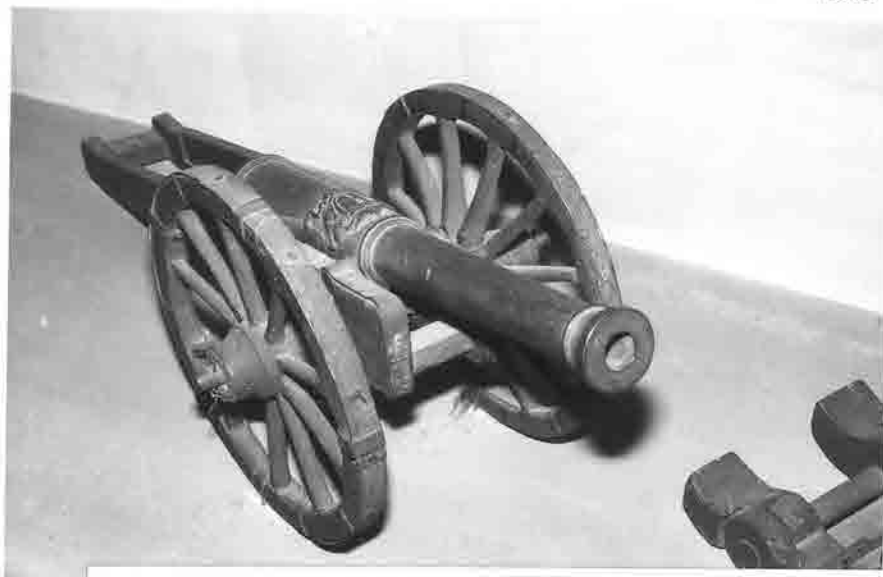
7



9.



11



12



27 (12BIS)



13



14



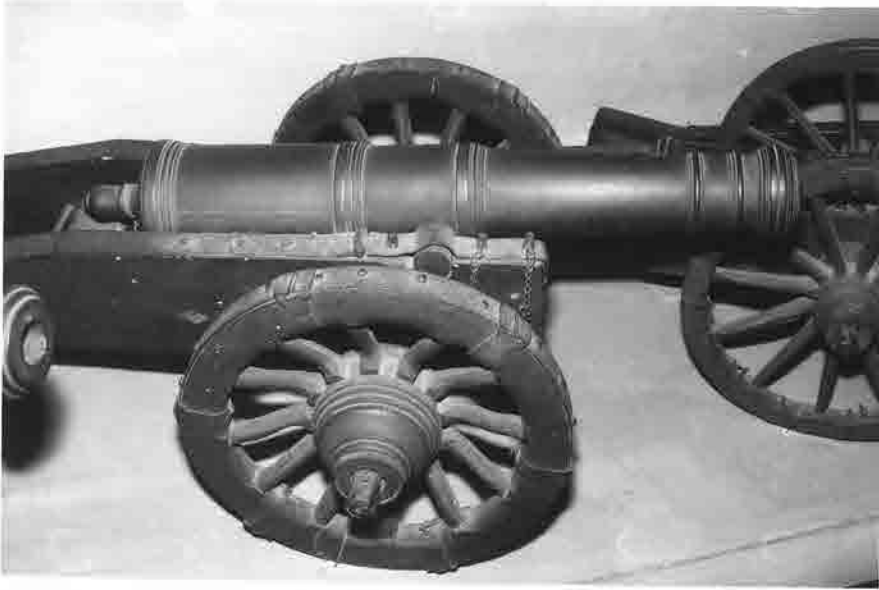
15.



16



17.



18



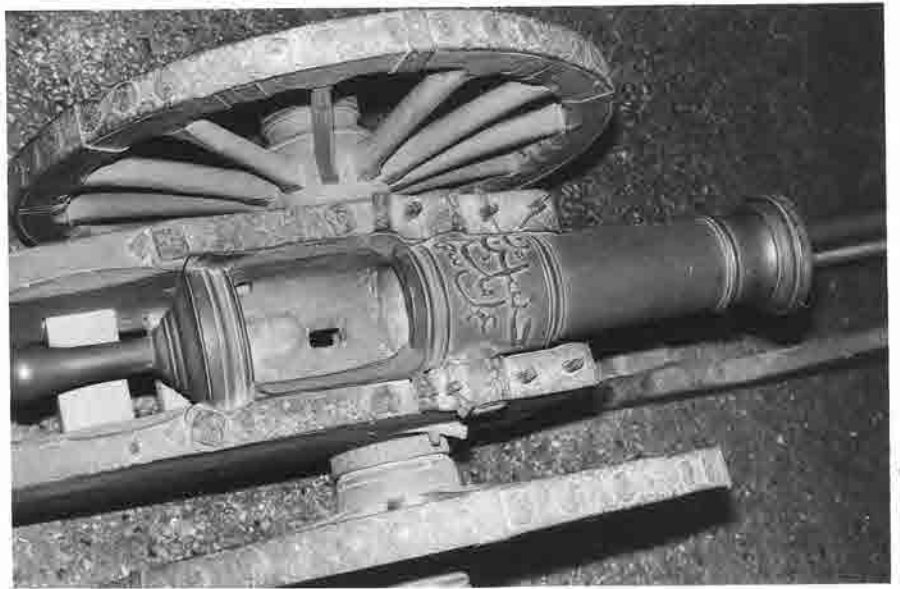
20



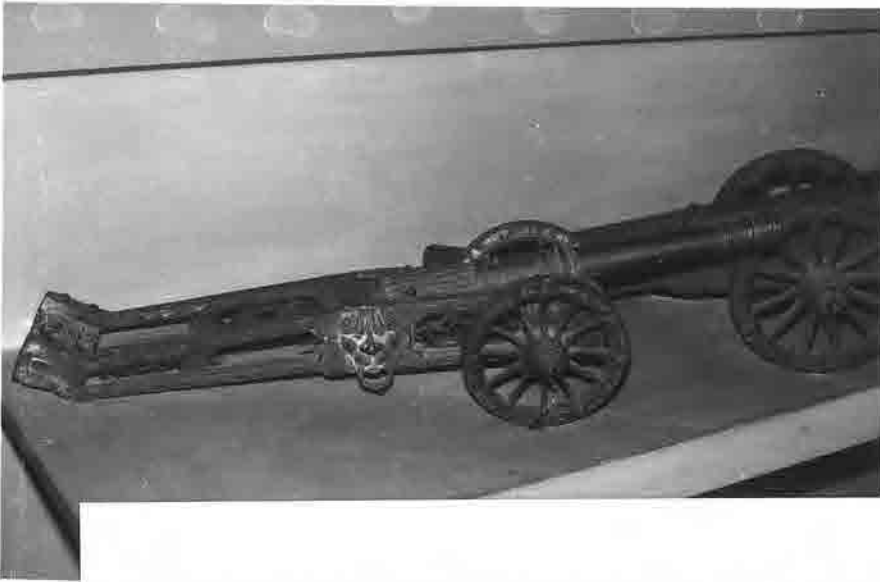
21.



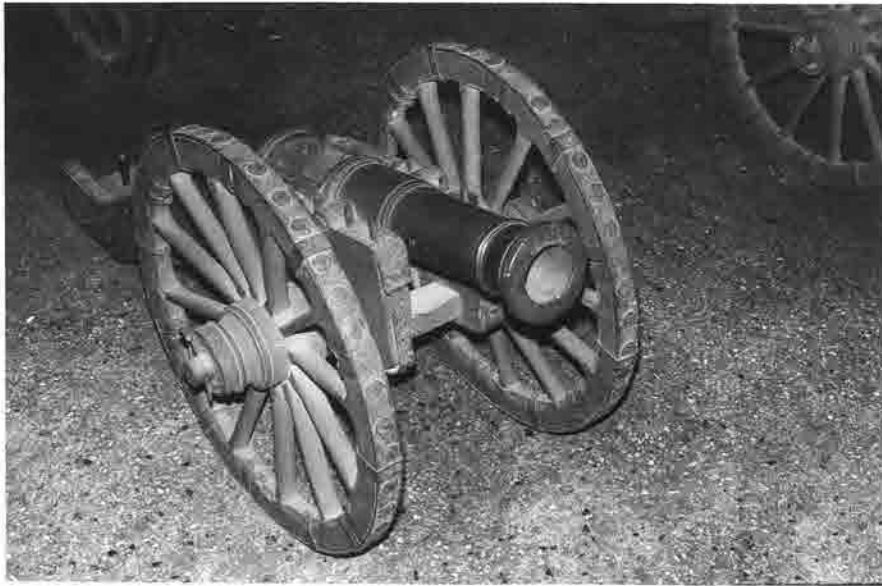
22



19



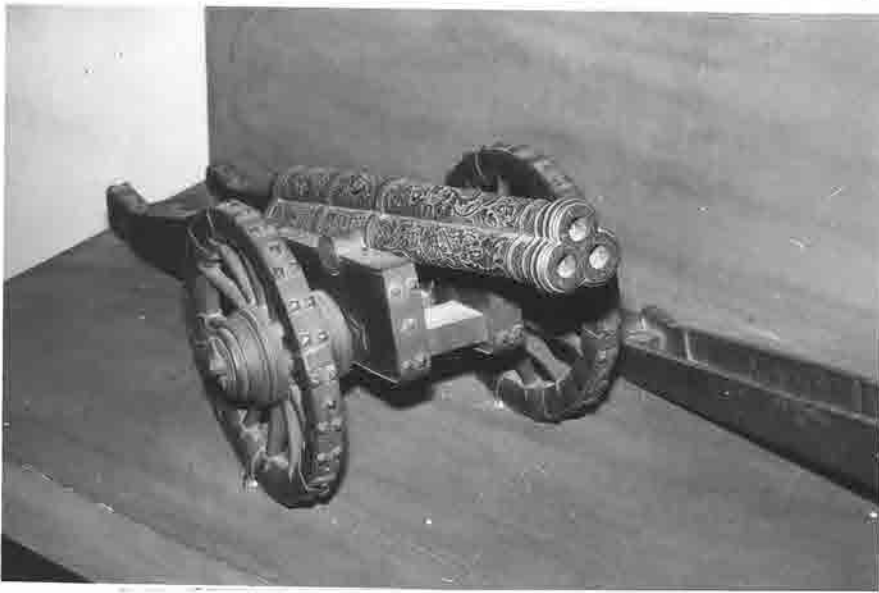
23



24



25.



6



26 (6BIS)



EDITOR'S ALBUM FOR

VENICE

**MUSEO CORRER
(CORRER MUSEUM)**

Museo Correr

Palazzo Ducale
Venezia
Fondazione Musei Civici Venezia

La storia di Venezia:
il Doge, il mare,
la Fortè, la battaglia

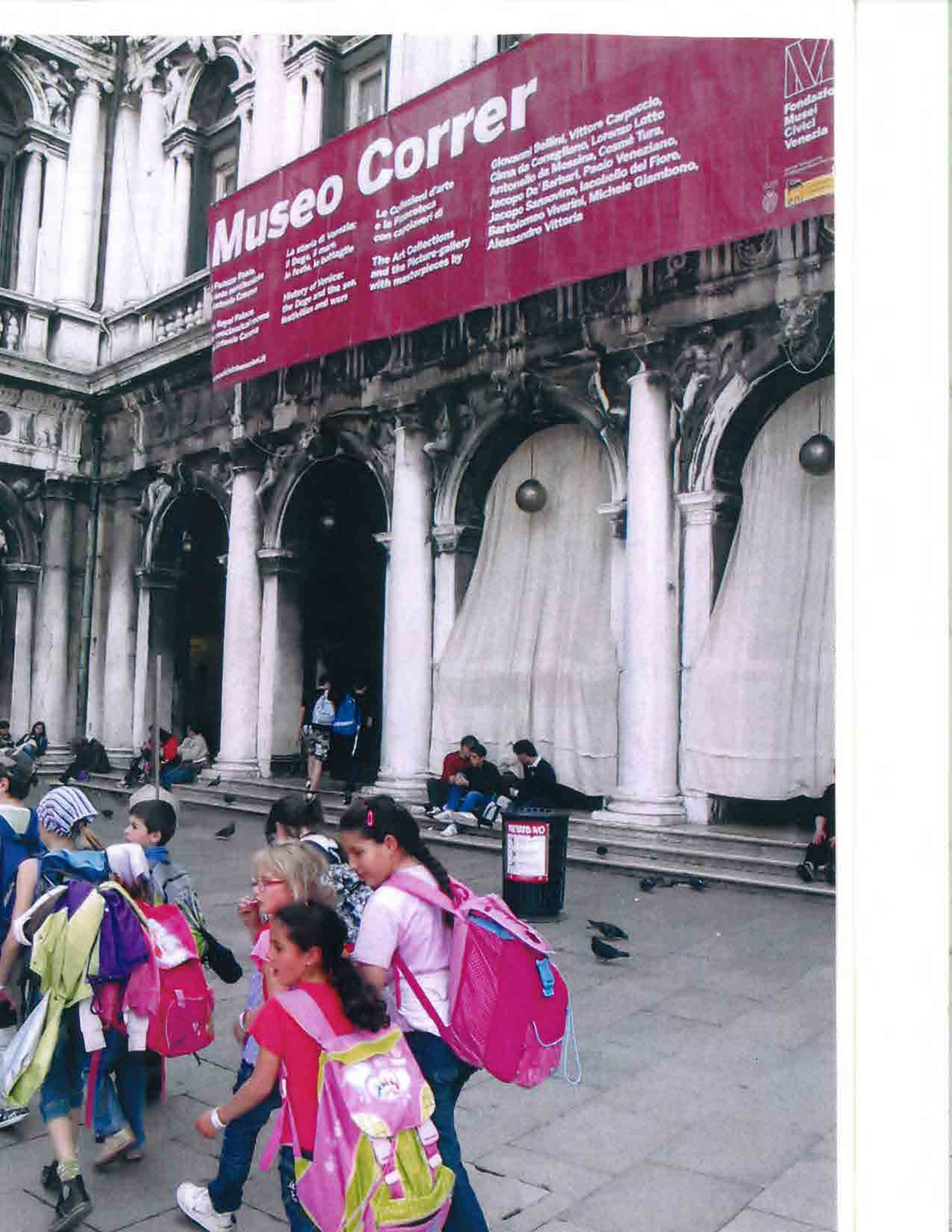
History of Venice:
the Doge and the sea,
the battles and wars

Le Collezioni d'arte
e la Pinacoteca
con capolavori di

The Art Collections
and the Picture-gallery
with masterpieces by

Giovanni Bellini, Vittore Carpaccio,
Gianni da Correggiano, Lorenzo Lotto,
Antonio da Messina, Cosmè Tura,
Jacopo de' Barbari, Paolo Veneziano,
Jacopo Sansovino, Jacovello del Fiore,
Bartolomeo Vivarini, Michele Giambono,
Alessandro Vittoria

Fondazione
Musei
Civici
Venezia





Scale models of cannons and mortars from the Museo Correr Collection.



Six small cannons, Turkish and/or Venetian, said to be naval guns and/or field pieces of the 17th Century (the carriages are modern and for display purposes only).



Land "harquebuses" mounted on modern (and only for display) tripods ("treppiedi" or "forcine").



A "macchina" (a machine or device) with twelve firing mouths, called "organo" (organ) of the XVII century – Probably an experimental piece, meant for siege operations and to be used to fire grenades or incendiary bombs (?) over walls. It consists in fact, of a row of 12 miniature mortars, fitted on as many stocks.

The room called “Armeria Morosini”, the Morosini Armoury” contains artefacts linked with Francesco Morosini, one of the last great admirals of the Serenissima’s navy whose successive campaigns led to Venice regaining control of the whole Peloponnese.

In 1688, Morosini was elected Doge and he reigned until his death, in 1694, when he was fatally wounded during yet another naval encounter with the Turks, off Napoli di Romania (today: Nauplia, in the Gulf of Argolis).

Original, personal mementos of the Doge include his carved coat of arms (in wood) his “corno dogale” – or doge’s hat – his “bastone di comando”, his sword, his portrait and the gilded “inginocchiato” – or prie Dieu – from his admiral’s flagship.

Paintings on the walls (see next page) include scenes of naval battles against the Turks (notice the bow chasers on the galley) and the Doge’s funeral procession from Napoli di Romania. Notice in the cortege the long artillery train.



A CHRISTIANI CONTRA TVRCHI ALLI SCOGLI CV

Painting in the style of the 17th century, Venetian school (detail).



MUSEUM:
CIVICO MUSEO CORRER, VENEZIA
CORRER MUSEUM, VENICE

Location: Piazza San Marco, in front of the basilica, in the Napoleonic wing of the “Procuratie” building.
Postal address: Civico Museo Correr — Piazza San Marco 52 — 30124 Venice — Italy
Telephone: ++39/041 240 52 11
Fax: ++39/041 520 09 35
Email: info@fmcvenezia.it
Website: www.museiciviviceneziani.it
Curator: Giandomenico Romanelli (Direttore Armerias)
Contact person: Catalogue and Collections: ++39/041 240 52 11
Services offered: A specialized Library about Art and History of Venice, a Print Cabinet, as well as photographic archives.
Opening hours: From April 1 to October 31: every day 10h-19h.
From November 1st to March 31: every day 10h-17h. Closed December 25 and January 1.

Recent catalogues and publications on the history of the building and its collections include:

History of the building: The “Procuratie Nuove” building, which houses the Museo Correr was originally devoted to municipal offices. It was built from 1582 by Vincenzo Scamozzi and later transformed into a Royal Palace, before being given back to the city in 1920.

History of the museum and its collections: The nucleus of the collection in Museo Correr is a donation by Teodoro Correr (1750-1830). Besides its art collection and artefacts related to the everyday life in Venice, the museum presents arms and armour from the 17th-18th centuries, trophies from Venice’s wars, Turkish and Venetian flags and banners and a department that illustrates the military history of the Risorgimento.

MENDEL L. PETERSON LGA

VENICE

**MUSEO PALAZZO DUCALE
(MUSEUM OF THE DOGES PALACE)**

Two rooms only of the palace, display artillery pieces.

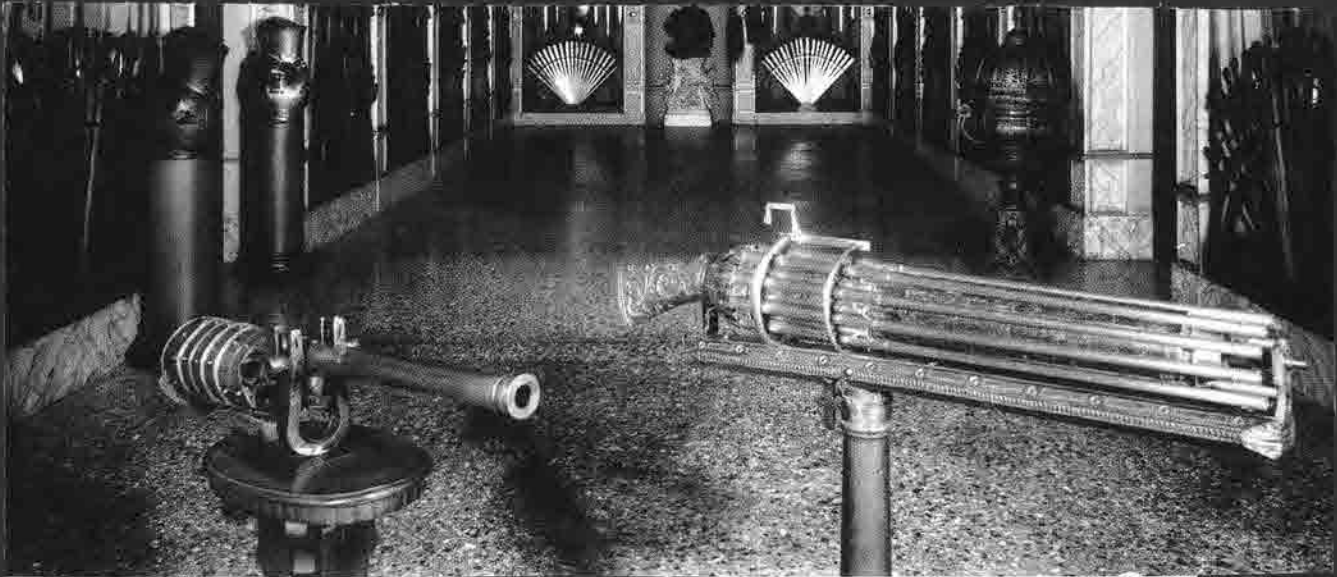
The “Sala Della Colubrina” displays a superb presentation piece, complete with its original, much decorated field carriage.

The “Sala Morosini” displays two experimental pieces, very early machine guns.

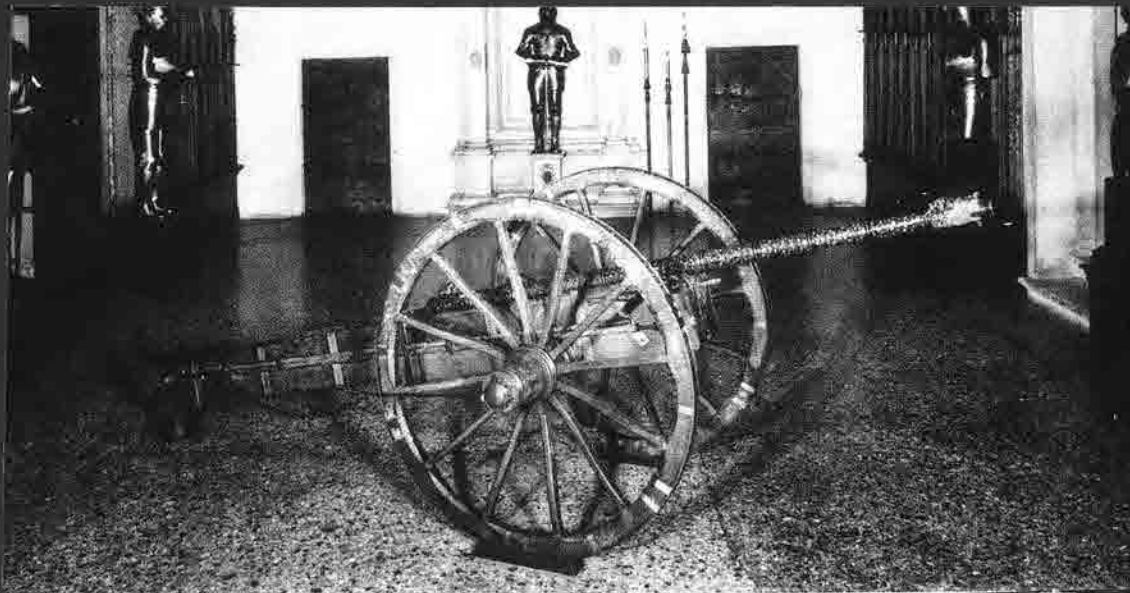
The LGA prepared by MLP consists of 1 page. He did not made any comments on those guns and he seems to have ignored the artillery related paintings.

The three exceptional pieces still on display are commented on in the editor’s album, which follows the MLP LGA.

**ARMERIA HALLS
(HALLS OF THE ARMS AND ARMOURS)**



The Morosini Hall in the Armeria of the Palazzo Ducale, unchanged since the time MLP visited. Photo Ardo.



The Culverin Hall in the Armeria of the Palazzo Ducale as it was, in the 1970s when MLP visited. It has not changed much since then. Photo Ardo.

EDITOR'S ALBUM

ITALY

VENICE



Photo: Robert Stenuit

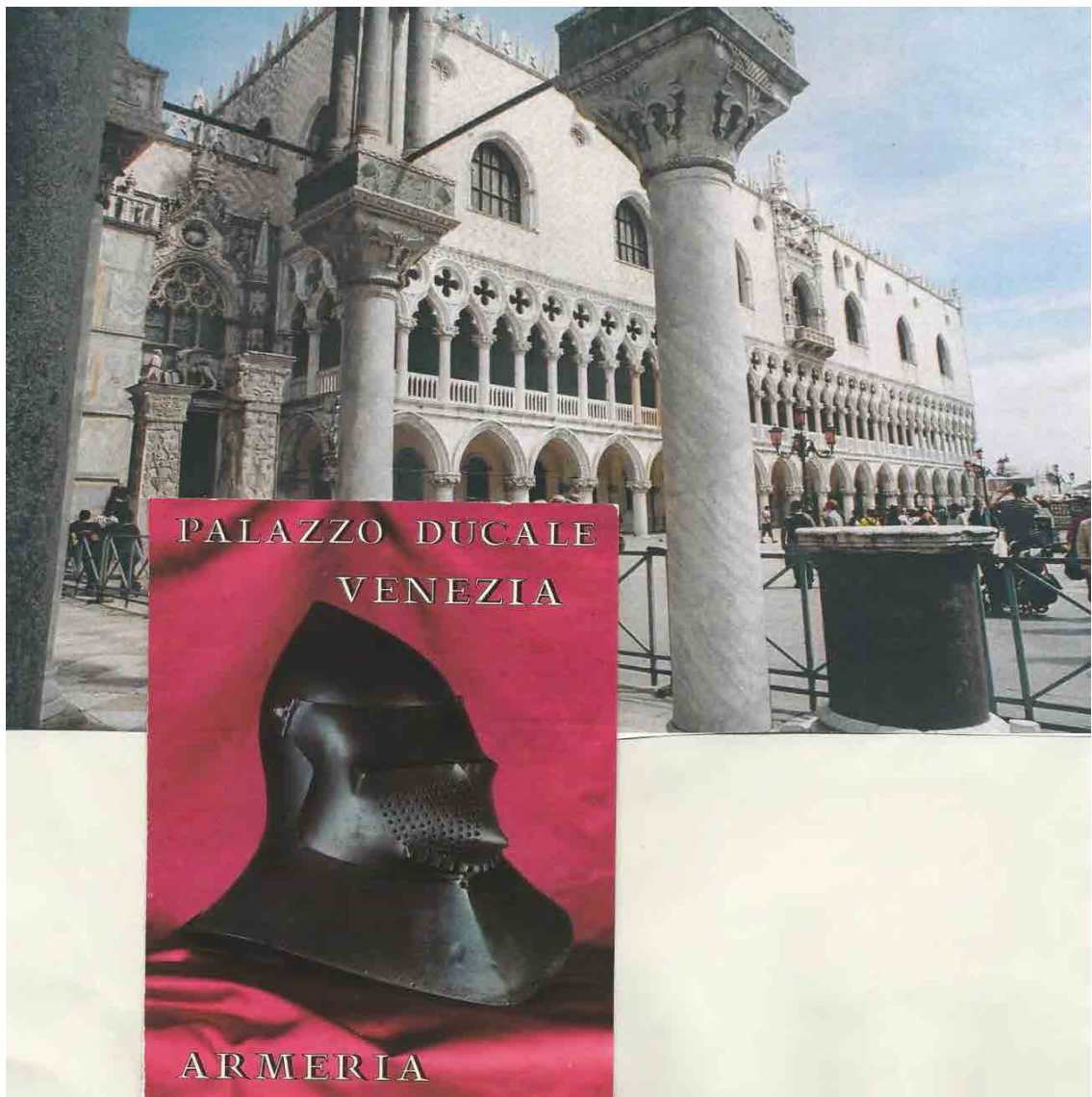


Painting by Francesco Guardi, Venice (1712-1793)

EDITOR'S ALBUM

VENICE

**MUSEO PALAZZO DUCALE
(MUSEUM OF THE DOGES PALACE)**

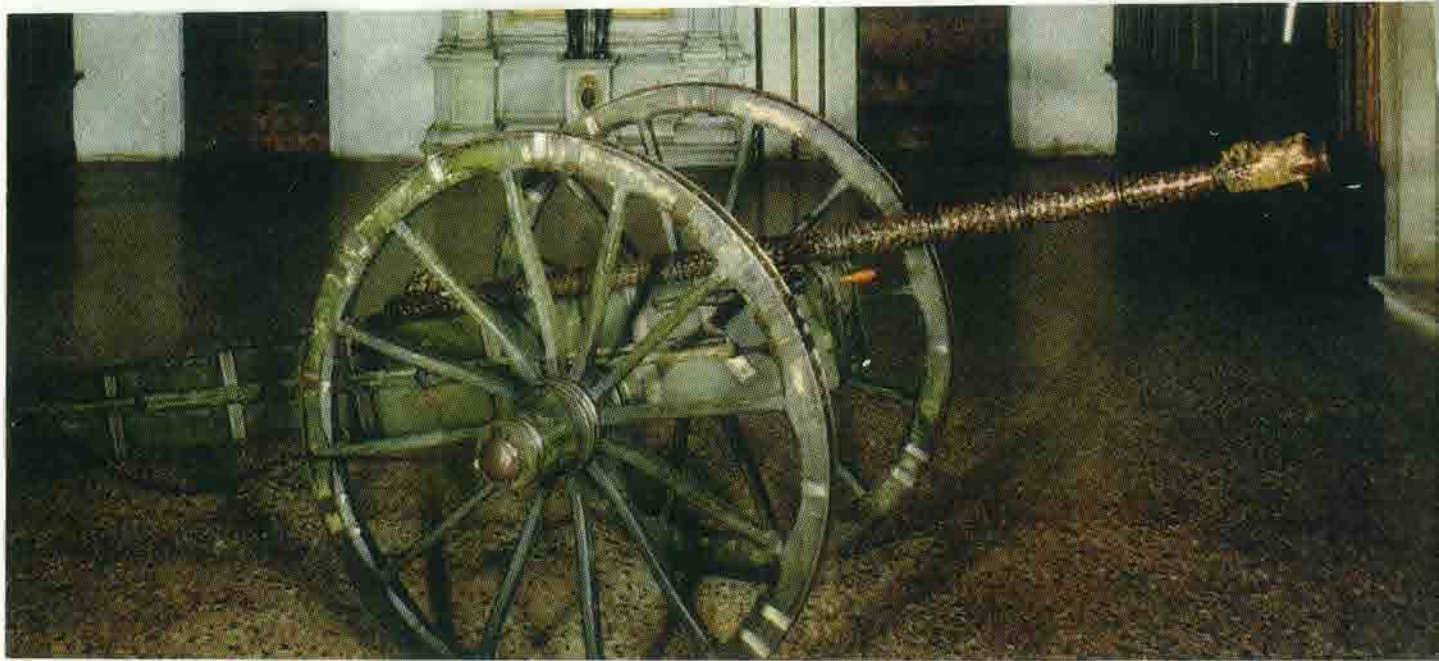




Early prototype of a machine gun-like weapon (exact date uncertain). It has a single barrel and revolving chambers for cartridges and projectiles.



Early prototype (exact date uncertain) of a machine gun-like weapon. It has 10 barrels, each with its individual chamber for cartridge and projectile.



The famous so-called "Colubrinetta".

MENDEL L. PETERSON
LARGE GREEN ALBUM

BELGIUM

UPDATED WITH THE CORRESPONDING
EDITOR'S ALBUM

MENDEL L. PETERSON LGA

BELGIUM

**THE MENDEL L. PETERSON LARGE GREEN ALBUM (LGA) FOR
BELGIAN MUSEUMS AND COLLECTIONS**

The MLP so-called “large green album” titled “Brussels” contains twenty-nine folios duly numbered 1 to 29 (there is a folio 13a and several folios are double faced) and, without transition or explanation, four folios numbered 41 to 44.

The first twenty-nine folios contain photographs taken in the “Musée de la Porte de Hal” and the last four contain photographs taken at the “Musée Royal de l’Armée et d’Histoire Militaire”, outside only. Two Manila envelopes attached in the same album are titled “Brussels negatives” and “Brussels field notes”.

Inspection of the negatives has not explained the anomaly in the pagination. There are negatives for the first twenty-nine folios of the “Musée de la Porte de Hal” and the ones used for folios 41-44 at the “Musée Royal de l’Armée”.

As for the envelope titled “Brussels field notes” it contains, first, nine pages of notes that have been used thoroughly by MLP in the captions of photographs n°1 to n°29. The next six pages of notes however, titled “Museum Mil. Hist.”, refer to sixteen photos that, next to their description, were marked by MLP “n°30 to n°44”. All, but the last four, now missing from the album (neither have the photographs or the negatives been found in the many boxes marked “to sort” or “miscellaneous” etc.). To make the mystery darker, there are layout indications on MLP’s notes as to the place where the photographs now missing, should have been pasted, and to the space they had to occupy. The inventory number of the mysteriously missing guns, etc. was X-80, X-79, X-97, V-3487, V-3488, IV-1678, IV-1682, II-762, III-775, and III-753. (Note that X-numbers are old “Porte de Hal” reference numbers that reveal to us today the provenance of the artillery pieces.) It is to be noted that these cannons were all inside the buildings whereas the four pieces of which the photos have survived were outside of the building (on the pavement in front) these were described as “flash photos” made with “a new roll” (in his hand written notes on the envelope of the negatives).

Note also that after the first title “Museum Mil. Hist. Brussels” is a written mention “no photos”. It is not clear however if this mention refers only to the cannon bearing inventory number X-80 or to all the cannons inside of the Brussels “Musée de l’Armée”.

The Editor has re-taken the needed photographs (missing or never made) according to the detailed notes of MLP, with the unimportant exception of the cannons X-80 (which largely duplicates X-79), V-3488 (duplicate of V-3487), III-753 and III-775, four guns which are no longer on display, but probably in storage. They are identified by the words “Photo RS”.

A last, amusing note: A blunt statement in MLP’s field notes bears testimony to the irritation of the ways of the Royal Army Museum’s organisation (or lack of) caused him: “All a jumble – one 15th century wrought iron gun displayed with 19th-20th century shells”. The situation has not changed today, and in fact, this is true for most of the cannons in all rooms of the museum but, in truth also, the differences in calibre and the chronological incompatibility are so enormous that no one can be misled. This being said, the identification and general information concerning individual cannons can be rated nil to poor, at least for visitors not equipped with a hired audio phone apparatus.

THE MENDEL L. PETERSON LGA

BELGIUM

**PORTE DE HAL MUSEUM
AND
ROYAL ARMY MUSEUM**

This photo album consists of:

Brussels – Part I

The “Porte de Hal” Museum:
Contains 29 numbered folios.

Brussels – Part II

(As said above, there is no transition between parts or collections in the original, unique LGA titled “Brussels”. The division in Parts I and II has been introduced by the Editor.)

The “Musée Royal de l’Armée et d’Histoire Militaire”:

Contains 4 folios of photographs taken by MLP, but outside of the building only (MLP’s folios 41-44).

The missing photographs of the non-existent folios 30 to 40 have been redone (in colour) and introduced by the Editor, in the correct location. They are identified by the words “Photo RS”.

As for the cannons now inaccessible for photography, they are replaced, in the album, by a transcription of MLP’s field notes or, in one case, by the photograph of a very similar piece (identical but for the date).

CANNONS IN BELGIAN COLLECTIONS

Including

Brussels: Royal Museum of the Armed Forces and of Military History
 Hal Gate Museum

In various places, other museums or forts (not visited by MLP):

Castle of the Counts of Flanders (Gent)
Citadel of Dinant
Citadel of Namur
The now extinct “Steen Museum” (Antwerp), to become the
“Museum aan de Stroom”
Museums in Liège
Cannon Foundries

To be kept in mind about Belgium

Belgium, as an independent Kingdom exists only since the year 1830.

Its territory (or most of it) during the “Age of Artillery” was ruled in succession by the Dukes of Burgundy (1384-1493); by the House of Austria-Burgundy after the marriage of Maximilian of Austria to Marie of Burgundy (1493-1506); by Spain (1506-1598); by Austria (1598-1621); by Spain again (1621-1713); by Austria again (1714-1790); by itself under the name of “Les Etats Belgiques Unis” (1790-1794); by the French Republic and the French Empire (1794-1814) and by the Kingdom of the Netherlands (1815-1830).

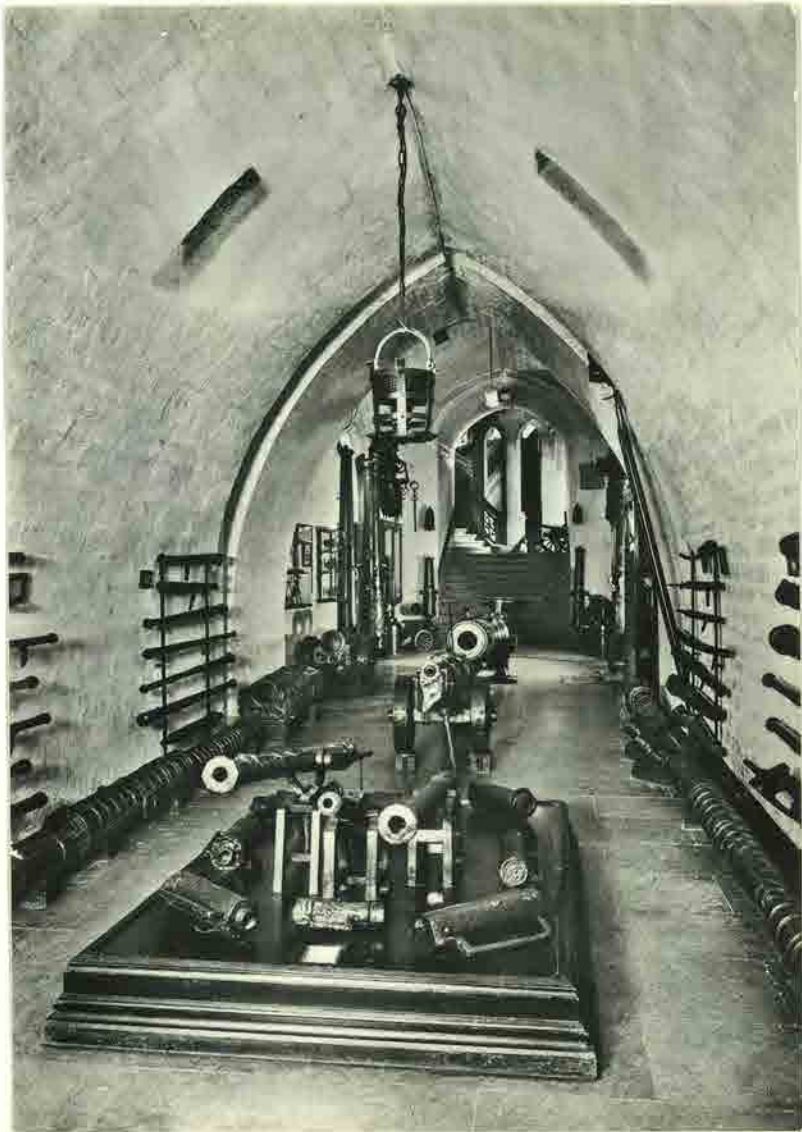
At all times an active gun industry continued to produce very fine artillery pieces for the powers that be and for export.

THE MENDEL L. PETERSON LGA

BELGIUM

**MUSEE DE LA PORTE DE HAL
(PORTE DE HAL MUSEUM)**

Folios 1 to 29



Brussels #1

English iron
Caliber 5.5 CM Len gth 210.5 Cm
Signed "R.H." on first reinforce
Weight mark "5-3-0" below



#1 (cont.)



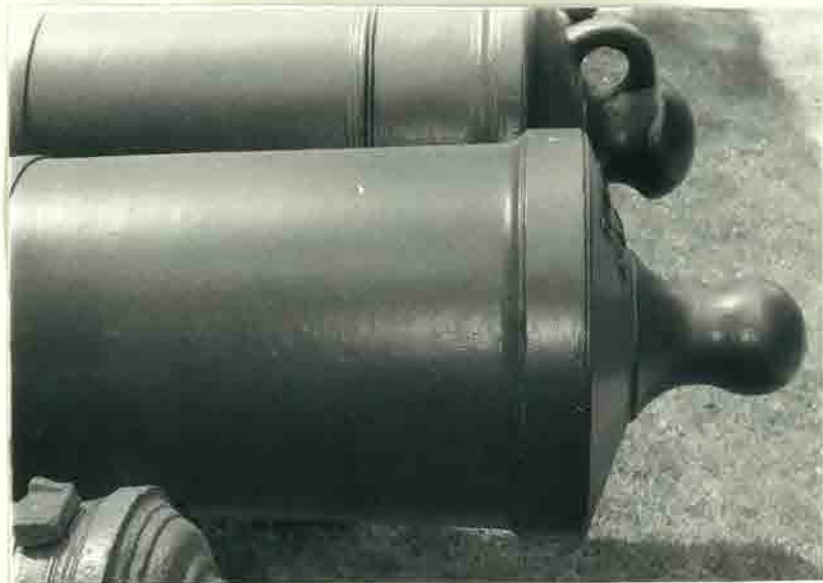
Brussels #2

Cast iron
Caliber 8.7 Cm Length 232.5 Cm
Weight mark on 1st. Reinf: 11 2 0



Brussels #3

Dutch iron
Caliber 13.7 Cm Length 301.5 Cm
Marked "LUIK 1828
No. 6 18 H



#3 (cont.)



Brussels #4

Congreve 6 pounder
Length 114 Cm
Crown over "6" on first reinforce



Brussels #5



Belgian iron
Caliber 15 Cm Length 234 Cm
Marked "LIEGE 1855" on muzzle face



Brussels #6

Breech fragment, iron
late 16th, early 17th. centuries
Caliber 9.5 Cm



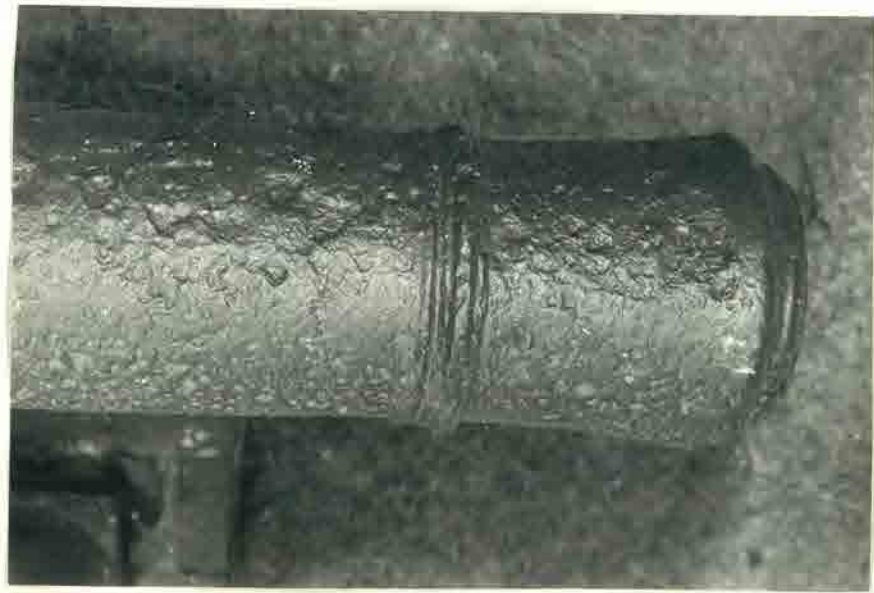
Brussels #7

French? U.S.? iron
Caliber 18.r Cm Length 393 Cm
Marked "No 3 5231" on muzzle face & "3
1813"



Brussels #8

English iron Ca. 1590-1610
Caliber 9.5 Cm Length 251 Cm
Trace of English type wt. mark and signature
" N" on first reinforce



Brussels #9

English ? Iron fragment Ca. 1570-1610
Caliber 9 Cm.
Marked "AC" on the first reinforce



Brussels #10

Iron muzzle fragment late 16th, early 17th.
centuries Caliber 7 Cm.



Brussels #11

Iron foot mortar
Caliber 31 Cm
Marked "FONDERIE IMPERIALE
DE LIEGE
1810"



Brussels #12



Iron gun with handles
probably 17th. century
Marked W on first reinforce
Caliber 10.5 Cm Length 237 CM
Weight mark "8-37-2" on first reinforce



Brussels #13

Iron gun howitzer
probably late seventeenth century
Caliber 11 Cm Length 170 Cm
Marked U on first reinforce



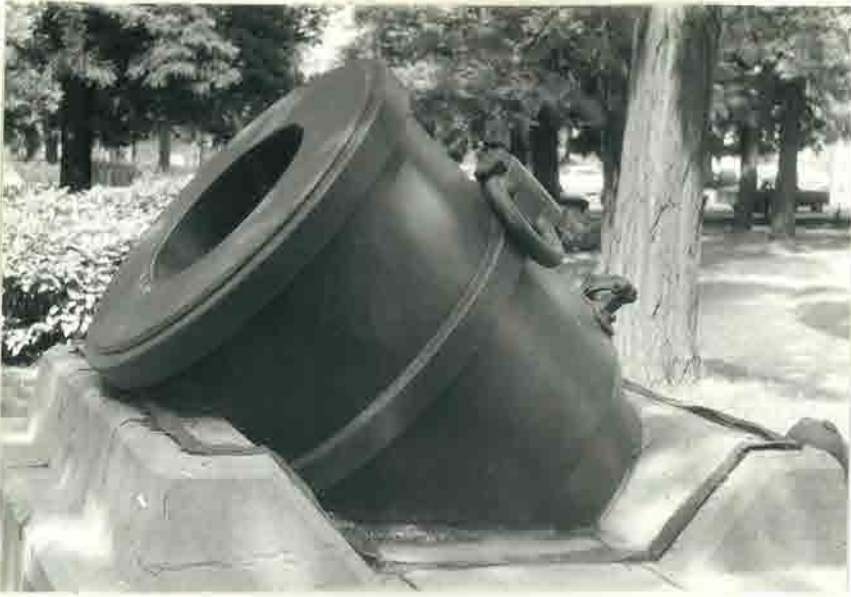
Brussels #13A

Iron mortar
Caliber 60 Cm

Marked " No 1

LI PGE 1834

8120 K" on muzzle face

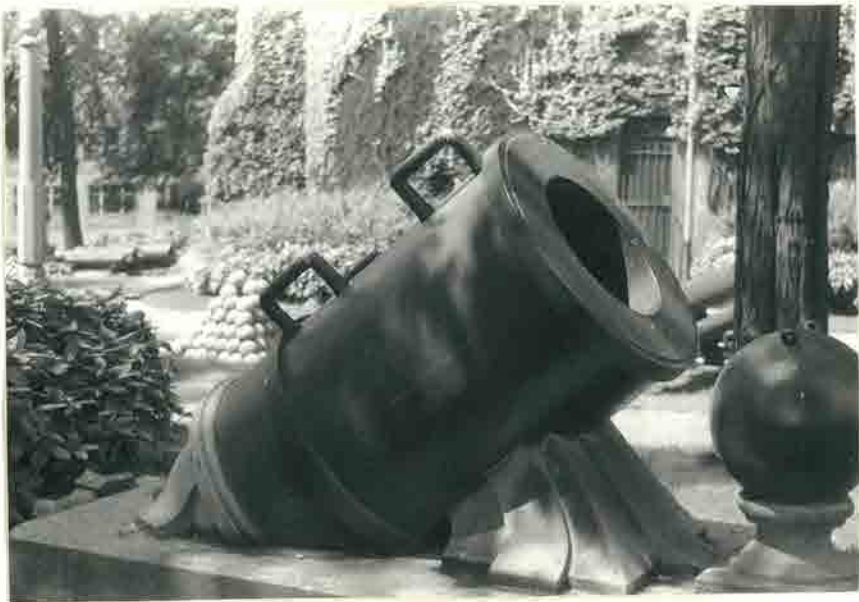


13 A (cont.)



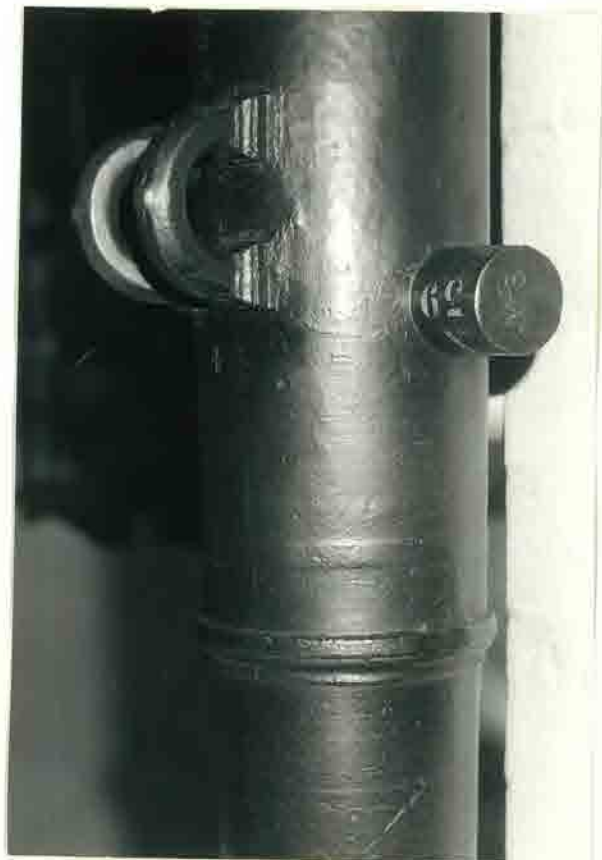
Brussels 14

Iron Mortar
Caliber 60 Cm
Date obliterated Marked "LIEGE"

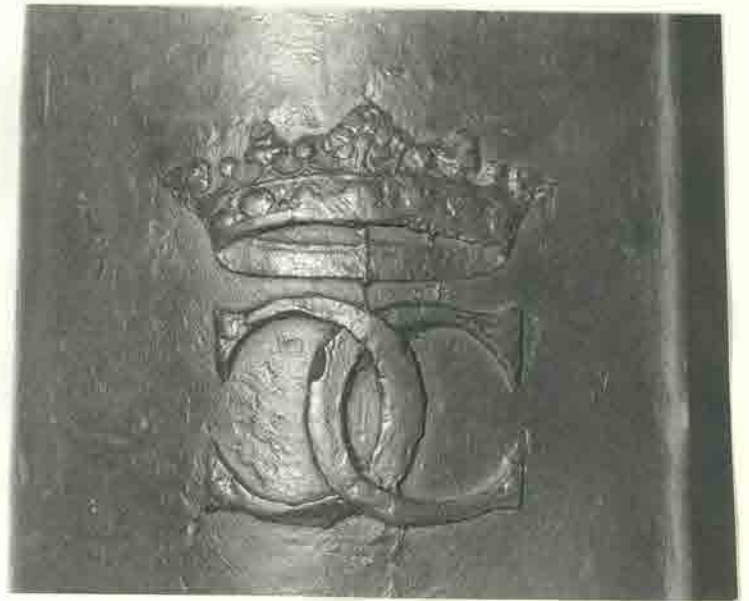


Brussels #15

Savoyard Bronze
Cast for Charles Emanuel of Savoy Duc de
Nemours 1586
Caliber 8 Cm Length - _____ (museum No. X-39)



Brussels # 15 (cont.)

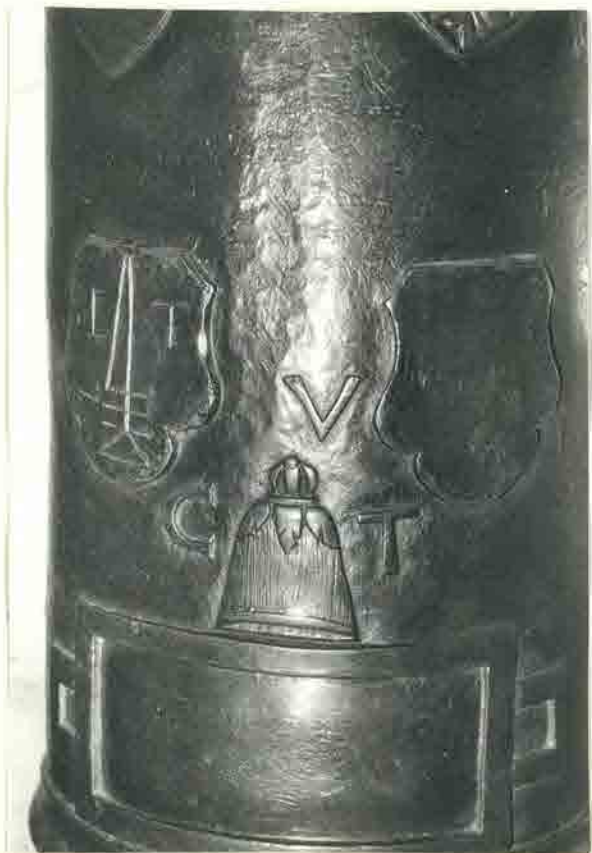
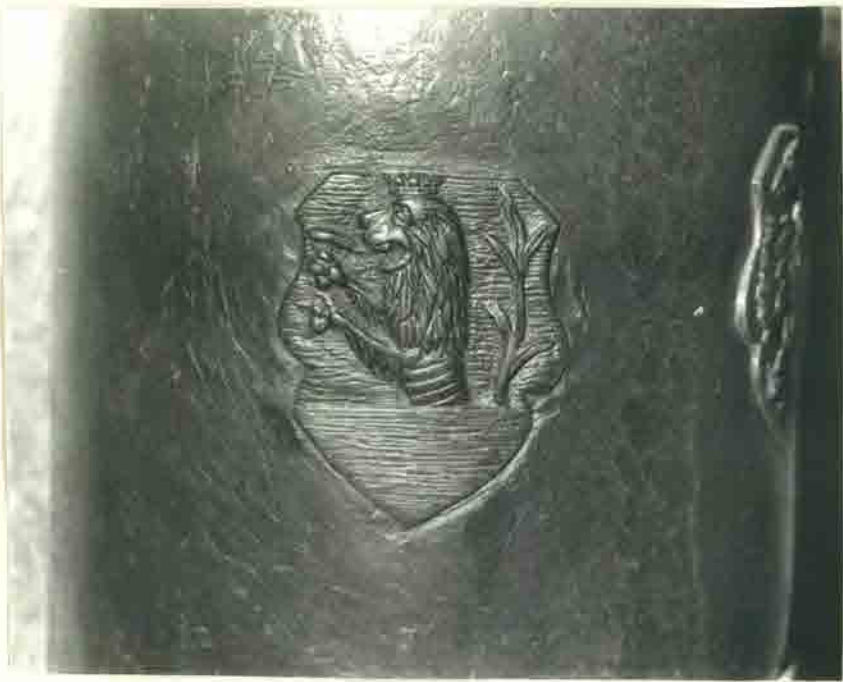


Brussels #16

Bronze fieldpiece (X-40)
Caliber 8 Cm Length -



#16 (cont.)



BRUSSELS # 17 (X-45) Bronze fieldpiece cast for
Charles III ~~of Spain~~ King of Two Sicilies
by "G. Castronovo" dated 1741
N_amed "EL SVLFVREO"

No Photograph

Brussels # 18

Bronze naval piece (X-44)
Cast for Charles III King of Two Sicilies
by "J. CASTRONOVO" 1736
Caliber * Length
On scroll behind muzzle "REAL MARINA"
On second scroll: "SERVATOR IMPERIUM."



Brussels #19

Bronze gun howitzer (X-41)
Caliber 8.5 Cm Length 128 Cm

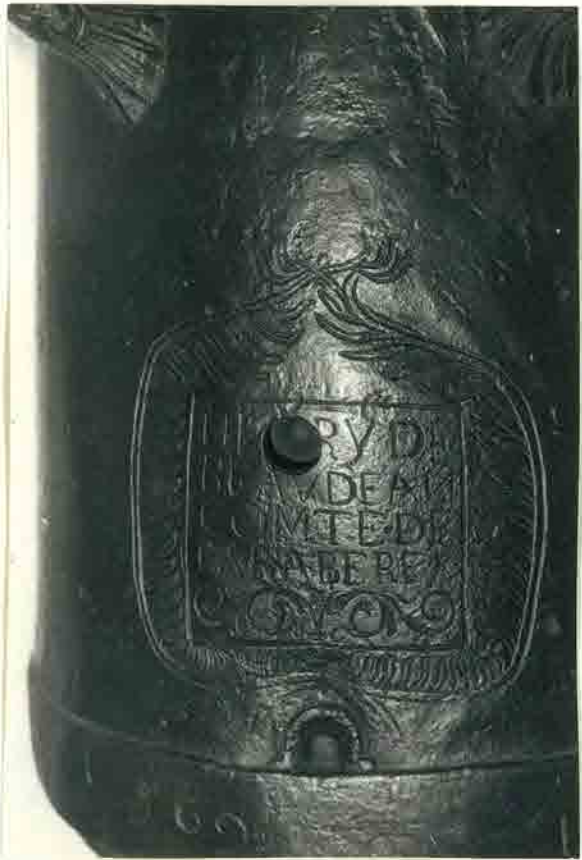
Engraved in cartouche at vent : "Henry de
Beaudean, Comte de Parabere."

Dated "1621" on base ring

TROPHY WT. MK BETWEEN
HANDLES "280 K"



#19 (cont.)



BRUSSELS #20

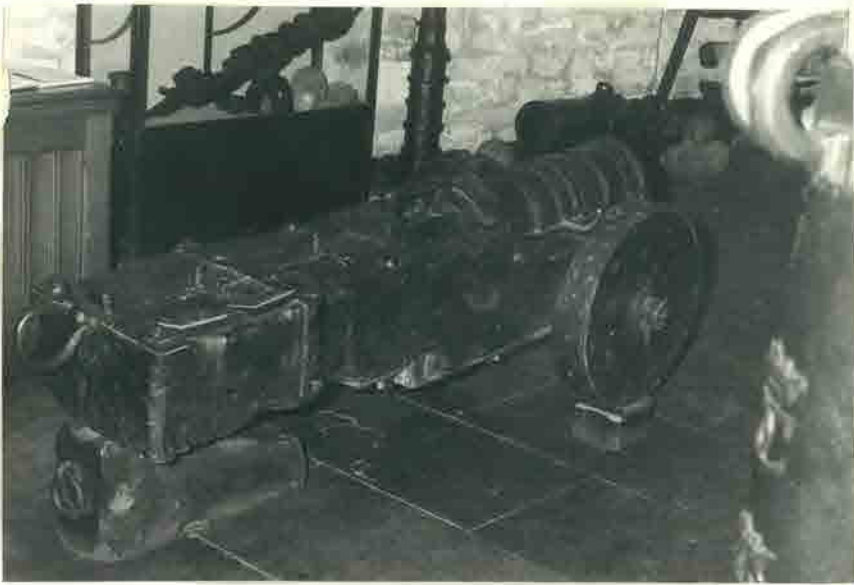
French bronze cast by Berenger at Douai 1745
named "CAROLSTADT" on chase; no photos

BRUSSELS

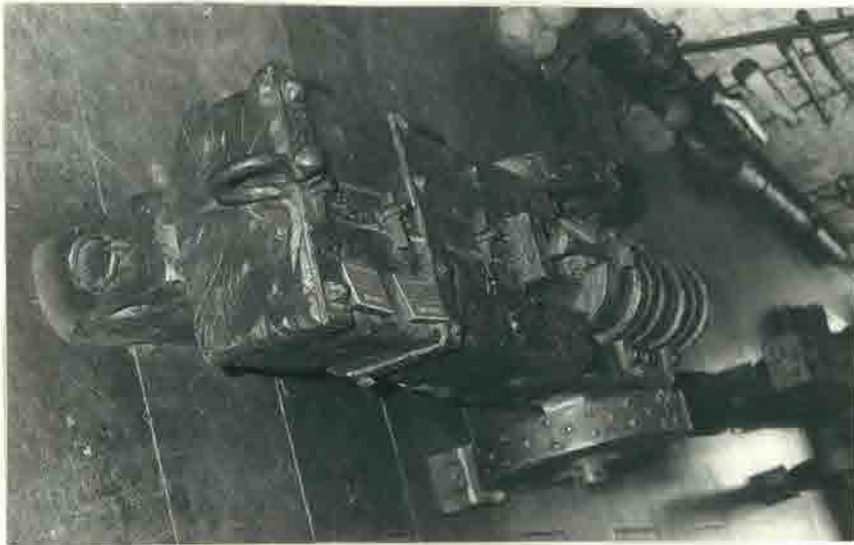
No Photograph

Brussels # 22

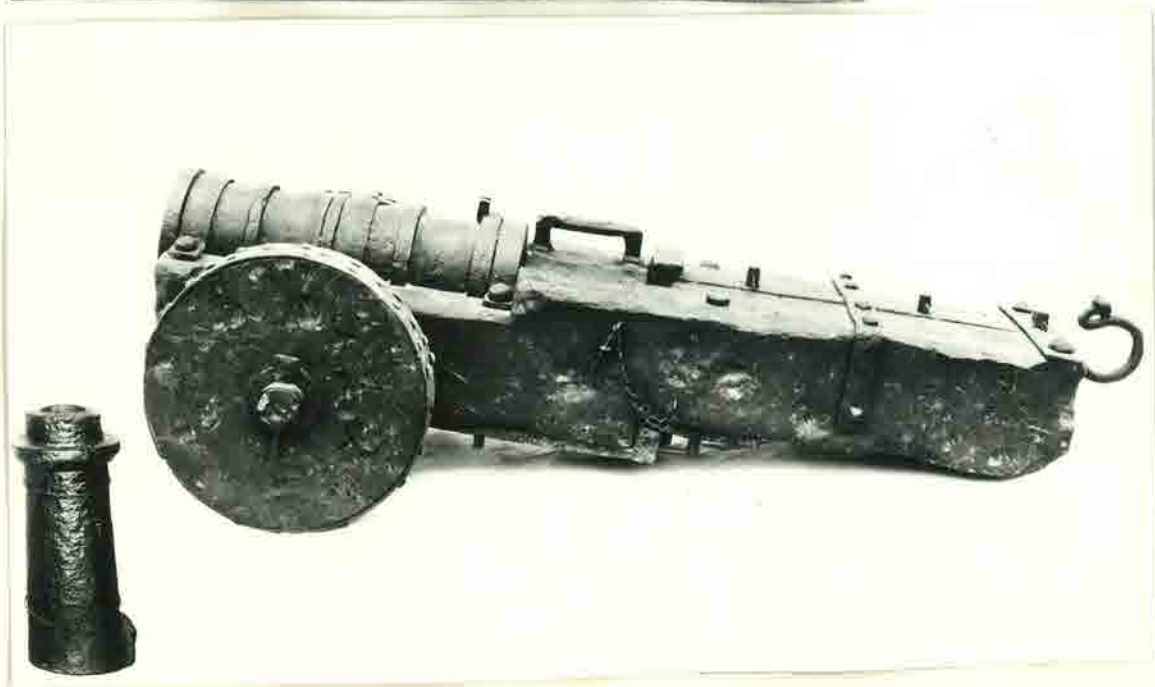
Wrought Iron Gun on original carriage
late 14th. century early 15th. century
labelled "VEUGLAIRE"
Caliber 19.5 Cm Length tube = 74.5 Cm
length of chamber 26 Cm



(VEUGLAIRE is a 15th century, large caliber short bombard.)

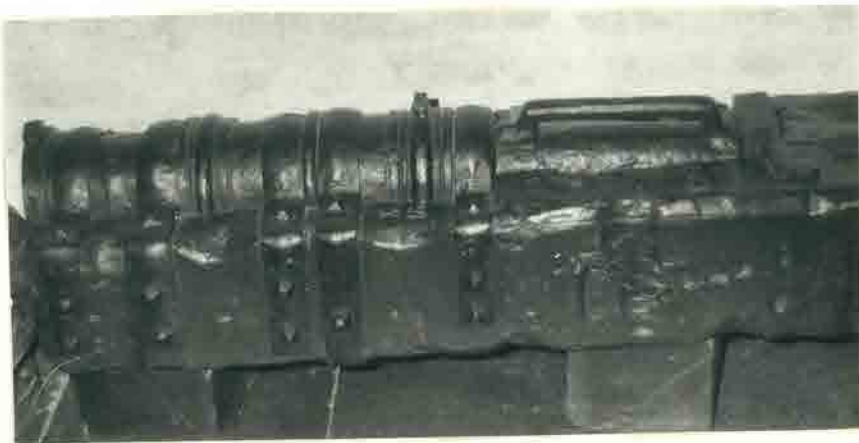
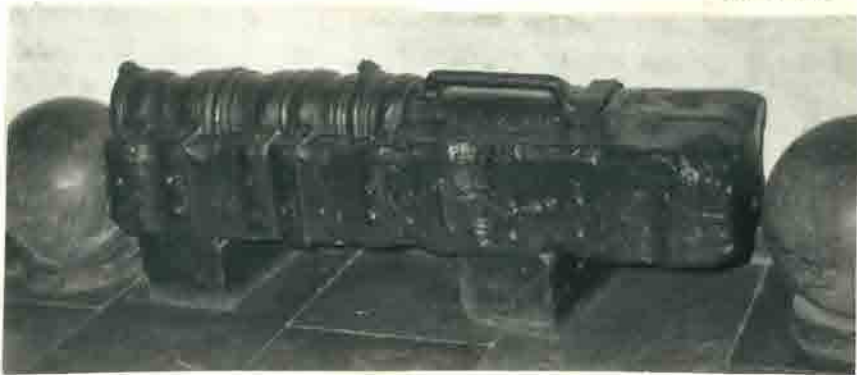


22 (cont.)



Brussels # 23

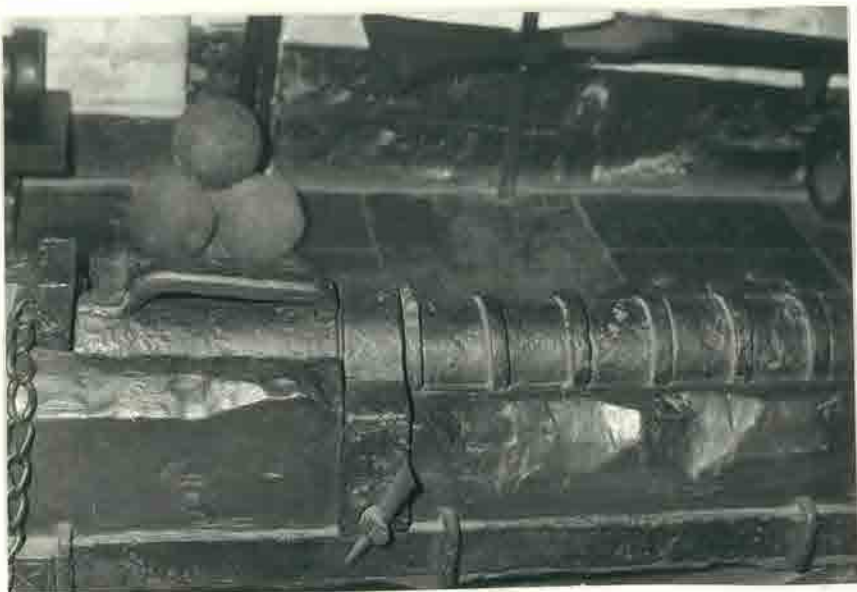
Wrought iron "Veuglaire" late 14th. early 15th.
century on original carriage
Caliber 15.2 Cm. Length 76 Cm. Length block
39.0 Cm



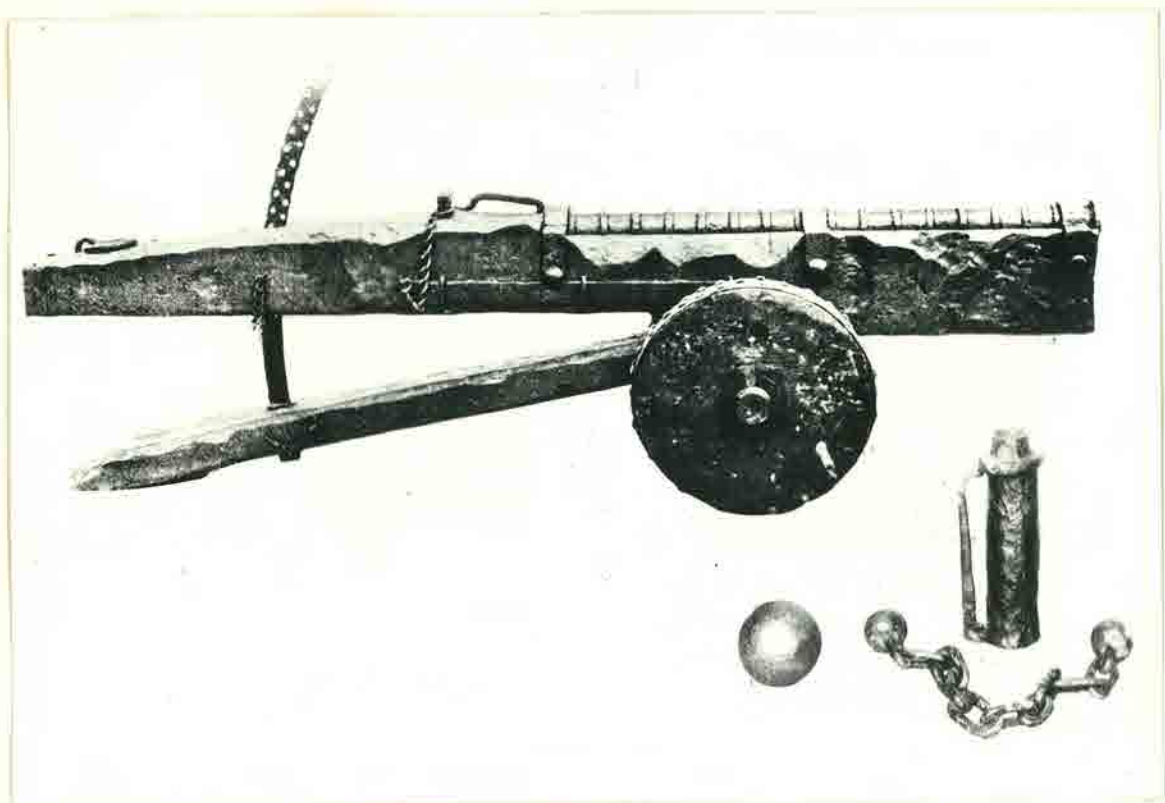
Brussels #24

Wrought iron "Coulévrine" late 14th. early (x13)
15th. centuries.

Caliber 4 Cm Len gth tube- 136.5 Cm Block 23.5



#24 (cont.)



Brussels #25

Wrought iron swivel (X21-A)
Caliber 5.5 Cm Length tube 161 Cm tiller 42 Cm



#25 (cont.)



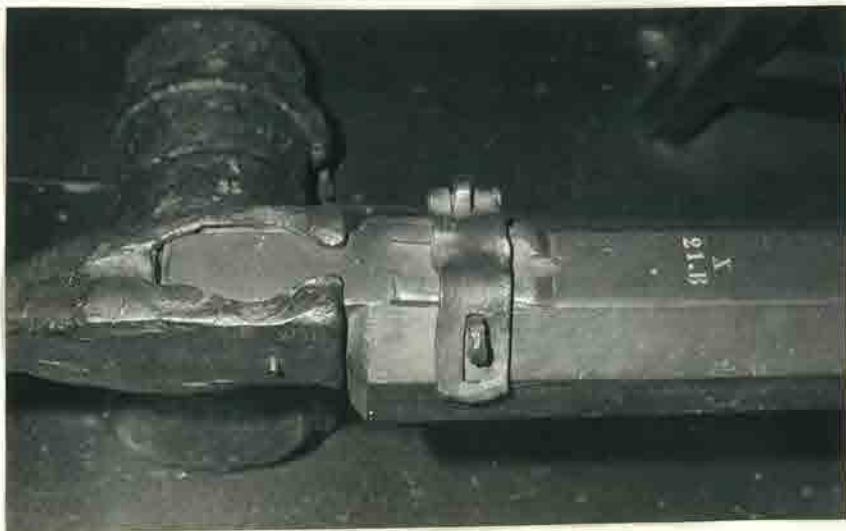
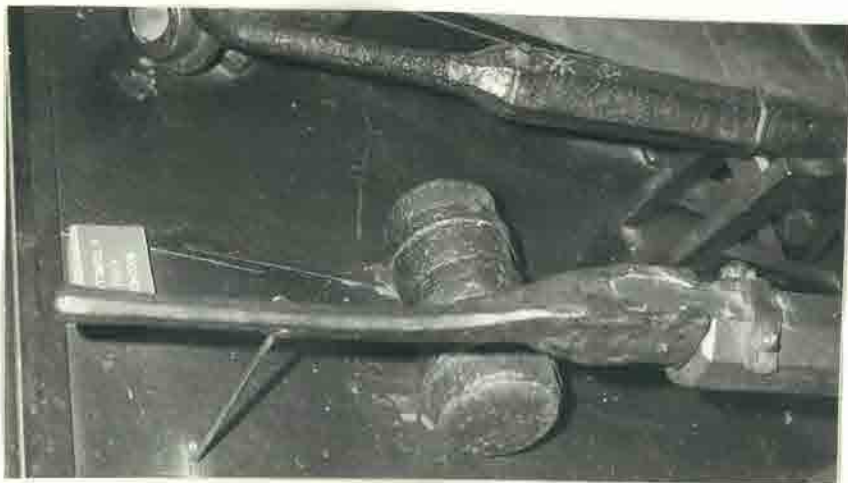
Brussels # 26

Wrought iron piece (4593)
Caliber 19.2 Cm Length 101 Cm



Brussels #27

Bronze swivel with wrought iron tiller(X21-B)
Caliber 4.5 Cm Length tube 185 Cm tiller 67 Cm



27 (cont.)



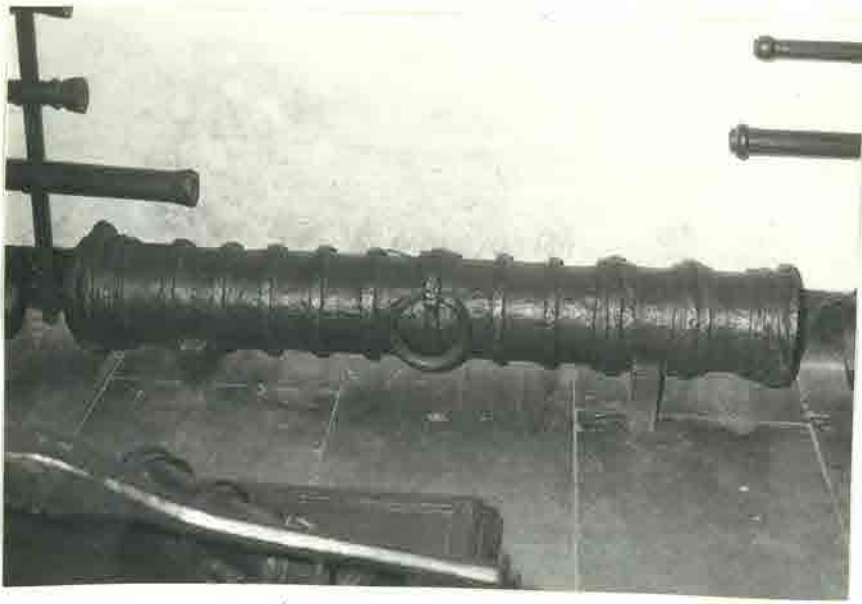
Brussels #28

Wrought iron breech block with swiveling handle Caliber 5 Cm. Length 37.5 Cm



Brussels #29

Small wrought iron bombard
Caliber 17 Length 150 Cm



THE MENDEL L. PETERSON LGA

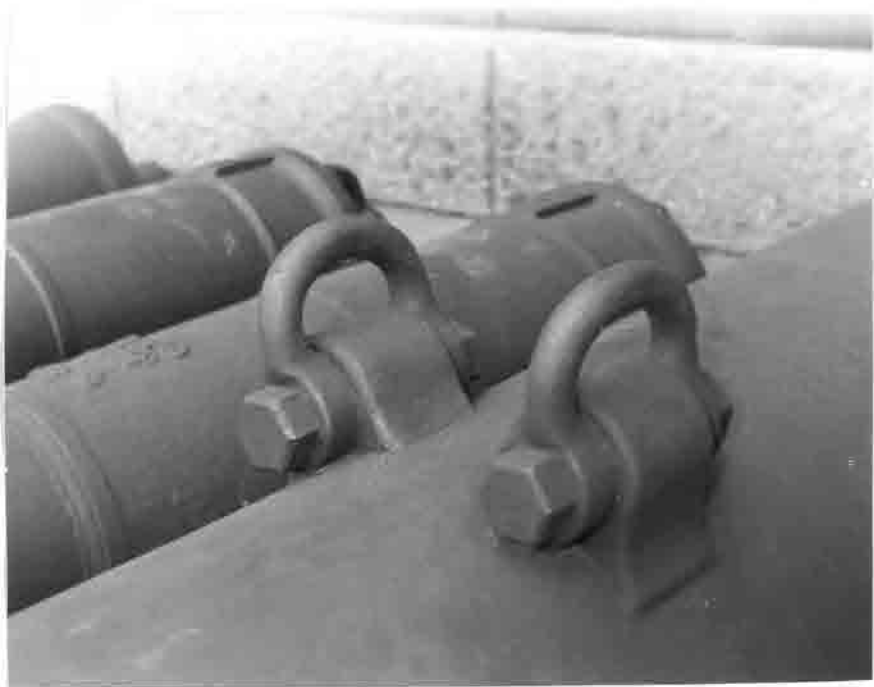
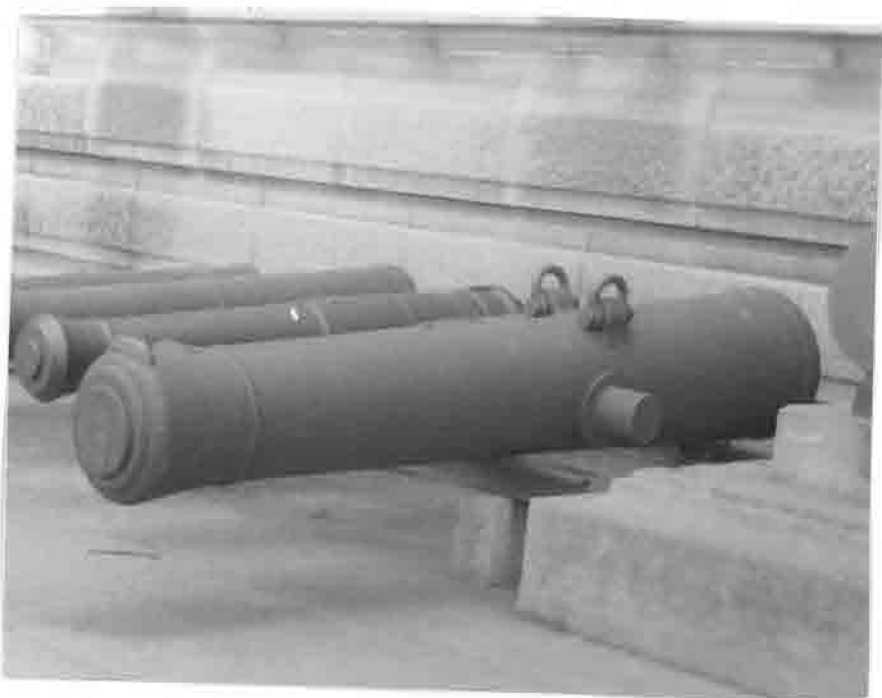
BELGIUM

**MUSEE ROYAL DE L'ARMEE ET D'HISTOIRE MILITAIRE
(ROYAL MUSEUM OF ARMED FORCES AND OF MILITARY HISTORY)**

Folios 41 (sic) to 44

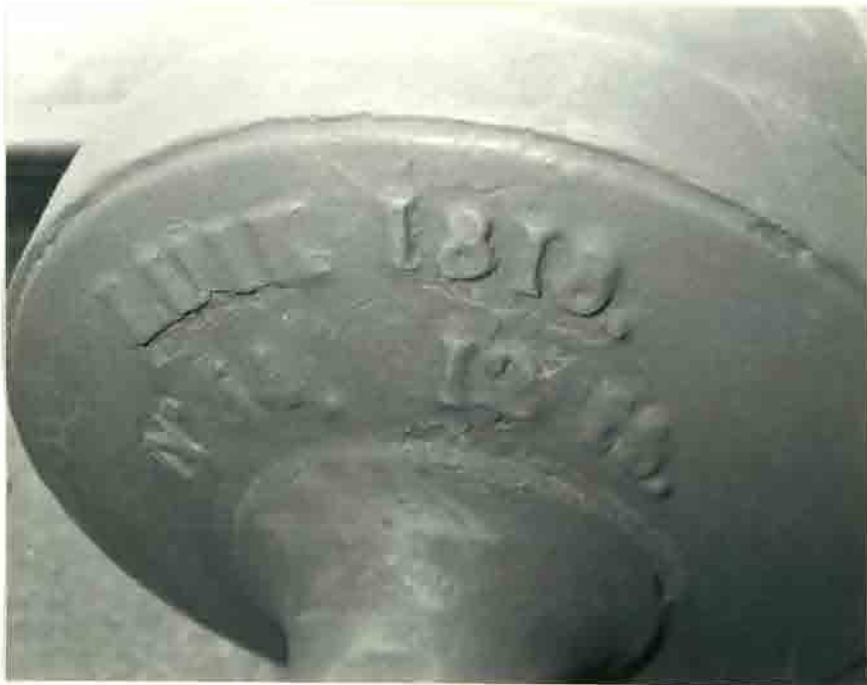
Brussels #41

Cast iron siege or fortress piece
Caliber 19.5 Cm Length - _____
No signature visible



Brussels # 42

Cast iron piece
Caliber 12.5 Cm Length-
Signed on cascabel above button
"LUIK 1818
No 64. 12. 12"



Brussels #43

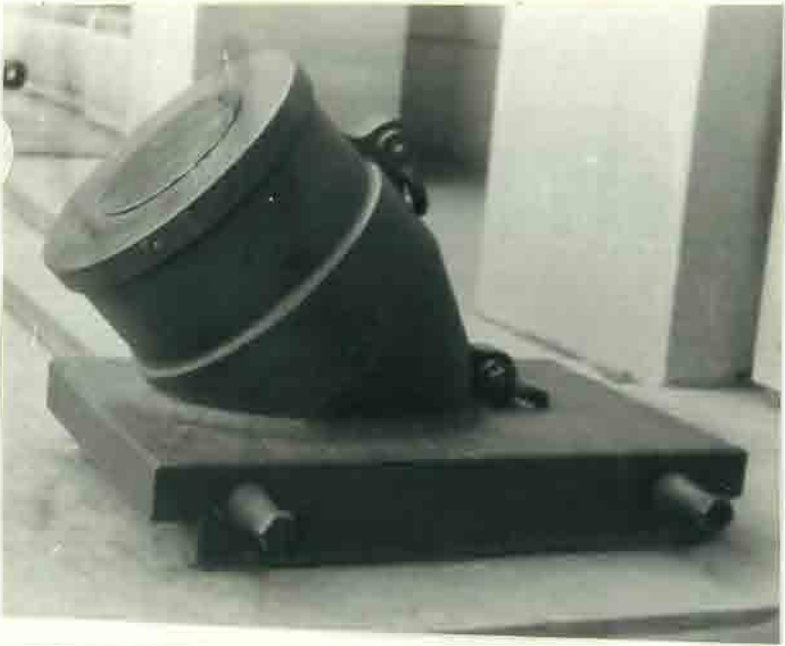
Cast iron trunion mortar
37 Cm
Signed on chase: "LUIK 1829
N 17 39 D"



Brussels #44

Iron foot mortar
180 pounder
Signed on muzzle:

"LIFGE 1860
No 39 180
2550 Km

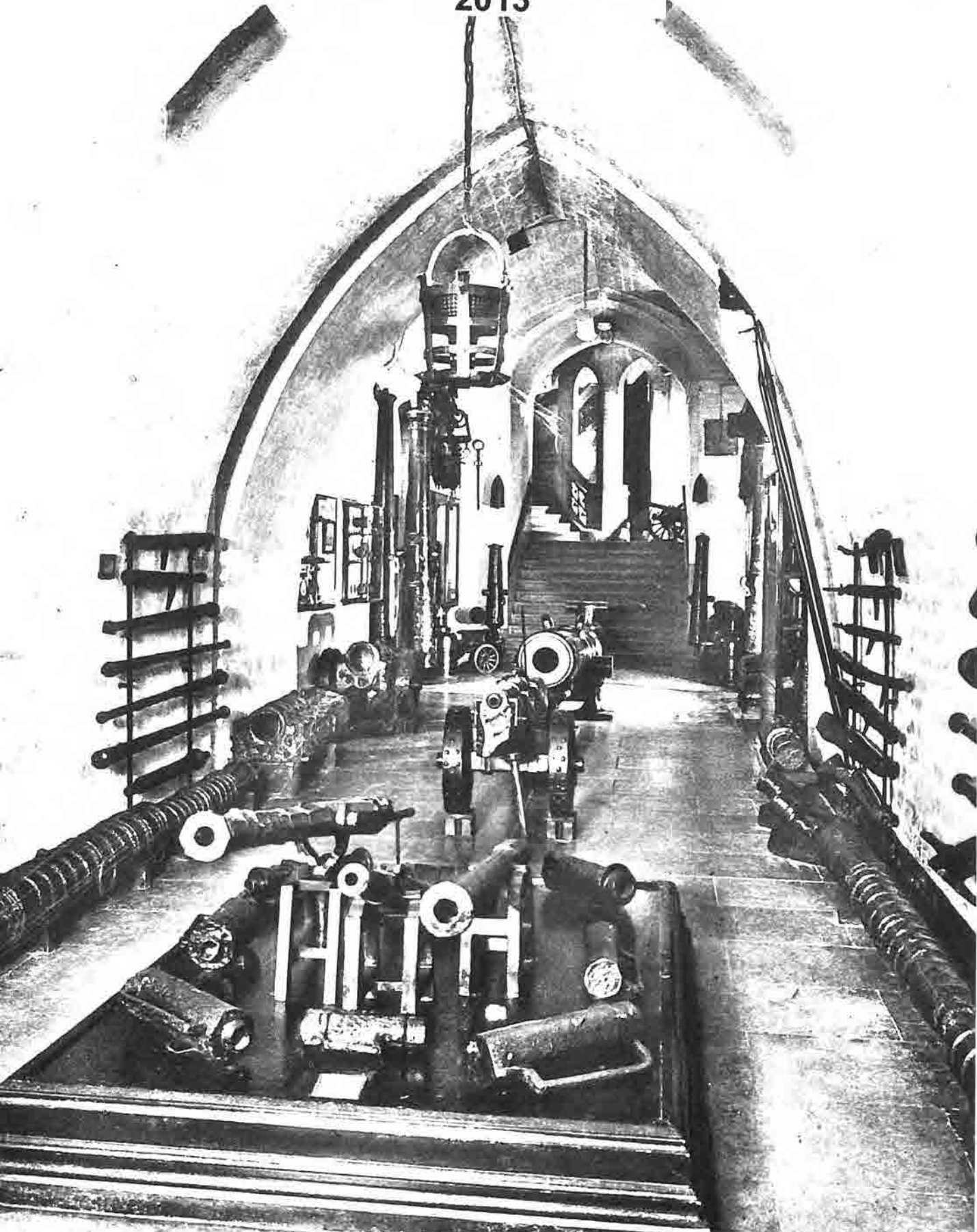


THE EDITOR'S ALBUM

BELGIUM

**MUSEE DE LA PORTE DE HAL
(PORTE DE HAL MUSEUM)**

Cannons in Belgium 2013



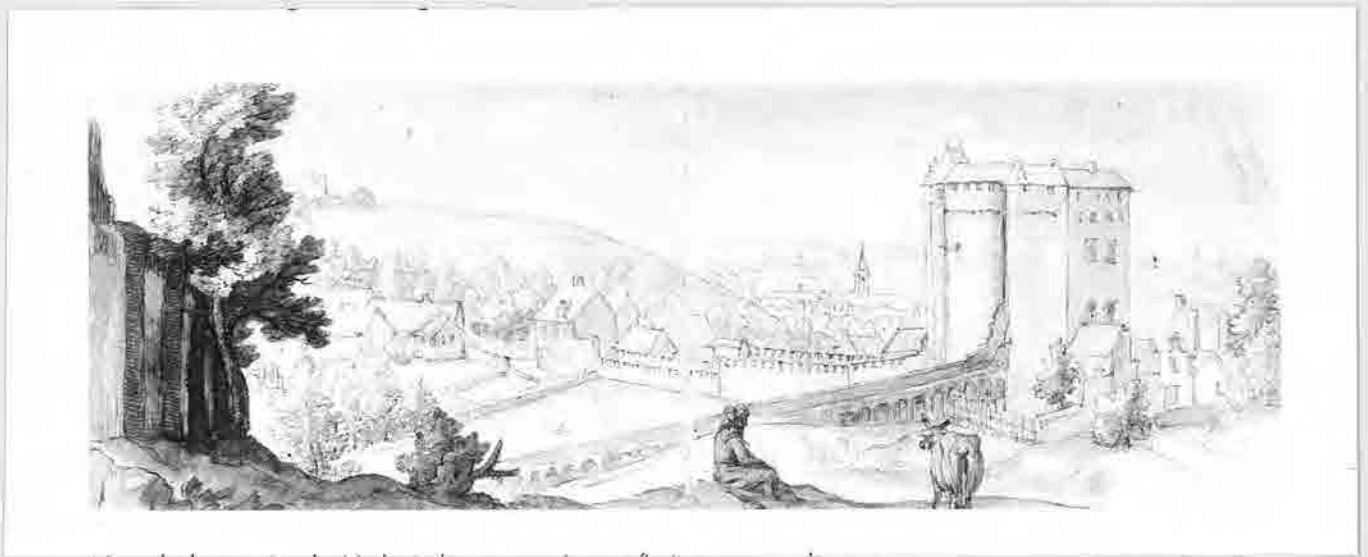
The ground floor of the former "Musée de la Porte de Hal" as it was when Mendel Peterson visited. (A vaulted passageway of the 14th-15th century, which permitted entry into Brussels, for visitors coming from the west.)



THE HAL GATE which formerly housed the Artillery Museum, now transferred to the Royal Army and Military History Museum. Note the small pond, all that remains of the original moat of the city walled fortifications.



The "Porte de Hal" or Hal Gate and its extra muros surroundings around 1612-1613.
A drawing by Remigio Cantagallina (© Musées Royaux des Beaux-Arts de Belgique)



MUSÉE DE LA PORTE DE HAL (formerly). Today: CENTRE DE CULTURE URBAINE
HAL GATE MUSEUM (formerly). (Since June 2008): CENTRE FOR URBAN CULTURE

Location: Central Brussels, Belgium.
Postal address: Boulevard du Midi – 1000 Brussels - Belgium
Telephone: ++32/2 253 33 452 or ++32/2 253 41 518
Fax: ++32/2 253 33 458
E-mail: info@kmsg-mrah.be
Website: www.mrah.be
Curators: E. Vander Elst (Conservateur/Keeper)
A. Cahen-Delhaye (Directeur général/General Manager)
Services offered: No library, no archives on site.
Frequent temporary exhibitions organized on related subjects.
Opening hours: Tuesday to Friday 9.30h-17h; Saturday & Sunday 10h–17h.
Closed on Mondays and public holidays.

Recent catalogues and publications on the history of the building and its collections include: Presles, E., *Catalogue des Collections de la Porte de Hal*, Bruxelles ; Wullus Linda, *La Porte de Hal. Témoin silencieux d'une histoire tumultueuse* (The Hal Gate. Mute witness to a tumultuous history) published in 2006, Brussels, by the Musées Royaux d'Art et d'Histoire. This excellent and well-illustrated booklet also contains a good bibliography.

History of the building: The Hal gate is over 600 years old and the only surviving fortified gate of the seven doors that allowed a passage through the 8km. long second walled fortifications of the city. The others were demolished in the 18th century. In spite of its many successive restorations over the last half millennium, the building in itself remains massive and inspiring and is of great interest to the historian of city fortifications as a mediaeval city gate. Part of the present day exhibition shows how the original fortified gate of the 14th century has evolved in following centuries and reveals how Brussels defended itself against external attacks, from the Middle-Ages to the 18th century. It also presents the role that town's people played in defence of their city. The crenellated walkway around the top of the monument offers a spectacular view on the Belgian capital and one tends to forget how much the latest restoration, in 1869, has been disastrous for the inner side, or city side, of the old gate and for its upper level now graced with a "romantic neo-Gothic" roof.

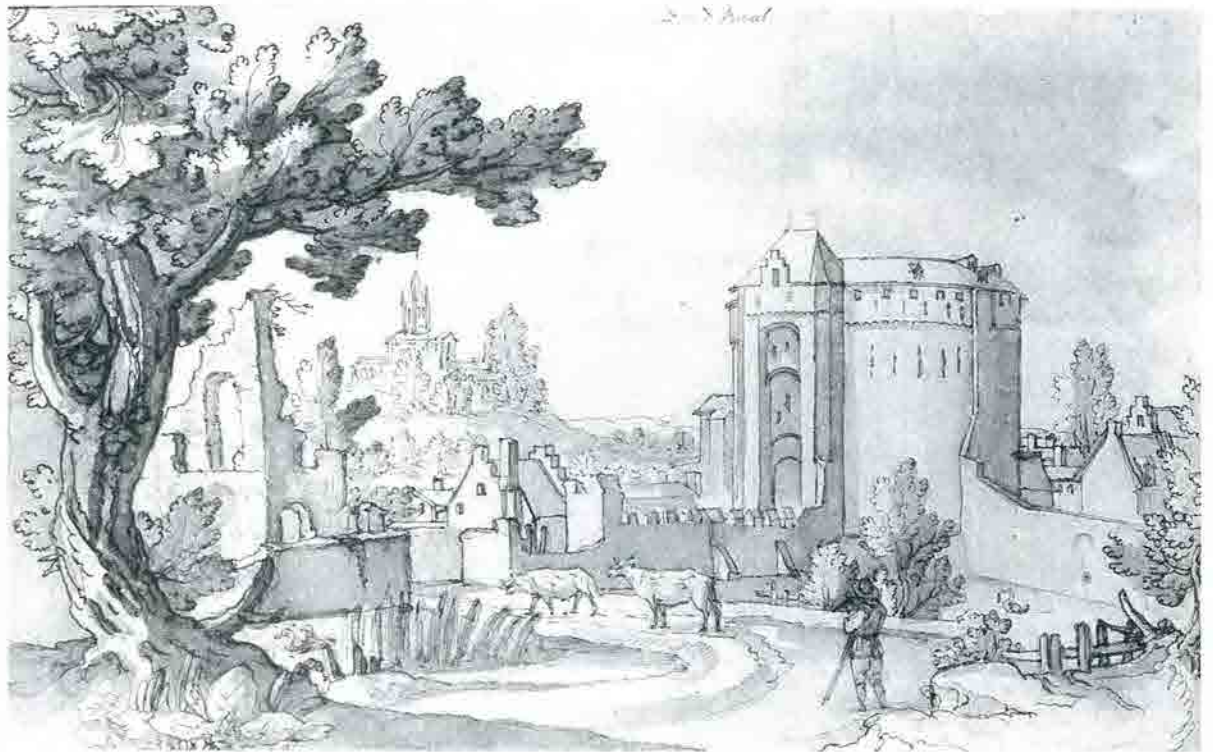
History of the museum and its collections: After its acquisition in 1842 by the Belgian state, the building, then used as a prison, housed at first (1847-1848) the "Musée Royal d'Armes, d'Antiquités et d'Ethnologie" (Royal Museum of Arms, Antiques and

Ethnology) one of the first ethnological museums in Europe. In 1889, due to a growing lack of space, the collections of antiques and ethnographic artefacts were sent to another museum and the new “Musée d’Armes et d’Armures” (Museum of Arms and Armour) of the Hal Gate became a purely military museum. The “Musée de la Porte de Hal” was still a purely military museum at the time Mendel Peterson made his European tour of cannon collections. It had a very good department devoted to the history of arms in general. It displayed a fine collection of weapons of all kinds, including hand held and portable firearms and artillery, pieces of various periods, as well as an exceptional collection of armours, cuirasses, helmets and the like. Also: A collection of objects relating to the history of the dynasty.

It is in 1976, that the museum changed its affectation. All the military collections, including the artillery collection were transferred to the “Musée Royal de l’Armée et de l’Histoire Militaire” at the Parc du Cinquanteaire, where part of it is now on display (see under that entry).

Since the year 2008, the “Musée de la Porte de Hal” has become a “Centre for Urban Culture”, and has been administered by the Royal Museums of Art and History. It has kept but a token sample of its former collection of armours and weapons in its educational department, which is aimed at school children. The new museum is mostly educational and caters generally to organised visits by student classes. It also keeps, on floor D, a unique collection of documents, paintings, ceremonial collars or chains insignia and banners illustrating the past role of the trade Guilds in the city and in the Gothic room on floor E, a permanent display devoted to the history of the fortifications of Brussels all around the Hal Gate. Not to be missed in the armoury department are some superb armour, including two ceremonial armours that were tailor-made for, respectively, Archduke¹ Albert and his favourite horse.

¹ Governor, then Sovereign Prince of the Southern (Spanish, then Austrian) Low-Countries (1595-1621).



The "Porte de Hal" or Hal Gate and its surroundings extra muros around 1612-1613. A drawing by Remigio Cantagallina (© Musées Royaux des Beaux-Arts de Belgique)

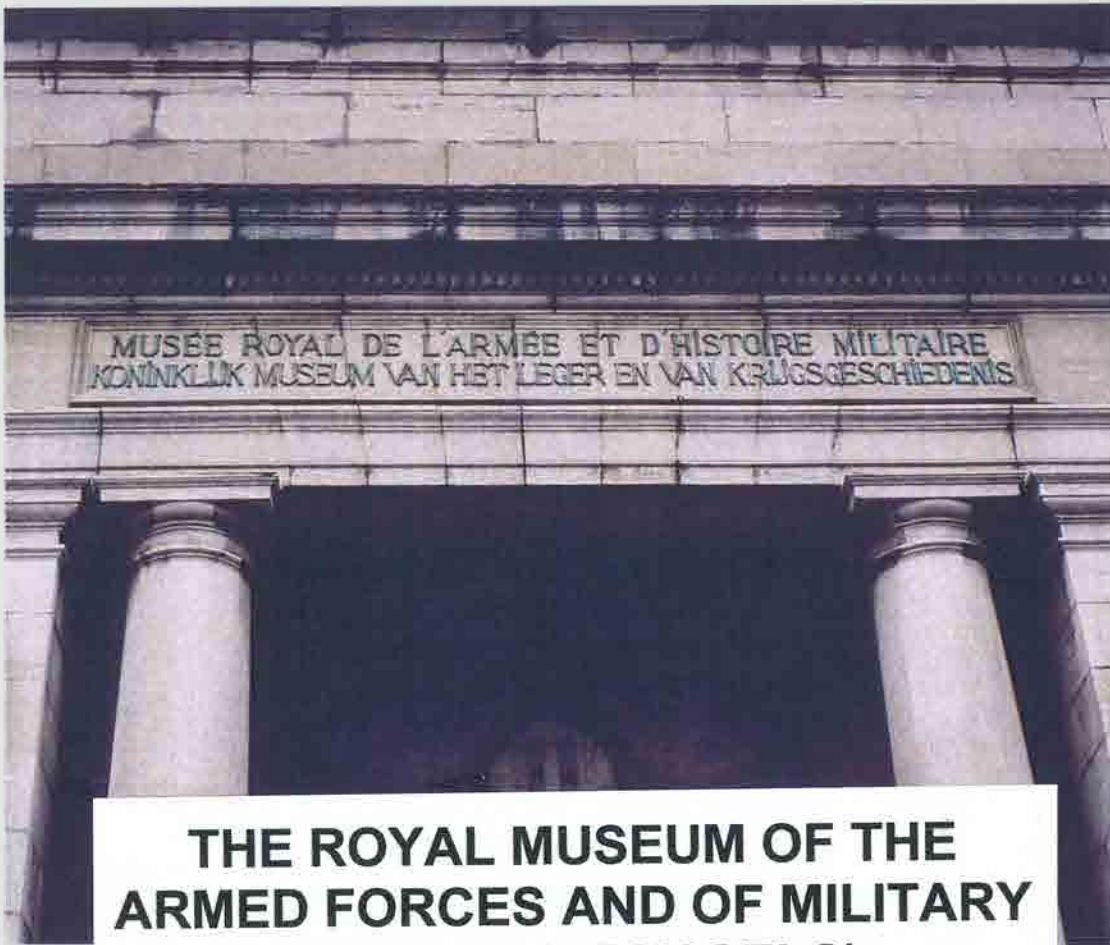


A last reminder of the former affectation of the Hal Gate: Three early 19th century iron guns, displayed in the surrounding gardens.

THE EDITOR'S ALBUM

BELGIUM

**MUSEE ROYAL DE L'ARMEE ET D'HISTOIRE MILITAIRE
(ROYAL MUSEUM OF ARMED FORCES AND OF MILITARY HISTORY
BRUSSELS)**



**THE ROYAL MUSEUM OF THE
ARMED FORCES AND OF MILITARY
HISTORY (BRUSSELS)**



MUSÉE ROYAL DE L'ARMÉE ET D'HISTOIRE MILITAIRE
ROYAL MUSEUM OF THE ARMED FORCES AND OF MILITARY HISTORY

- Location: In the “Parc du Cinquanteaire”, Brussels, Belgium
Postal address: 3, Parc du Cinquanteaire – 1000 Brussels – Belgium
Telephone: ++32/2 737 78 11 (central); ++32/2 737 08 33 (visitors);
++32/2 737 78 09 (information, Mrs Diane Vanthemsche)
Fax: ++32/2 737 78 02
E-mail: infocom@klm-mra.be or diane.vanthemsche@klm-mra.be
Website: www.klm-mra.be; www.museedel'armee.be
Curator: Prof. Patrick Lefèvre (Directeur)
Artillery collections: M. Degryse (++32/2 737 79 00); Colonel Hausmann (++32/2 737 79 24)
Services offered: A Centre of Documentation of major interest, including: A very important library of 450,000 volumes, pamphlets, military newspapers and magazines, etc., covering a wide number of military related topics, 100,000 of them concerning the history of military art in the world; a very rich repository of archives (public and private records) concerning military history from the Austrian period on; a very rich general Iconography Department (drawings, watercolours, prints, posters, photographs – 75,000 referring to WWI only –, postcards and the like), mostly concerned with military life from 1830 on (the date of Belgium's independence from the Netherlands); a Department of Maps with important collections from the periods of the Spanish and Austrian Low Countries up to this day, also many operation maps for WWI and WWII, plans of fortifications, of military buildings etc..
Tel. of the Documentation Centre: ++32/2 737 79 30 or e-mail: richard.boujen@klm-mra.be
Opening hours: Tuesday to Sunday: 9h-16h45. Closed on Mondays and public holidays.
- Recent catalogues and publications on the history of the building and its collections include: Naeyaert Sylvie and Van Everbroeck Christine, *Musée Royal de l'Armée et d'Histoire Militaire*, Bruxelles, 2000
The museum publishes a quarterly information magazine, “CIBLES”, (in French and in Dutch), available upon written request.
- History of the building: At the end of the 19th century, King Leopold II who, having inherited the dream of Leopold I, was determined to transform Brussels into a European capital that could rival Paris, had embarked on an ambitious building programme (financed by the “Etat Libre du Congo”, which he personally ruled). The project included the transformation of the former marshy training grounds of the then para-military “garde-civique” (the approximate equivalent of the American

National Guard) into what is known today as the “Parc du Cinquantenaire”.

In 1880, for the fiftieth anniversary of the Independence of Belgium, he ordered the architect Gédéon Bordiau to draw the plans of the future “Palais du Jubilé” (the Jubilee Palace), with a view to organise in its huge halls, world fairs and commercial shows. The huge exhibition halls and the massive commemorative arcades (in their first, temporary state) were ready in time for the “Exposition Universelle et Internationale” (sic!) of 1897 and, later on, housed the World Fair of 1910. On that occasion, a temporary stand was erected in the grounds of the World Fair, which happened to constitute the embryo of a collection of militaria that was eventually to evolve into a permanent army museum thanks to its unexpected success. This embryo of a collection of arms, armours, guns, cannons, etc., was moved to the premises of the Military School (at the time at the “Abbaye du Bois de la Cambre” where it has been replaced, up to this day, by the Military Cartographic Service).

History of the museum and its collections: The same original embryo of the collections kept growing, mostly through donations and was, in the early 1920's, permanently installed in the exhibition halls of the “Parc du Cinquantenaire”. The official inauguration by King Albert I on July 22, 1923, was a national event. The museum's collections continued to grow through acquisitions and donations until the present time and have made of the “Musée de l'Armée” a world renown scientific institution. They have known also a steady growing, popular success (250,000 visitors a year). The Royal Army Museum today is a scientific establishment of the Kingdom of Belgium, functioning under the direct authority of the Ministry of Defence. Its general mission is: “Researching, acquiring, conserving and making available to the members of the public, documents, studies, publications and/or artefacts relating to military history in its widest sense. The Museum today is also the seat of the International Commission of Military History (ICOM) and regularly organises meetings and conventions. The Museum is closely associated to all of the activities of the International Museums Association (IAM), and of the International Association of Military Museums (IAMAM).

The museum does not present only weapons, artillery pieces, uniforms, airplanes, tanks and small warships, but it also tells the story of the arms, etc., and of the Belgian armed forces, through paintings, drawings, statues, miniatures etc. A particular impetus is given to the telling of the story of the individual soldiers and seamen, with all the dangers and hardships of their daily life. The story of the technical

evolution of their weapons is illustrated from the shiny armours of the Middle Ages knights (the collection of armours was in earlier times exhibited at the “Musée de la Porte de Hal” and included a number of exceptional early pieces from the armoury of the Dukes of Burgundy and from the Spanish and/or Austrian periods of the history of Belgium), all the way to the present day camouflage uniforms and bullet proof vests.

From the first rooms devoted to the military history of the Middle-Ages, the visitor will move to the Spanish period of the Southern Low Countries, then to the Austrian period. The “Révolution Brabançonne”, a popular insurrection against the rule of Austria is widely documented. The Napoleonic period is represented by some of the highlights of the museum’s collections and includes two remarkable private collections in deposit to the museum, the Titeca collection and the “Collection de Ribaucourt”. Other rooms are devoted also to the Dutch period, which followed the period when Belgium was annexed to France, after the French Revolution and the Napoleonic period, and of course, to the 1830 Revolution, through which the country wrestled its independence from the Netherlands. The sending of a corps of Belgian volunteers to serve as a private guard to Princess Charlotte (daughter of King Leopold I and the Empress of Mexico through her marriage in 1864 with Maximilian of Austria) is briefly featured. The museum also keeps a fine collection of Russian Imperial uniforms (1812-1915) and a splendid “treasury room” featuring jewels, silverware, etc., of the Tsarist era.

WWI and WWII are the strong points of the collections of the museum.

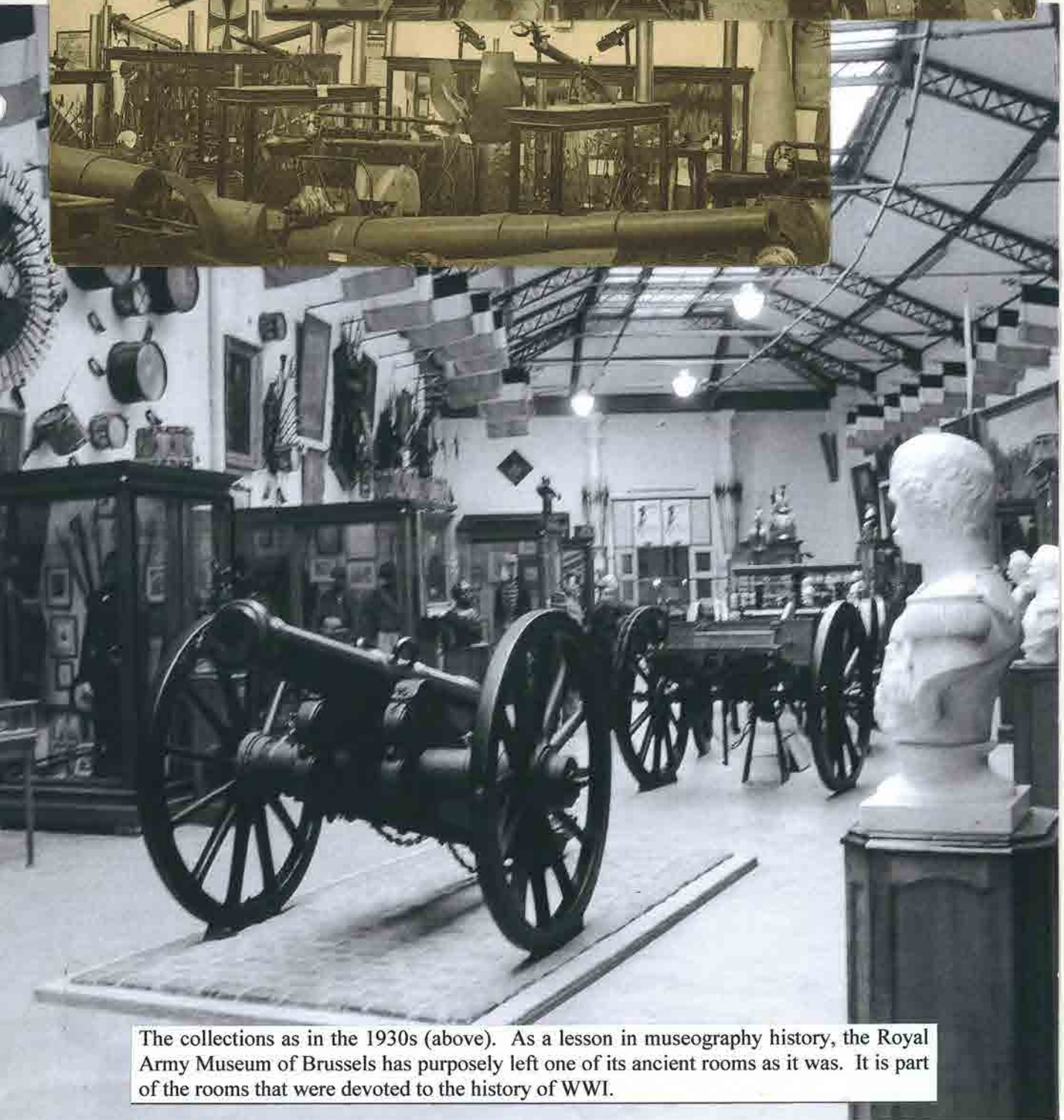
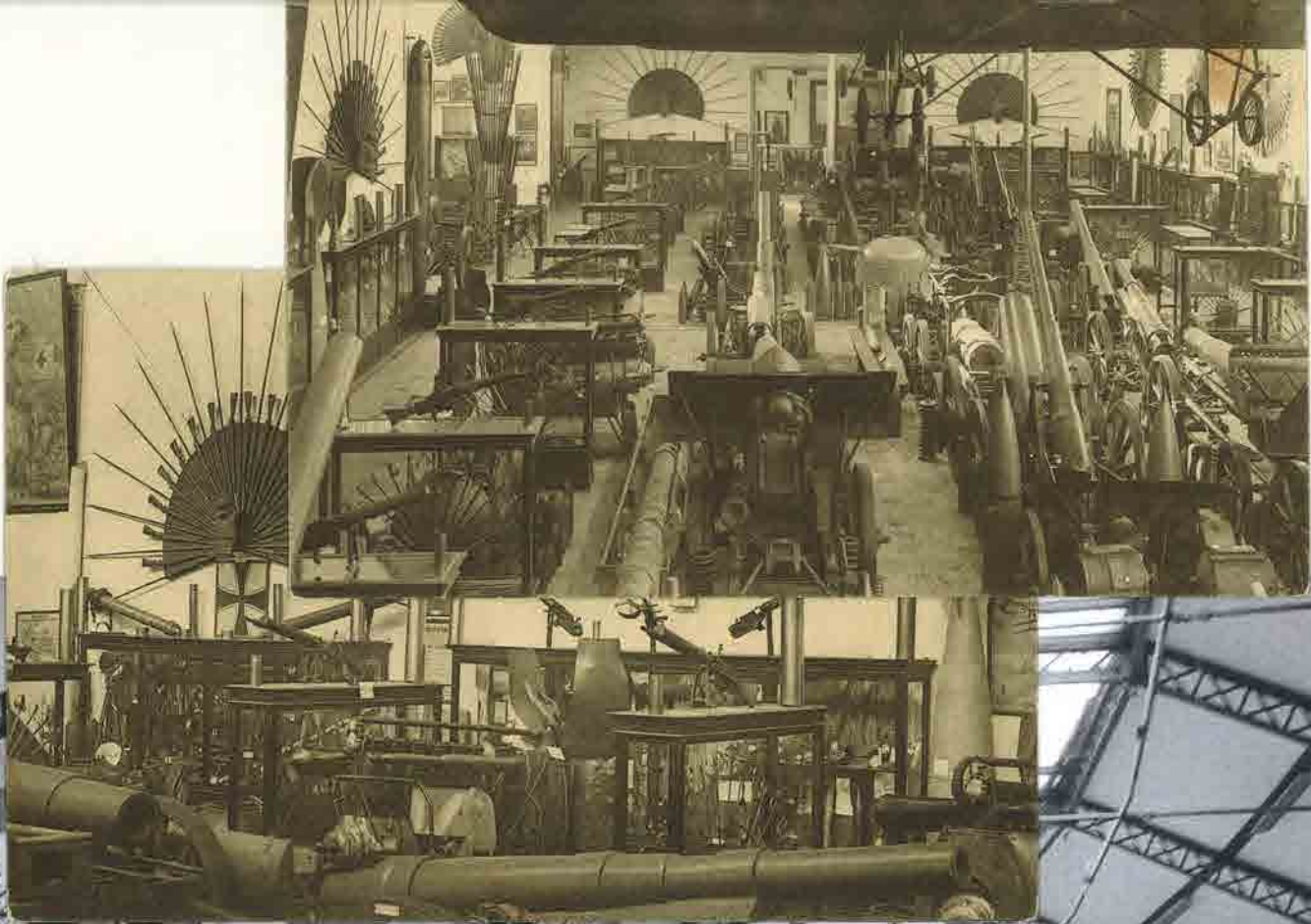
The collections also include a small Navy Department and a much stronger Aviation Department.

The collection of early armoured vehicles formerly used by the Belgian army is of major interest.

As for the collections of cannons, mortars, etc. that were transferred from the “Musée de la Porte de Hal” (see under that entry) to the Army Museum of the Parc du Cinquantenaire, some are now sited on the pavement outside of the museum, a few of the oldest pieces (cannons and mortars) are now on exhibit at the antechambre to room n°3 (devoted to the Middle Ages) whilst the more recent pieces (17th to 19th centuries) have been integrated into the respective chronologically arranged departments of rooms n°2, 4, 5 and 6. These pieces can be identified easily by the X mark they bear, which refers to the “Room 10” of the ex-“Porte de Hal” Museum. The rest is now kept in the underground reserves of the Museums and is normally

inaccessible to the members of the public, except once a year and by arrangement, on a special “open doors day”.

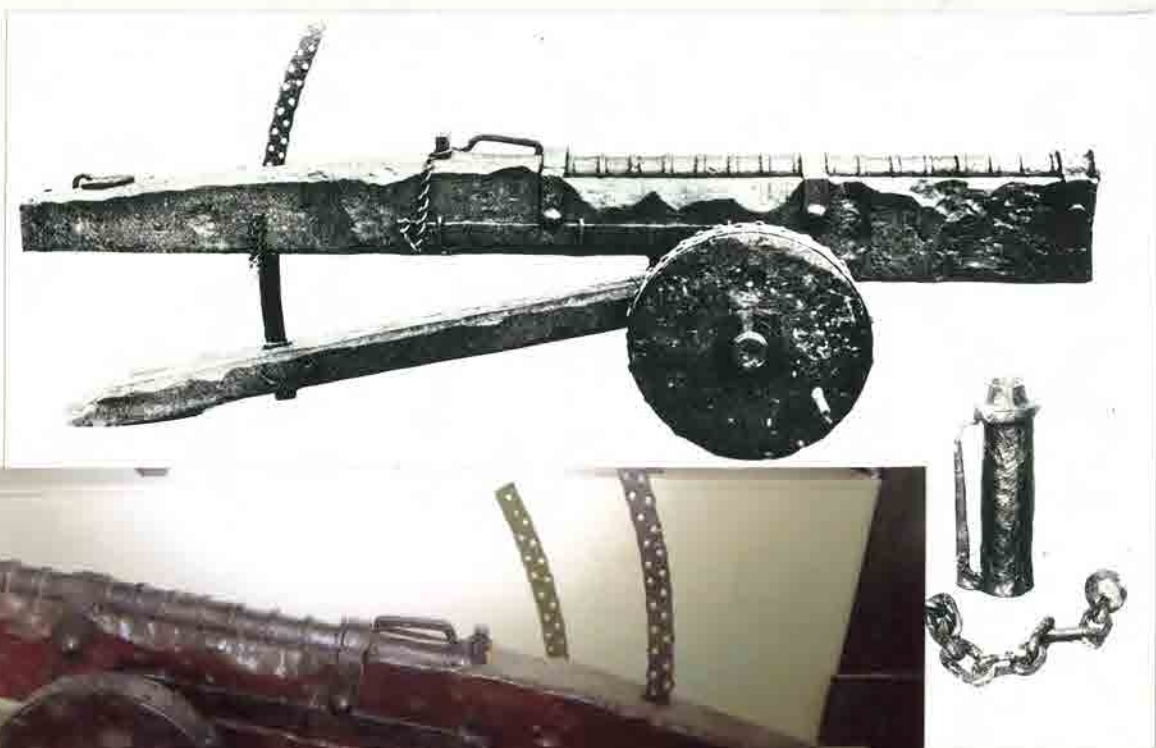
In 2010, the administrative status of the ex-collection of cannons of the “Porte de Hal” has been officially clarified. All pieces, originally transferred to the “Musées Royaux des Beaux-Arts” have now become the property of the “Musée de l'Armée”.



The collections as in the 1930s (above). As a lesson in museography history, the Royal Army Museum of Brussels has purposely left one of its ancient rooms as it was. It is part of the rooms that were devoted to the history of WWI.



Two very early wrought-iron bombards of the 15th century found in Bouvignes (in the valley of the Meuse). Both were in the Porte de Hal Museum when Mendel Peterson visited and are now on display at the Royal Army and Military History Museum.





15th century wrought-iron breech-loader, a bombard, complete with powder chamber and iron wedge. (Probably made in Belgium).



Above: Small muzzle-loader, early 16th century.
Below: Light cast iron breech-loading "falconete", with wedge and tiller.



C. 15th century wrought-iron bombards, muzzle-loaders. On the right (vertical) and above, various types of hackebusses. Also a "hand-gun" with very long "tiller".



An impressive group of 6 fine bronze muzzle-loaders. Their inventory number indicates that they were originally in the "Porte de Hal" Museum before being brought to the "Musées Royaux d'Art et d'Histoire".

Inv. nr 20155: Italian smooth bore cannon, bore: 11cm., founder "FRANC CASTRONOVA F. PANORMI (Palermo) 1741".



Inv. nr 11103: Smooth bore cannon, bore: 6cm., of the 16th century. Mark believed to be of the founder: "L.T." (City of Dinant?)

Inv. nr 20161: Dutch smooth bore cannon, bore: 9.7cm., cast by "JOH. MARITZ FEC. HAGAE (the Hague) 1792".



Inv. nr 401687: Dutch smooth bore gun, 6-pdr., bore: 9cm., cast in "LIÈGE 1830".

Inv. nr 26382: Italian smooth bore
cannon, bore: 8.7cm., cast by
"SEGURANO DORMEA
LENVEN (of Genoa) 1586".



Inv. nr 26383: Italian smooth bore
cannon, bore: 12cm., cast by
"HIEVS CASTRONOVA F.
NEAPOLI (Naples) 1736".

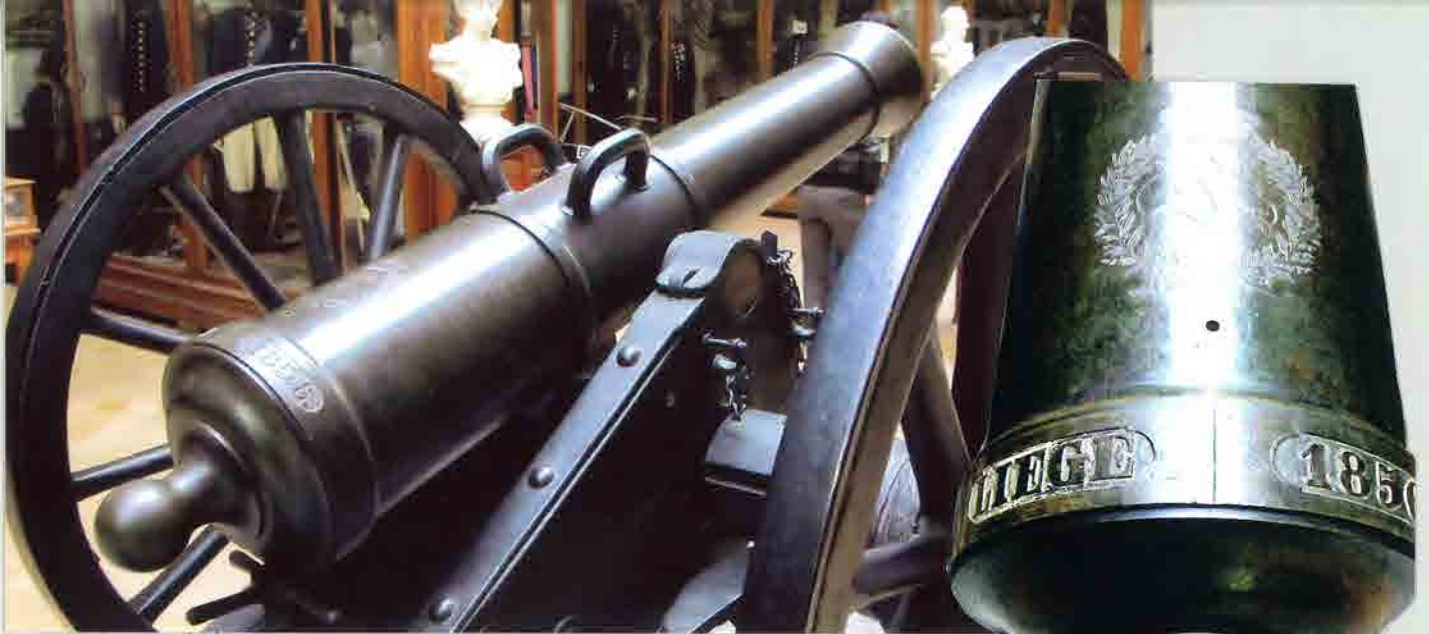




Extremely fine bronze cannon, bearing the crowned monogram of Emperor Napoleon I.

Because it probably took part in the Battle of Waterloo, this piece is of particular interest to British, as well as Belgians visitors.

See further details on next pages.



Bronze cannon (bore: 11.5cm.), cast in Liège in 1856, bearing the engraved cipher of King Leopold I, crowned and with wreath.



Cast iron field piece (bore: 9cm.), made in Liège in 1818 and therefore a Dutch cannon.



Napoleonic bronze cannon (bore: 9cm.), cast by Berenger in Douai in 1813. Bears the crowned monogram of Napoleon I, with wreath and the piece's name: LA BALEINE (The Whale).



Bronze short gun cast in Liège in 1856, as indicated on the base ring (with a moulded sight between the place name and date). The cascabel is a simple, solid cylinder.



Two Dutch bronze howitzers (bore: 16.5cm.), signed "JOH: MARITZ FECIT. HAGAE A 1788". Engraved arms of The Netherlands (lion passant) crowned and with motto "VIGILATE DEO CONFIDENTES" on chase.





Dutch, bronze field piece. Bore: 11.5cm., bearing the arms of The Netherlands on the first reinforce with the motto "VIGILATE DEO CONFIDENTES". Cast by John Maritz, in the Hague in 1776.

OTHER MUSEUMS, FORTS AND CASTLES

Other museums, forts, castles, etc., in Belgium keep and display a number of miscellaneous artillery pieces, often for decoration purposes. Most are of marginal interest. This is probably the reason why Mendel Peterson did not mention such places in his encyclopaedia and, in most cases, did not even visit them. The following museums, castles or forts may not be worth a special visit by a knowledgeable artillery historian, but are worthy of a visit.

Such museums are listed hereafter, in decreasing order of importance and not chronologically or with regard to their respective geographical locations in Belgium.

Name: **Gravensteen (Castle) / Château des Comtes (de Flandres)**
Castle of the Counts (of Flanders)

Location: In the centre of the city of Gent (Gand).

Postal address: Gravensteen – Sint-Veerle Plein — 9000 Gent — Belgium

Telephone: ++32/92 25 93 06

Fax: —

E-mail: info@boekjebezoek.be

Remarks: The Castle of the Counts of Flanders, in Gent, the former capital city of the former Flanders County, originally built, mostly, of wood, in the early Middle-Ages, was replaced in 1180 by the present day stone built “château-fort”. It was the seat and full time residence of the Earls until the 14th century, when they moved to the Prinsenhoff (now demolished), more comfortable and graced with large gardens. From then on, the castle was used as a prison (it still features a fine, well equipped, torture room). At the end of the 18th century, the castle successively housed a cotton spinning mill and a number of workshops. It has been since restored as closely to its original state as possible, and is now a museum that displays fine collections of arms and armours, but few cannons of interest.

*
* *

Name: **La Citadelle de Dinant (Fort)**
The Dinant Citadel (Fort)

Location: On a one hundred metre high cliff dominating the city of Dinant, on the river Meuse.

Postal address: La Citadelle de Dinant S.A. – Place Reine Astrid 3-5 – 5500 Dinant - Belgium

Telephone: ++32/82 22 36 70

Fax: ++32/82 22 58 39

E-mail: —

Remarks: A cliff top fortress, originally a Roman castellum, in later times a mediaeval “château-fort”, destroyed by the troops of Charles le Téméraire in 1466 (and the city sacked). Since the early 16th century, a fortress with a keep, half round towers, battlements and lodgings and supplies for five hundred soldiers. Heavy destruction of the fortress occurred in 1554, when the city was captured and sacked again by the French (as well as the nearby city of Bouvines). Rebuilt by the Bishop of Liège, it was occupied once more, in the late 17th century, by the French. Major reinforcing works, during the Dutch occupation, from 1818 to 1821, have given the Citadel its present day aspect. The Citadel was sold in 1878 and became a civilian monument.

The Citadel houses a “Musée des Armes” or Arms Museum, which shows fine collections of ancient weapons and portable fire arms of the 17th, 18th and 19th century. The few 19th century cannons, mortars and pyramidal piles of ammunition, which decorate the interior of the Citadel, are of moderate interest.

Lectures and thematic meetings on military history in general and, occasionally, on artillery, are regularly organised in the Citadel by historians and specialists of university level.

*
* *

Name: **La Citadelle de Namur (Fort)**
The Namur Citadel (Fort)

Location: On a high rocky spur at the confluent of the rivers Sambre and Meuse, overlooking the ancient city of Namur (earliest traces of habitation found on the site: 6000 BC).

Postal address: Citadelle – Terra Nova — 64 route Merveilleuse — 5000 Namur — Belgium

Telephone: ++32/81 65 45 00

Fax: ++32/81 22 93 66

E-mail: info@citadelle.namur.be

Remarks: Located in the heart of Europe, a major crossroad for land and fluvial communications, the rocky spur where the present day citadel still stands has known all the trials and vicissitudes of Europe. Originally fortified by the Romans, then, in stone, by the Counts of Namur, from the 10th to the 15th century, then taken and retaken countless times by Spanish, Austrian, French and Dutch armies, demolished and reconstructed several times, it remains today one of the largest, most important stone fortresses of Europe. The battlements and walls were attacked by artillery, for the first time, in 1488 by the bombards and the stone balls of Maximilian de Habsburg. As a result of the heavy destructions, the layout of the fort was completely revised

and artillery boulevards were traced behind the outer walls. The following progresses of artillery were reflected in a quasi automatic way in the successive changes brought to the stone defences of the “Namur Castle” as it was then called. Unfortunately, for the artillery historian, the few 19th century cannons and mortars now on display in the Citadel, which date from the Dutch period, do not match the interest of the buildings.

*
* *

Name: **La Citadelle ou Fort de Huy (Fort)**
The Citadel or Fortress of Huy (Fort)
Remarks: This place must be mentioned because it is the third fortress on the heights of the Valley of the Meuse (downstream from Namur). However, although the Citadel contains one room (Room 8, first floor) that keeps a collection of miscellaneous weapons and firearms (individual firearms), the rest of the museum is entirely devoted to the history of the “Résistance” (the Belgian underground army that waged a war of attrition against the Nazi occupants) and, generally speaking, as an institution, is a maintainer of Memory.

*
* *

Name: **Nationaal Scheepvaart Museum (“Steen”) Antwerpen / Musée National de la Marine (“Steen”) Anvers**
National Maritime Museum Antwerp

This museum no longer exists and the building is closed to the public.

A new, highly modernistic museum named “MUSEUM AAN DE STROOM” (Museum of the River) or MAS, has been inaugurated in Antwerp along the river Schelt in 2012.

Address: Museum aan de Stroom – Hanzestedenplaats 1 — 2000 Antwerpen — Belgium
Telephone: ++32/3 338 40 00
Fax: ++32/3 338 44 44
E-mail: mas@stad.antwerpen.be

It is remarkable that although it is very modern by some aspects, the lighting of the displayed artefacts and paintings, etc., is very good and not the work of a trendy specialist. Its five floors are described as devoted to “the essential connexions between Antwerp and the world”. To this effect the museum “leans on four universal themes” including: The Metropolis (the past, the present and the future), The World’s Harbour (crossroad of trade and navigation), these themes are

illustrated in part by the very fine former collection of ship's models, paintings, etc., of the late "National Scheepvaart Museum". None of the few, small cannons, of which, are on display in the MAS. But for reasons beyond understanding, three totally unrelated themes have also been selected, including: "Demonstrations of Power" (status symbols from all over the world such as sceptres, totems, crowns, etc.) and "Life and Death: Men and Gods" (Where do we come from? Where do we go? What happens after Death?) (sic).

N.B.: Unrelated, but superb and worth seeing is an outstanding (Belgian, formerly private) collection of Pre-Colombian treasures and artefacts that occupies most of the fifth floor. Truly one of the very best collections in the world after "Museo del Oro", in Bogota.

*
* *

Museums in Liege:

Thanks to its craftsmen, Liège has been, for five centuries, a leading centre for the production of high quality firearms (hunting guns, hand guns, rifles and carbines). The city is still world famous for the quality of the rifles, submachine-guns, light and heavy machine guns, etc., produced and exported by the FN factory ("Fabrique Nationale d'Armes de Guerre"). However, the city never had a gun foundry worth mentioning before the 19th century. This is the reason, no doubt, why neither the "Musée de la Métallurgie et de l'Industrie" (Museum of Metallurgy and Industry) or the "Musée d'Armes" (Arms Museum) have any cannons in their otherwise remarkable fine collections. (This is with the exception of two locally cast mortars flanking the entrance of the "Musée d'Armes".)

*
* *

Cannon foundries:

Being, as MLP was, deeply interested in the history of gun founders and gun foundries, having furthermore, in many of the museums he had visited, come across guns or mortars that had been cast in Belgium, in Malines and, later on, in Liège, MLP, no doubt, inquired about the whereabouts and the present state of the Belgium gun foundries.

Sadly, he learnt that nothing remains of the premises, ironworks and industrial installations of either of the foundries.

Hand-held firearms and artillery pieces have been manufactured in the Southern Netherlands, as far as the official and commercial records can tell us, since the early 14th century. The early bombards, the "Veuglaire", etc. of the

time were, however, often made with forged bars of iron welded together and reinforced with iron hoops, a manufacturing operation that could be achieved in most any blacksmith's shop.

Among the exports that have been traced by historians, the most famous is of course the present made by Philippe le Bon to King James II of Scotland in 1457: The huge cannon presently conserved in Edinburgh under the nickname of "Mons Meg", which was actually manufactured in Tournai in Hainaut, together with another gun made in Bruges.

The manufacture of artillery pieces in what is now Belgium is as old as artillery itself, since in 1346, the very year when the first "bouche à feu" or artillery piece in the most general sense, appeared on the battle field, there was already at least one gun manufacturer in Tournai. These were small calibre guns, but very soon, the local foundries began, in a purely empirical way, to produce bombards which became bigger and bigger. In the 15th century, the "Belgian" foundries and forges were highly reputed abroad. Their best customers were France and England.

The Malines (or Mechelen) foundry rapidly became the most important and famed for quality. Having been founded in the early part of the 15th century, that foundry continuously increased its production and sold it on a wider and wider market, until 1775.

The most renown gun founders in Malines were Remi de Hallut and his successor, (who had wisely hastened to marry his widow) Hans Poppenruyter. Their production is found today in most of the army museums of Europe and, consequently, in many of the MLP's LGAs.

In the very early years of the 19th century, as Liège and most of present day Belgium had temporarily become part of France, the "Premier Consul" being much in need of as many cannons as he could gather for some projects he had in mind, ordered a gun foundry to be established in Liège. This was done in 1803. The site was very well chosen from the industrial and military viewpoints: In the midst of an active industrial area, in the centre of a coal basin, and on the very riverbank (on the "quai Saint-Léonard"), therefore with quick connections via the Meuse and the Sambre to Northern France.

During the "Consulat" and during the "Premier Empire", the Liège Foundry produced over 7,000 cannons, mortars, etc. for the Navy, the coastal batteries and the fortresses. Immediately after present day Belgium had ceased to be French, to become Dutch, the government of the Netherlands turned the former "Fonderie Impériale de Liège" into one of its national foundries and proceeded to produce as many iron

cannons it could, with the necessary ammunition, to be exported to the Dutch colonies.

After 1830, when Belgium became an independent Kingdom under Leopold I, formerly of Saxe-Cobourg Gotha, and the place the “Fonderie Royale de Canons”, the new Belgian Ministry of War oversaw its production until 1835, at which date a foundry for brass cannons and mortars was installed next to the old foundry for cast-iron pieces. From 1840 on, the production for export developed considerably. Again, the present day artillery museums of Bavaria, Denmark, Egypt, the United States, Spain, the Netherlands, Russia, etc., bear testimony to the importance of its production.

About 1860, the Liège Foundry was one of the first to switch its production from iron guns to steel cannons, either of smooth-bore or rifled. The Foundry was brought to a stand still during WWI by the Germans, who took away all its modern machinery.

Between WWI and WWII, the Foundry was fully occupied in supplying modern equipment to the Belgian artillery corps and to the forts.

In 1940, the Germans, again, occupied the installations at the “quai Saint-Léonard”. Although it was restarted in 1945, the activity of the gun foundry petered out, as did the tactical use of traditional artillery and its remaining activities, workshops and personnel were transferred to the “Caserne-Arsenal”, the barracks and artillery depot of Rocourt.

Declassified in 1949, as a military establishment, the Foundry was demolished in successive stages from 1962 to 1973, to make way for other buildings.

MENDEL L. PETERSON

LARGE GREEN ALBUM

NETHERLANDS

**UPDATED WITH THE CORRESPONDING
EDITOR'S ALBUM**

MENDEL L. PETERSON LGA

THE NETHERLANDS

Consisting of the following parts:

LGA AMSTERDAM

RIJKSMUSEUM AMSTERDAM

With an added folio showing an important cannon photographed in ENCKHUIJSEN

EDITOR'S ALBUM

The new, re-inaugurated in April 2013

RIJKSMUSEUM AMSTERDAM

and

THE CITY OF ENCKHUIJSEN

**Two Editor's Albums describing two Amsterdam museums,
which MLP did not visit:**

SCHEEPVAART MUSEUM

(NAVIGATION MUSEUM)

and

AMSTERDAMS HISTORISCH MUSEUM

(AMSTERDAM HISTORY MUSEUM)

THE LGA

LEGER AND WAPENMUSEUM (GENERAAL HOEFER) LEIDEN

(ARMY AND WEAPONS MUSEUM (GENERAL HOEFER) LEIDE)

(No longer exists and transferred to Delft)

EDITOR'S ALBUM

DELFT

**NEDERLANDS LEGERMUSEUM DELFT
(ARMY MUSEUM OF THE NETHERLANDS DELFT)**

No longer exists, since January 2013 and to be now transferred to Soesterberg, on the grounds of the present day Air Force Museum, where it should reopen in the year 2015.

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EDITOR'S ALBUM

**MARITIEM MUSEUM ROTTERDAM
(MARITIME MUSEUM OF ROTTERDAM)**

*

MLP LGA

SCHOCKLAND MUSEUM

With the corresponding Editor's Album.

MENDEL PETERSON LGA

AMSTERDAM

RIJKSMUSEUM

This album consisted of originally, 32 folios, not numbered, but each folio featuring a gun with a reference number that only refers to the museum's Foto Commissie negative of each photograph.

The photos are pasted on one side only, except the last page concerning Enckhuijsen, which has obviously been added later (different paper).

MLP has not prepared captions for any of the pieces of ordnance photographed in this album and his field notes have not been found (he may never have prepared any field notes since the photographs are not his). Neither has the documentation that was undoubtedly supplied to MLP by the photographers of the Foto Commissie together with their photographs, been found with the unfinished album.

Summary captions therefore have been prepared by the Editor with the invaluable help of the extremely kind present-day, Curator of Artillery for the Rijksmuseum, Mrs Evelin Sint Nicolaas.

It is interesting that the 31 pieces photographed hereafter have been selected by MLP in the vast collection of artillery pieces, which at the time he visited the museum, was displayed. The museum has undergone since, a ten year long and radical series of structural and other transformations. The philosophy of the organization of the exhibits has been reviewed in depth and few of the pieces he photographed 45 years ago are displayed in the new halls of the museum, which further enhances the value of the Rijksmuseum LGA.

NB:

The F-number refers only to the ancient negatives of the Foto Commissie of the Rijksmuseum.

The NG-2000 numbers are recent inventory numbers (from the year 2000 on) of the Rijksmuseum (established by Mrs. Eveline Sint Nicolaas).

The pieces still missing a NG-number have an ancient "record number" or RNr (digits only) and/or an ancient NM-number, which is an old 'object number' where NM stands for Nederlandsche Museum voor Geschiedenis en Kunst".

To be kept in mind about the Low Countries

The Low Countries, or the Netherlands, or Flanders, consisting of 17 Provinces, were fully submitted to the Spanish Crown until the year 1579, when the Northern Netherlands or the “Seven Provinces” proclaimed their independence as the “Republic of the United Provinces”, after a long and bloody insurrection.

The Southern Netherlands or “Les Pays d’en bas” became then known as the “Spanish Netherlands” and later (from 1598 to 1621 — at which date they returned to Spain) as the “Austrian Netherlands”.

Amsterdam
F-682-7



Editor's note :

All photographs in the present Mendel Peterson LGA for the Rijksmuseum Amsterdam have been kindly made at his request by the staff of the "Foto Commissie" of the museum. The following note, handwritten by MLP, concerns all photographs referred to (by him) as "Amsterdam F 682-7 to Amsterdam F 716-2".

Copyright
Foto - Commissie
Rijksmuseum
Amsterdam

The correspondence of the time — from the summer of 1971 on — indicates an excellent, enthusiastic collaboration by the Rijksmuseum to MLP's great project.

Amsterdam
F-682-8



Amsterdam
F686-1



Amsterdam
F686-2



Amsterdam
F687-10

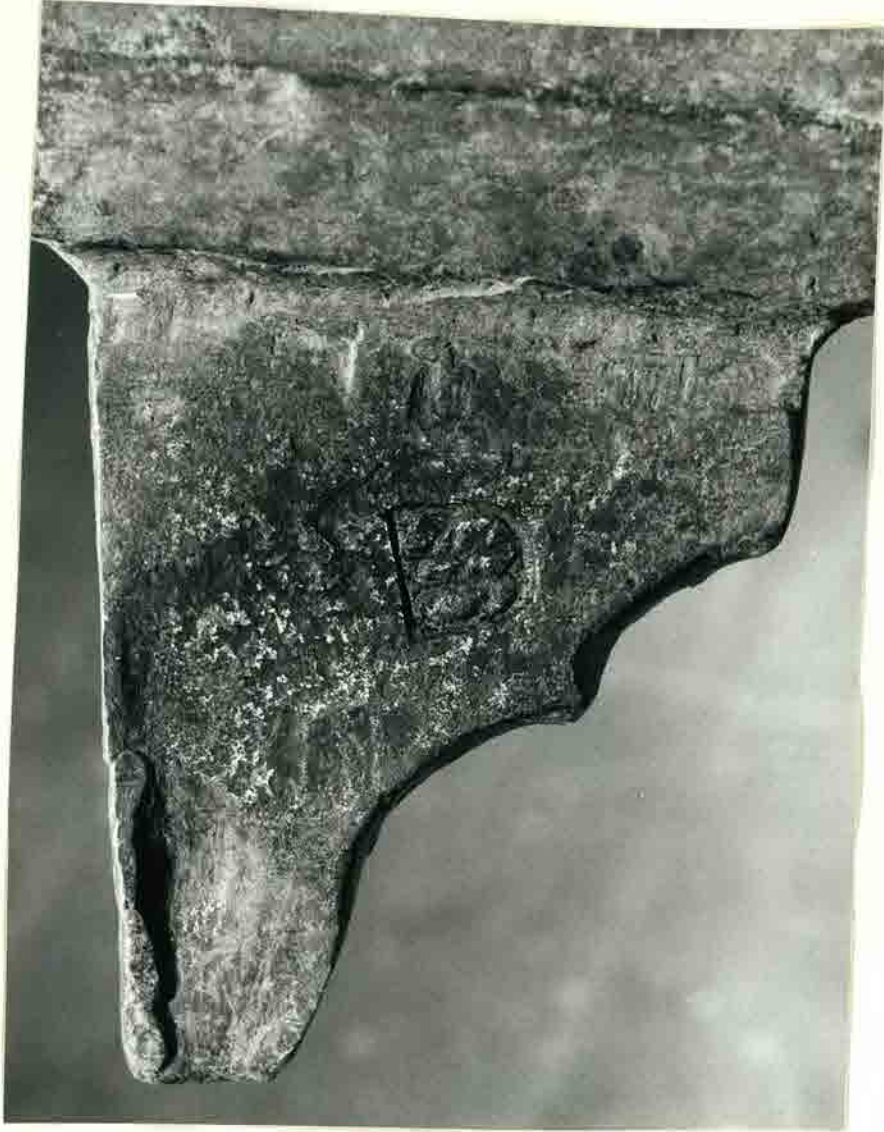


Amsterdam F687-9



Amsterdam

F-687-12



Amsterdam
F688-2



VOC are the initials of the “Verenichte Neederlandsche Geocroijeerde Oost Indische Compagnie”, commonly called the “Dutch East India Company”, and abbreviated as VOC. The VOC was an exclusive nation-wide trading company which had the monopoly of the commerce with the whole of the East Indies, in fact from East Africa and the Persian Gulf to Japan and Formosa. All the Dutch citizens could and did invest in the Company for any amount they could afford. It was by far the biggest enterprise in the Netherlands during the 17th and the 18th century. Its produced in the good years returns on investment between 15 to 40%. The capital grew steadily and the Company, based first in Bantam on the north-west coast of Java, later in Batavia (today called Djakarta) extended its power and commercial network all over its realm at, mostly, the cost of the Portuguese trading organization in India and in the whole Far East. The fighting between the already established Portuguese and the Dutch new comers was fierce. Prisoners were not at the order of the day. The Company was rich and powerful, it received, when needed, the full support of the Government, the Army and the Navy. It had sovereign rights, the Governor in Batavia being entitled to render justice, to wage war locally and to strike its own coins. The VOC was composed of six regional “Kamers” (Chambers): Amsterdam, Zeeland, Rotterdam, Delft, Hoorn and Enkhuizen.

The VOC was one of the two most important ever East India Companies, with the two successive English East India Companies (for details, see the Editor’s Albums concerning the Tower of London). Their example was followed by smaller, sometimes ephemeral companies which would fly the French, the Danish, the Swedish, the Prussian, the Imperial or the Ostende flag (more details in the corresponding Editor’s Albums).

Amsterdam
F-688-3



Amsterdam
F. 688-4



Amsterdam F688-7



Amsterdam
F-688-8



Amsterdam
F-688-12



Amsterdam F-689-1



Amsterdam
F-689-2



Amsterdam
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Amsterdam
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Amsterdam
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Amsterdam
F-691-7
F-691-6



Amsterdam
F693-2

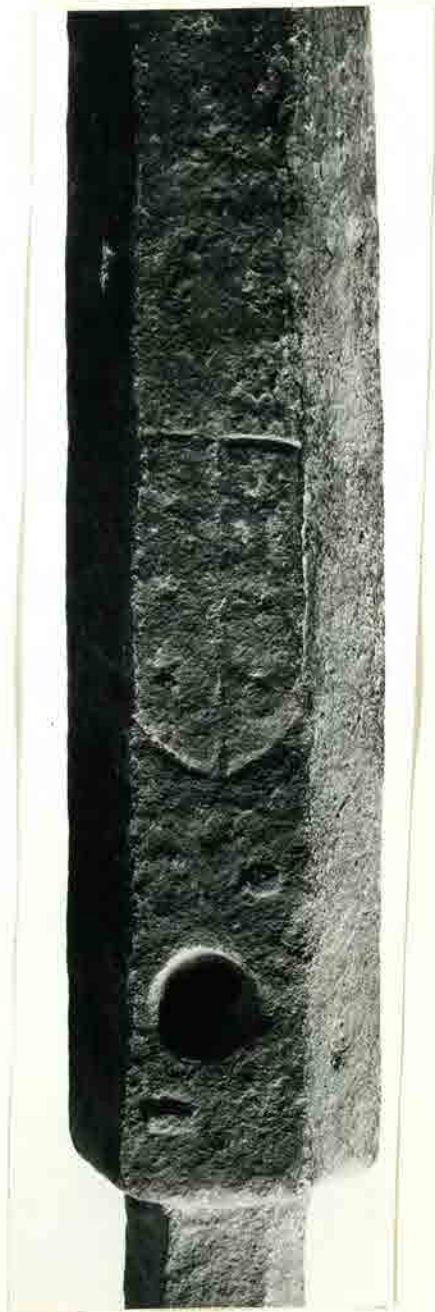


Amsterdam

F693-10



F693-9



Amsterdam
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Amsterdam
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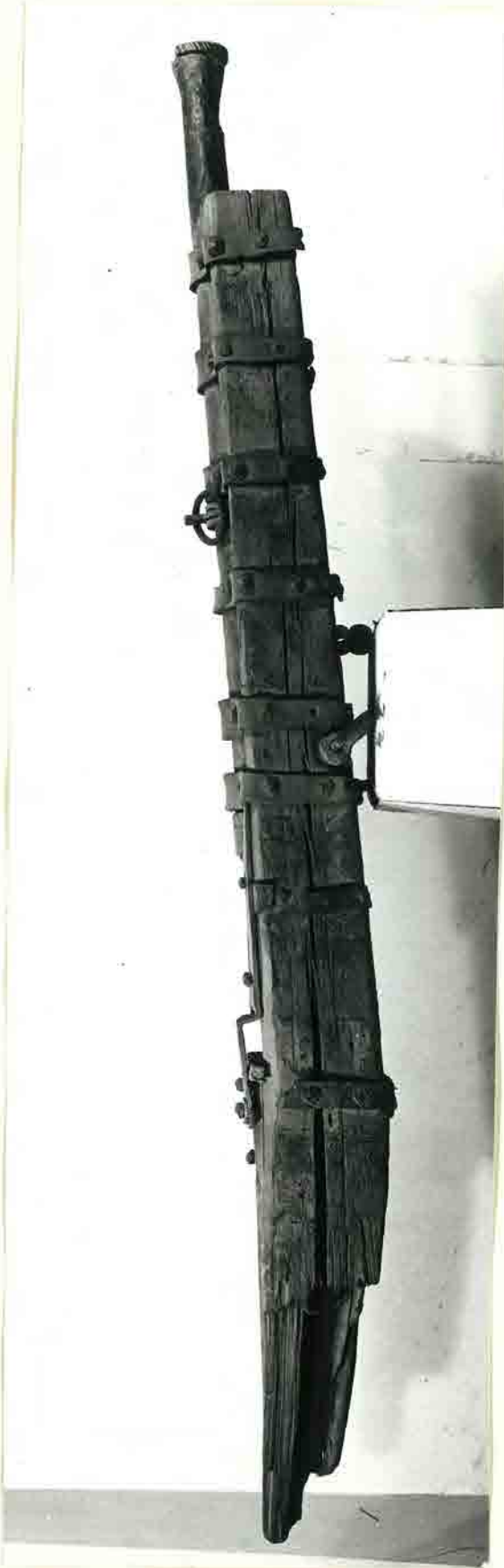
Amsterdam
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**Cannons in
The Netherlands
2013**



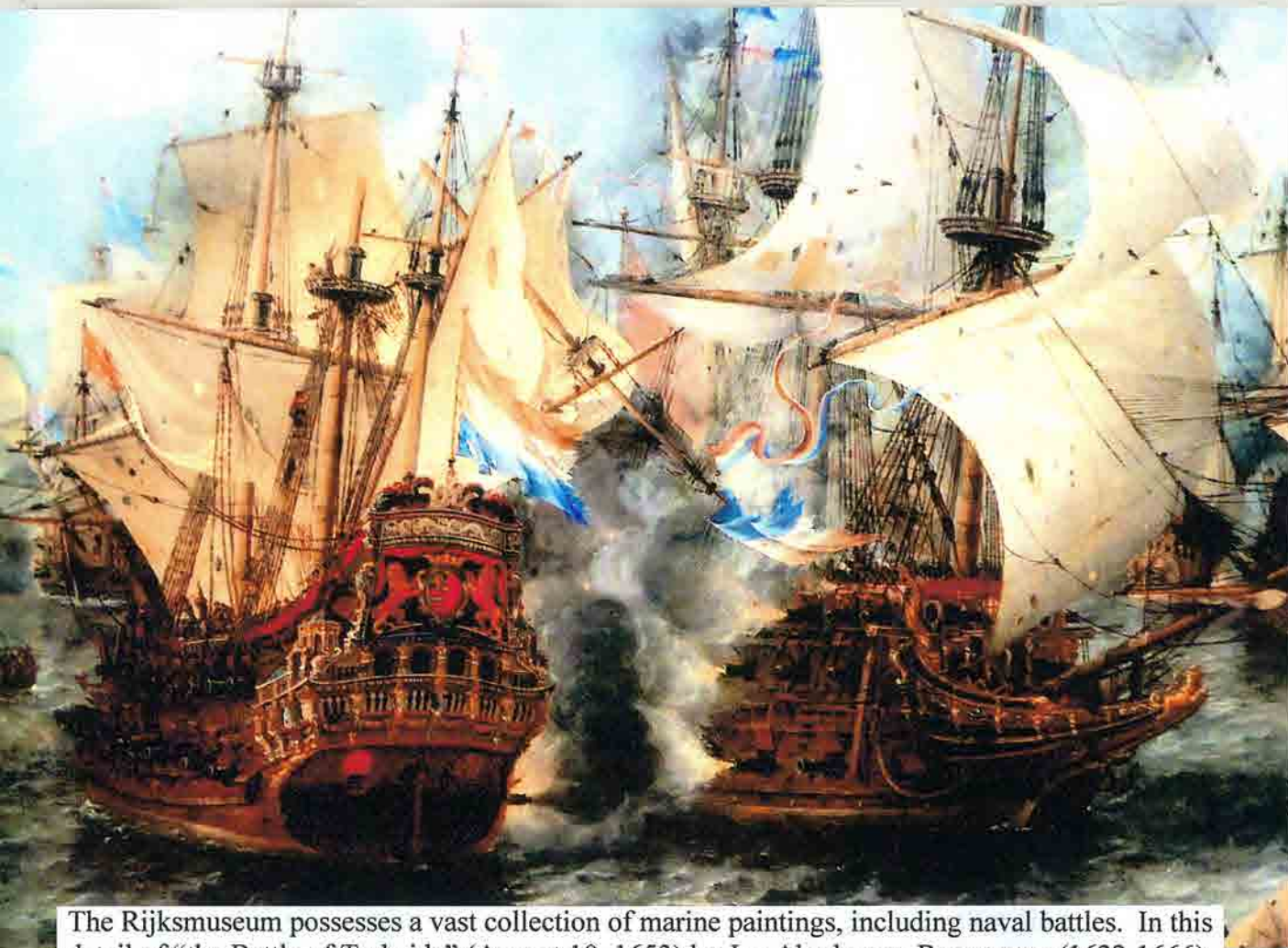
"ULTIMA RATIO MERCATORUM"

(The Dutch merchants could well have adapted the proud motto of King Louis XIV, and lesser sovereigns.)

EDITOR'S ALBUM

AMSTERDAM

**RIJKSMUSEUM
(KINGDOM'S MUSEUM OR NATIONAL MUSEUM OF AMSTERDAM)**



The Rijksmuseum possesses a vast collection of marine paintings, including naval battles. In this detail of "the Battle of Terheide" (August 10, 1653) by Jan Abrahamsz Beerstraten (1622-1666), we see an episode of the Anglo-Dutch Wars (1652-1674), with intervals.). The painting shows the flagship of the Dutch fleet, under the orders of Admiral Maerten Harpertsz Tromp firing its cannons at an English ship. The Dutch Republic won the battle but Admiral Tromp was fatally wounded.

RIJKS MUSEUM

**THE KINGSDOM'S MUSEUM
or NATIONAL MUSEUM
(AMSTERDAM)**



Two “wager cups” in the shape of a cannon, one in glazed stoneware, made in Raeren, the other in glass, produced in the Low Countries (c.1550-1600). A “wager cup”, also termed a “drink-up”, was so called because the user could not put it down when it was full and thus had to drain it. Although wager cups came in all shapes and forms at the time, they were often shaped after cannons.

**MUSEUM:
RIJKSMUSEUM
KINGSDOM'S MUSEUM OR NATIONAL MUSEUM OF AMSTERDAM**

- Location: When you look at the city map, the museum is just south of the ancient, half spider web-like part of the town with its four main 17th century concentric canals, and on the “Singelgracht” (another, major canal).
- Postal address: Postbus 74888 – 1070 DN Amsterdam – The Netherlands.
- Telephone: ++31/20 67 47 000
- Fax: ++31/20 67 47 001
- Email: info@rijksmuseum.nl (General)
e.sintnicolaas@rijksmuseum.nl (For artillery matters)
- Website: www.rijksmuseum.nl
- Curator: Dr Eveline Sint Nicolaas (Curator Department of History - includes militaria and artillery)
- Contact person: Information on ordnance: Dr Sint Nicolaas, tel. ++31/20 67 47 212 or Mr Leon Vosters, Head Librarian, tel. ++31/20 67 47 267
- Services offered: An extremely rich library, probably the best in the country for the history of the arts in general and of applied arts. It is not particularly specialized in the ancient artillery part of the museum's collections but it is run by two extremely helpful and competent librarians who will quickly produce to the visiting researcher all the most detailed information from the latest official inventory of the museum's holdings in general, and this with a smile. Unfortunately there is no such thing as a complete catalogue of artillery pieces.
The museum also publishes the very good trimestrial *Bulletin van het Rijksmuseum* of mostly artistic interest. The issue n°1 for 2007 contained nevertheless a fascinating article by Evelin Sint Nicolaas, titled: *Drie indische kanonnen* or “Three Indian Cannons”. That article goes much further than its apparently anecdotal subject.
- Opening hours: 9h-17h every day; 9h-22h on Fridays.

Recent catalogues and publications on the history of the building and its collections include: On the museum in general : Bakker, Jansz S. (publishers), *In en om het Rijksmuseum* (with 75 photographs of the museum and its collections), Koog Zandwijk, 1909 (a good overview of the museum in the 19th century); Rijksmuseum Stichting Amsterdam (a collective work), *Rijksmuseum Amsterdam, topstukken uit de collectie*, Amsterdam, 1995 (a well-illustrated album); Kiers Judikje and Tissink Fieke, *The building of the Rijksmuseum*, Milan, 1991; Braat J et al., *Honderd jaar Rijksmuseum, 1885, 1995*, Bilbao, 1985; etc. Unfortunately, there is no up to date, complete catalogue of the artillery collection, at this time.

History of the building: The first Rijksmuseum opened its doors in 1800, in The Hague. It was then called the “Nationaal Konstgallerij”, the National Arts Gallery”, and showed mostly paintings. The museum moved eight years later to two different successive sites in Amsterdam, until it became apparent that a larger definitive national museum had to be built. The present day building or group of buildings of the Rijksmuseum was inaugurated on July the 13th 1885 amid great celebration. The building as it is results from the works of a commission of artists and art lovers, who ran a competition amongst architects, closing date: February 1, 1864.

The results were controversial, a beautiful looking building had been selected, but it turned out, on second examination that it would be impractical, too expensive to build and not at all adapted for museum use, so a new competition was organized in 1875. The specifications again were simple: A building for the safekeeping and exhibition of Dutch art treasures, particularly from the 16th and 17th centuries. The area where the building was to be erected, at the cost of no more than one million guilders, was at the time largely farmland, but a residential area to the south of the site had been approved and the architect had to take that into account. Out of four candidates, it is architect, Petrus Josephus Hubertus Cuypers, commonly called Pierre Cuypers, whose plan was chosen. The plan envisaged a symmetrical building, rectangular, with two inner courts separated by a central public passage. The exterior of the winning museum design represented a revival of the local architectural style of the early 17th century, in which Renaissance forms had newly made an appearance. The building was built of bricks, but with stone ornaments, pilasters, balustrades, etc., as well as a number of statues. The architect, during the long construction period, worked closely with his son Jos and with a good friend of his, Jonkheer Victor de Stuer.

There had been controversy in Amsterdam about the way Cuypers project had been selected, there was more controversy when Cuypers decided to more and more ignore the plans, which had been retained by the committee to do instead almost literally what pleased him, in order to follow his own taste, with the result that the final building looked more like the first plan he had presented years earlier than the plan that had been approved. One of the specifications of the Rijksmuseum competition had emphatically specified “an old Dutch style” and indeed Cuypers took his inspiration from a number of 17th century town houses in Amsterdam and in a number of well-known brick buildings in the country. Still, the most acerbic critics were directed at him on the grounds that he had in fact “adulterated old Dutch Renaissance architecture with Gothic architectural forms” (Cuypers was a

devote Catholic, so was his friend de Stuer and the Gothic style was associated to Catholicism in the mind of the Dutch artists, architects, etc., who were mostly Protestant). “Friendly colleagues” wrote after the inauguration of the museum that it looked like “an Episcopal palace” and that “its dominating Gothic character was inexcusable”. It was “bad taste”, etc...

Cuypers had designed the smallest details of the building himself, including the arrangements of the garden and even the iron grate that surrounds them.

The building, the largest in The Netherlands, ended up costing 2,770,000 guilders, about three times the original budgeted amount.

However, as it was, the building of the Rijksmuseum has done its job, at the cost of a few small adjustments and transformations over its century and something of existence.

Over the last ten years, as the museum was closed (except for two rooms displaying a very small selection of its most spectacular treasures, including one cannon, major works of consolidation, rebuilding, renovation, restoration and inside transformations have been carried on and an all new Asian Pavilion, made of stone and glass, has been built. These major works lasted until mid-April 2013 when the new “R.M.” was officially re-inaugurated by HM the Queen. The result is splendid.

History of the museum and its collections: The collections of the “Nederlandsch Museum of History and Arts”, its first official name, always consisted of more art than history, “art” being, in the Netherlands, mostly painting of course and painting being of course consubstantial with the period of history in which it was created.

Aside from the Fine Arts Department, which included also objects grouped under the vague definition of “Applied Arts”, was a historical department, which was separated in the 1930s between the Department “Geschiedenis ter Zee”, History at Sea, and the section “Geschiedenis ter Land”, History on Land, which, in 1946, were merged again, under the name of “Afdeling Vaderlandsche Geschiedenis” or Department of the Fatherland’s History. This is where ordnance pieces came to be relevant. They were relevant for the two main periods of the nation’s military strength: The period, in the 16th century, of the Independence War against the Spanish Crown (which led finally to the freedom of the Seven Northern Provinces and to the Republic) and the much longer intermittent war at sea that the Dutch continued to fight, first against the Spaniards, later against their main trade competitors in the overseas trade, the Portuguese and the English (and their occasional allies). Consequently, the

artillery collections of the Rijksmuseum contained a small number of land pieces, which were mostly defensive pieces that had been fired from the fortified walls of their besieged cities against the “tercios de Flandes” and, on the other hand, a larger number of the naval guns of the several “Admiraliteiten” (the provincial admiralties of the United Provinces), as well as the specially made sea artillery pieces of the all-powerful Dutch East India Company that between 1603 and the late 18th century established fortified trade posts all over the Indian Ocean, the China Sea and the Pacific and made the fortune of the merchant nation. The guns were marked with the initials of the VOC and of one of the six chambers (Amsterdam, Rotterdam, Zeeland, Enkuizen, Hoorn and Delft).

Originally, most of the naval guns in the museum were gifts of the “Navy Models Room” at the Navy Ministry in The Hague. The Navy Models Room was an early attempt at keeping some kind of a museum in the Ministry, in which one could see and study obsolete cannons and mortars, as well as trophies, pieces of ordnance, mostly taken as booty in battles against Asian rulers. Later on, other museums contributed and from the 1950s on, underwater archaeological excavations were, as in so many museums, the main provider of naval artillery, as well as of all the artefacts from the time capsules, which underwater excavators have opened and keep opening all over the world on the bottom of the sea (this includes the excavations led on various VOC wrecks and Dutch warships by this editor).

Generally speaking, in most European museums, the number of ordnance pieces exhibited, either field pieces or naval guns, has been steadily declining after every period of closure for structural repairs or for inside renovation. But the Rijksmuseum seems not to have followed that trend. Some of the brochures of the museum are still advertising a department concerned with “the Republic of the Seven United Provinces as an international superpower” (and it may not be an overlook) whereas the general trend these days is of course to erase the glory of the redoubtable Dutch Navy and of the conquest of Asia and its profitable markets that made the country rich and powerful in its golden age (16th and 17th century). Instead to organize exhibitions or departments with titles that allude to “the encounter between West and East” and “the cultural exchanges that resulted of such meetings” (the true, original purpose of such “encounters” would be looked for in vain in the accompanying literature). Consequently, as a result, the instruments of power, the instruments of conquest, the instruments that brought glory, power and wealth to the Netherlands are to be hidden in the deepest parts of most of the other museums cellars, with the

exception of the Rijksmuseum, that after the complete reorganisation of its collections continues to show cannons in small number yes, but well chosen, in their context, and not presented only as works of art, as fine examples of sculpture (preferably of oriental sculpture), etc., but as what they really are: “ultima ratio regis”, the killing tools for the conquest of those highly profitable spice markets overseas.

The collections in the new Rijksmuseum:

The in depth, inside structural rebuilding of the museum (the outside has of course not been altered at all) has been accompanied by a radical redistribution of the innumerable artefacts, paintings and other treasures of this exceptionally rich museum, along the lines of a new display philosophy. New, yes, but the visitor will be grateful to the curators for having built and organized for them a friendly “new museum design”.

It must be mentioned also that, contrary to former regulations, photography is now permitted (without flash or tripod) everywhere in the museum. Good news indeed!

The artefacts and paintings exposed are exhibited in chronological order and floor by floor. “Floor Zero” (which is in fact underground) contains artefacts and paintings of the years 1100 to 1600 and gives access to a new modern building, the “Aziatisch Paviljoen”, the Asian Pavilion (on two levels, A1 and A2), which displays, mostly, sculptures. The other half of level zero is occupied by the “Special Collections” (Keys, Delftware, Music, Jewellery and Fashion, Dutch porcelain, Relics and, in Hall 0.12: Arms, including a small number of cannons (which will be described further on) and a fine collection of authentic ancient artillery models, as well as a hall displaying ship models (0.13).

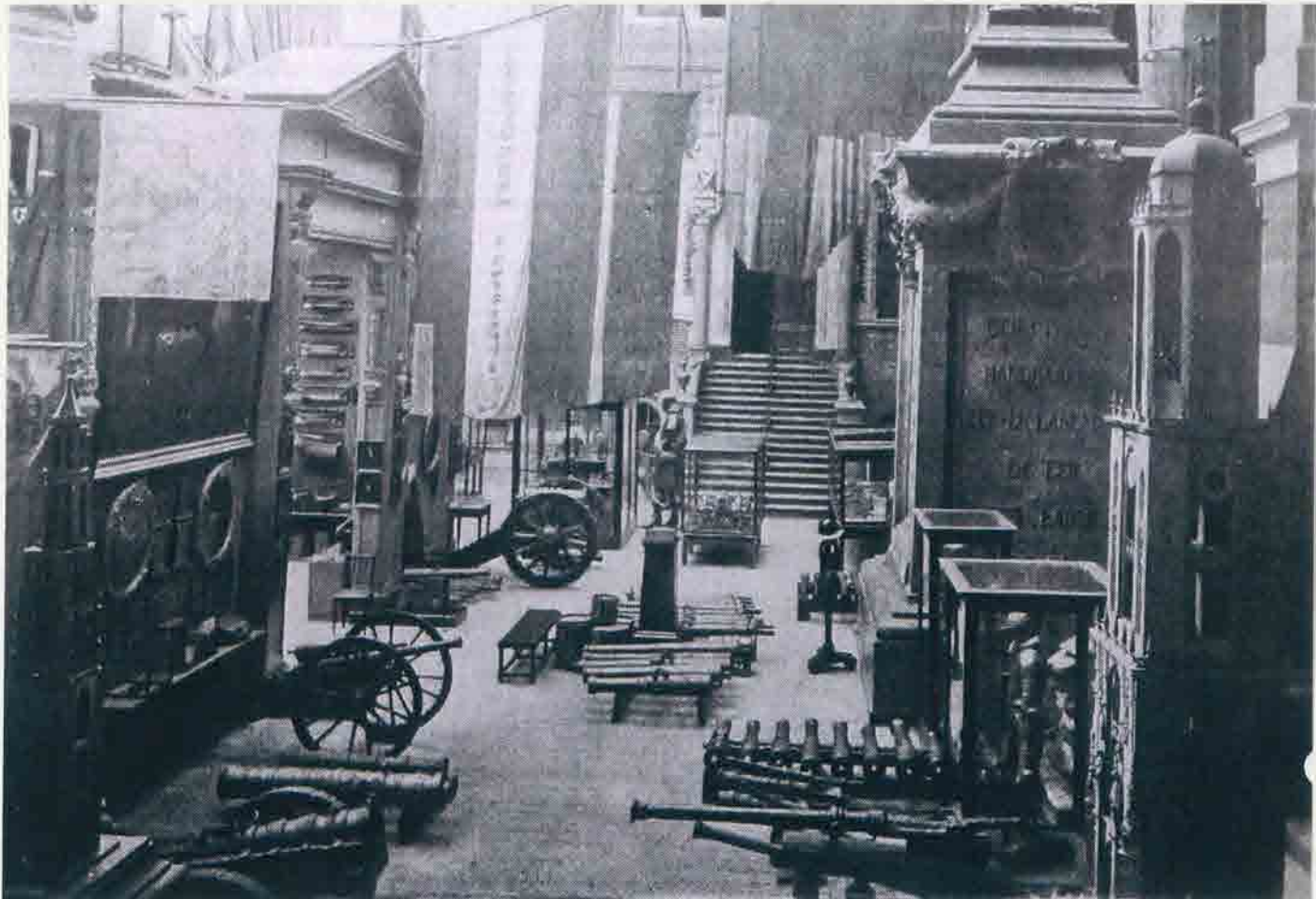
Level 1 (actually at street level) is devoted to the 18th century (1700-1800) on one side of the street that actually runs across the lower levels of the museum, it contains, in Hall 1.5, “The Netherlands Overseas”, a small presentation gun and other weapons. The other side of the street is devoted to the 19th century (1800-1900). This part, in Room 1.17: “Javanese Officials”, contains five extremely interesting oriental swivel guns, trophies of the Java War, which are described in detail further on.

Level 2 is devoted to the periods 1600-1650 and 1650-1700. In the first series of exhibition halls (Rooms 2.1 to 2.14), the visitor will find a series of extremely important paintings of naval battles, rich in actual detail of great interest to the artillery experts. The same Room 2.1 contains an important brass cannon of the Admiralty of Amsterdam (described further on) and a mid-16th century “draaibas”, a bombard on

its original stock (stock with swivel) found in the Zuiderzee. Room 2.9, further on, contains important paintings showing some VOC buildings in the East Indies and a collection of VOC porcelain, including a quantity of porcelain pieces recovered (by this Editor) from the wreck of the Dutch east Indiaman WITTE LEEUW lost in 1613 at the island of Saint Helena.

Floor 3, of little interest to the cannon expert, is devoted to the 20th century (Painting, Fashion, Design and Aircraft history).

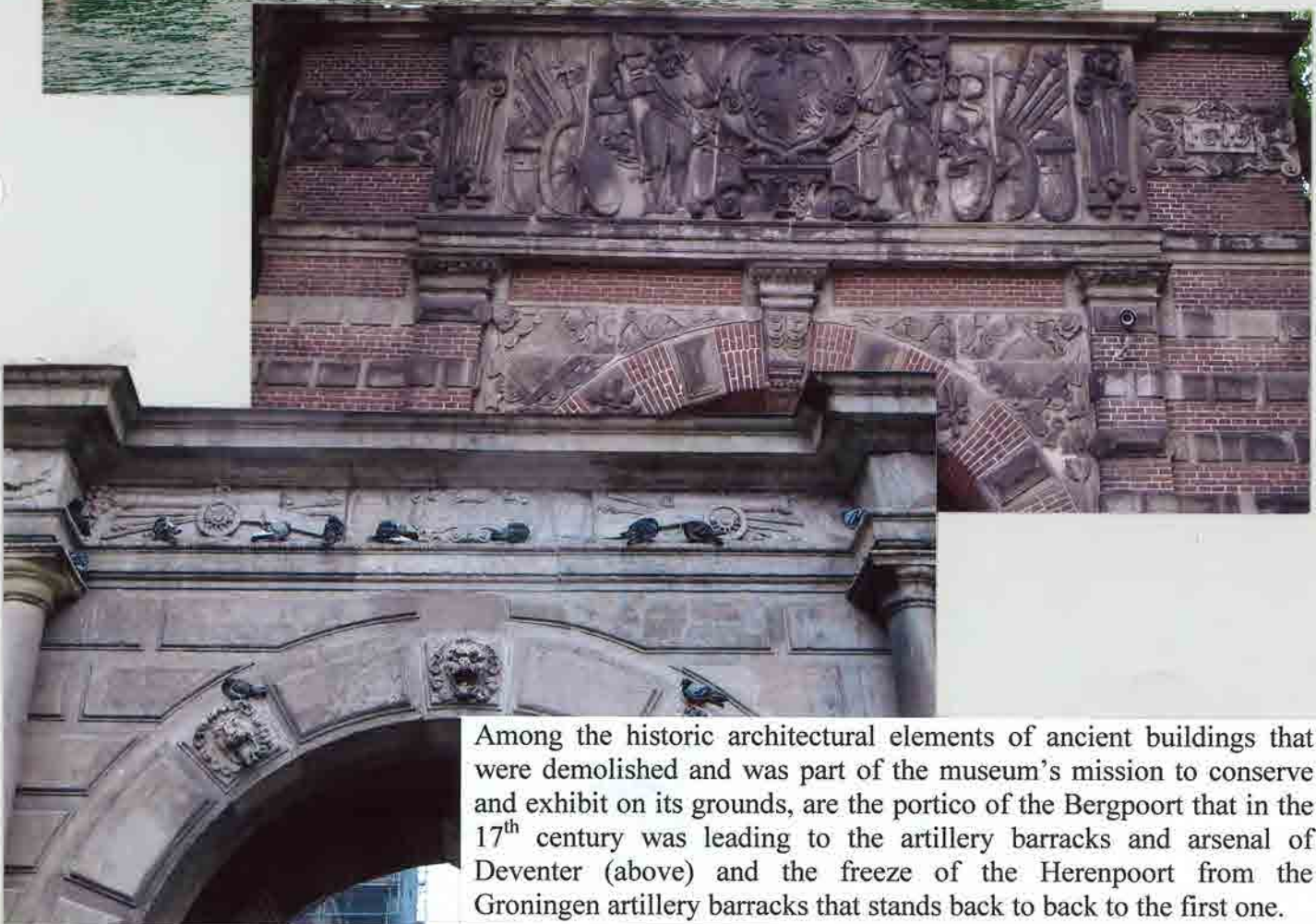
In summary, an exceptionally fine and rich museum where, nevertheless, the amateur of artillery will feel that the very fine pieces exhibited have only wetted their appetite. The many pieces of ordnance in the collections of the Rijksmuseum, which are stored in reserve, are accessible, upon previous reservation by phone or by mail, to bona fide researchers. And last but not least, the famous “Visser Collectie” recently acquired by the museum and by far the largest and best privately constituted and owned contemporary collection of ancient cannons, mortars and howitzers in the world (see Roth 1996 in Bibliography) is at the present time in storage at the said depot. These important, numerous ordnance pieces are at the present time kept in the “Depot Lelystad” on Albert Einsteinweg 5, 8218 NH Lelystad (Lelystad is a suburb of Amsterdam). The person in charge of the “depot” is Mr Dennis Kemper (his telephone is ++31/320 25 91 13) with whom a rendez-vous should be arranged previously to any planned visit.



Artillery Hall of the Rijksmuseum in the late 19th century.



The Rijksmuseum, Amsterdam, seen from the Singel (above) and from the Museum plein.



Among the historic architectural elements of ancient buildings that were demolished and was part of the museum's mission to conserve and exhibit on its grounds, are the portico of the Bergpoort that in the 17th century was leading to the artillery barracks and arsenal of Deventer (above) and the freeze of the Herenpoort from the Groningen artillery barracks that stands back to back to the first one.

The following photographs and captions are taken from Eveline Sint Nikolaas, *Drie Indische Kannonen en hun Geschiedenis*, *Bulletin van het Rijksmuseum*, Jaargang 55, 2007/n^o1 (a remarkably well done monography).
© 2007 Rijksmuseum Amsterdam. Photographs: Courtesy of Foto-kommissie Rijksmuseum Amsterdam.



The breech of the “Naga cannon” is octagonal from the knob to the trunnions and the tube is cylindrical further on. The cylindrical knob of the piece is hollow and would have received a stick to be used for easier aiming of the piece.



The “Naga cannon” made in Brunei (probably 1750-1850).



1 2 3 4 5 6 7 8

Eight locally made guns taken from the enemy in battle, by the Dutch, in various encounters in the Java War (that ended in 1835). The display was arranged on the occasion of a temporary exhibition in 2002 that commemorated the four hundredth anniversary of the VOC. All guns were made in Asia and, except n°3, are of the "lantaca" type.

Cannon n°3 which at first sight looks like a typical Dutch-cast VOC gun, is in fact one of the few guns known that were cast in Batavia, the capital of the Dutch East Indies. It bears the inscription "BATAVIA", the lotus form of his knob is an oriental influence, and so is the elaborate decoration on the breech and the execution of the cartouche. The "VOC A" monogram is flanked by mermaids, a free interpretation of the way the Amsterdam Admiralty decorated its cannons. The piece is dated 1667. The VOC had established its first own foundry in Batavia in 1654 and European cannon founders worked in it with local staff. Only one European signed his work : Laurens Oxsen (he was from Schleswig-Holstein and worked for the VOC from 1656 until his death, apparently in 1670). The foundry was then closed for ten years. When it reopened, in 1680, it continued its earlier vocation : to cast artillery for the small ships trading locally for the Company.

Cannon n°5, a spectacular bronze piece, is a so-called "Naga cannon". It has an impressive mouth in the form of a dragon head. It was probably cast between 1750 and 1850 in Brunei where a large group of such pieces, Mrs Sint Nicolaas underlines, are known to have been made, possibly, by the many Chinese founders who were active there. That particular cannon was not taken during the Java War as the others but in 1858 during a punitive expedition against the new sultan of Djambi on East Sumatra, who had refused to trade with the Dutch on their imposed conditions under their military protection. This cannon, as most of the others, was most probably meant to serve as a gift or possibly as a means of payment, rather than to be used as weapon.

Piece n°7 is carefully ligatured with rattan, possibly for reinforcement, more probably for protection during transport, as indicated by the additional protection, a plank on its top part, probably again to specially protect its sculpted decoration.

The knob or cascable of n°8 is quite peculiar, being a hook and in the form of a mythical animal.

Cannon now standing on the quayside, at Veere, in Zeeland was studied by Mrs Sint Nicolaas.



Bronze muzzle-loader of European type, with two VOC monograms on the first reinforce. But, an inscription in Arabic on the chase that shows it was made for Hadjé Mahmoud Calif (of whom nothing has been discovered) after his return from Hadj, in 1835. This shows that this cannon is not a captured 18th century piece (contrary to what the museum's inventory stated) but an imitation of a VOC cannon made at a time the Company had long ceased to exist (in 1835).



Cannon #3 (see preceding page).



The cartouche of the Batavia-marked VOC cannon. It is flanked by two mermaids, an adaptation perhaps of the two Tritons that traditionally flanked the monogram of the Admiralty of Amsterdam.



An elaborate presentation piece from the East. This costly cannon, cast in Ceylon before 1745, was presented by Lewuke, the "Disawa" or district chief of the "Four Korales" to the King of Kandy in 1745. The cannon displays the King's symbols: a sun, a half moon and a Singhalese lion. Such a piece would be used exclusively in ceremonies or to fire salutes to welcome visitors. The Dutch took it as booty during the military campaign of 1765 in Ceylon. (Cal. 4 cm, length c. 88 cm.)



Two "jingals". Those "portable cannons" made in Ceylon c. 1725-1760, made of iron, brass and wood, had to be mounted on a tripod or on a fork, before they could be fired. Hence, perhaps their name, "jingal", which means grasshopper. These fine weapons were seized by the Dutch from the Ceylonese warriors during the military campaign against the kingdom of Kandy in 1765.



A selection of the fine collection of war trophies captured from the enemy, during the Java War (1825-1830) and in other places and circumstances in the East Indies. The piece in the foreground is decorated near the touch-hole with a crocodile, and on the muzzle mouldings with the head of a bear (?), both decorations serving as sights. (See previous pages for details of the three, larger central guns.)







One of a pair (identical) "Van Reigersberg cannons", (calibre: 5.5cm., length: 1.12m.). These fine bronze cannons were owned by the Van Reigersberg family of Zeeland and bear their coat of arms with the inscription "SEMPER IDEM" ("Always the Same"). Cast by Johannes Burgerhuijs (?-1679) in Middlesburgh in 1678. The cannons, mostly used for decoration, stood for several generations in the Molenbaix Mansion in Walkeren. Their decoration, the herons and the water plants, etc. on the carriages allude to the family name ("reiger" means heron).





The cannon "Fredelant". This cannon, attributed to Wilhelm Tolhuys, was cast in Haarnem in 1533. It is said to be "the oldest known cannon inscribed with a Dutch text". The text translates as : "Fredelant is my name". On the barrel are the arms of the married couple Hendrik van Isendorn and Sophia von Stommel. Hendrik owned the "Cannsburgh Castle" in Vaassen where this small cannon stood until 1881. The decoration shows a transitional style from Gothic to Renaissance.





Dutch wrought-iron swivel gun or “draaibas” (calibre: c. 6cm.) on its original stock, was found in the reclaimed Haarlemmermeer in the late 19th century. It may have been used during the battle of Haarlemmermeer of 1573, fought between Dutch and Spanish ships and painted in 1629 by Hendrik Cornelisz Vroom (1566-1640) (background). The wooden stock or support on which the cannon is fixed with six wrought-iron bands, can swivel on a fork and its iron pin (the pin now broken). The powder chambre is missing and so is the wedge that would have secured it when put in place (arrow).





This bronze 18-pounder of the Admiralty of Amsterdam was cast by Gerrit Koster in Amsterdam in 1615. Its caliber is 12,5 cm, the length 3,06 m. It bears the arms of the Admiralty of Amsterdam in between two Tritons on the first reinforce, and the date of casting : 1615. In a rectangle is the mention "DIE ADMIRALITEIT TOT AMSTELREDAM". On the base ring : "GERHARDUS. KOSTERUS. ME FECIT. AMSTELREDAMI." It also bears the lion of Holland on the chase, and the words: "ANNO. DOMINI. 1615". The cascabel is decorated with acanthus leaves and grapes. The back of the breech is flat and similarly decorated.



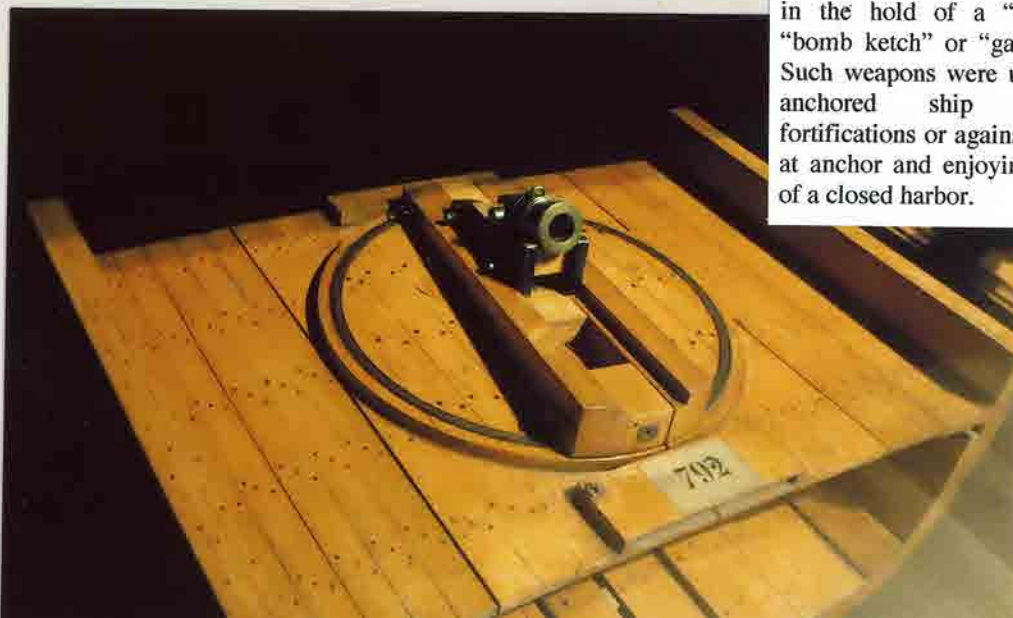
The fine collection of official scale models in the museum was transferred in the early 19th century to the Rijksmuseum from the "Navy Models Room" of the Navy Ministry in the Hague. Such scale models were very carefully made in preparation of the casting of new guns for the ministry. Being an essential part of the contract between founder and Navy, they had to be absolutely exact and constitute therefore a highly reliable tool of research for the artillery historian.



A naval 24-pounder cannon with its carriage. (Scale model made in 1800 in Rotterdam.)



A carronade. Invented at the Carron iron-works in Scotland and produced in vast numbers from the last years of the 18th century on. The piece, commonly known as a "smasher", had a devastating power at close range. The model displays all the requisite accessories: an ammunition rack, powder horns and kegs, shrapnel shells, cartridges and cleaning tools.




A ship's mortar on its rotating support in the hold of a "mortar ship" or "bomb ketch" or "galiote à bombes". Such weapons were used from a well anchored ship against land fortifications or against an enemy fleet at anchor and enjoying the protection of a closed harbor.



A French swivel musketoon of c. 1780-1820. It was designed and signed by Jean-Baptiste Vaquette de Gribeauval (1715-1789). This type of weapons first used on galleys in the Mediterranean in the 16th century, evolved towards this "modern weapon" with a relatively wide barrel. It would most often be shooting scattershot in prepared cartridges. It came to be used on all types of ships, in all navies. It was very maneuverable and served by a single man.





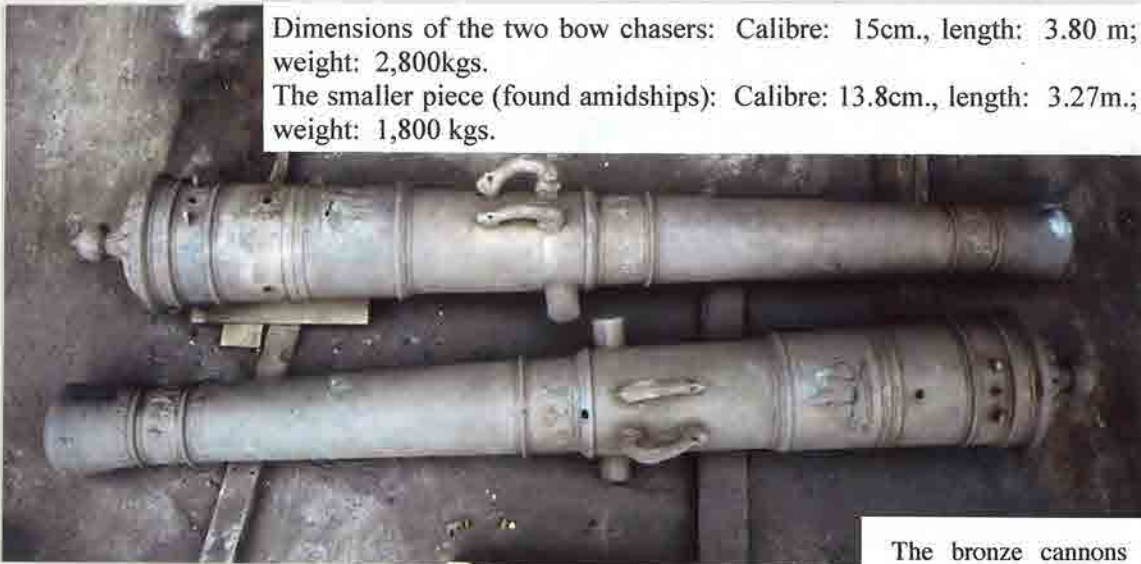
Three cubic meters of compressed air gently take to the surface one of the culverins of the wreck of the WITTE LEEUW.

(Photograph Bates Littlehales.
Courtesy National Geographic Society)

The Rijksmuseum keeps in its reserves one of the bow chasers, a heavy bronze culverin, recovered by a team of the Groupe de Recherche Archéologique Sous-Marine Post-Médiévale (GRASP), under the direction of this Editor, Robert Sténuît, from the wreck of the Dutch Eastindiaman the WITTE LEEUW (The White Lion) of the Chamber of Amsterdam of the Vereenigde Oostindische Compagnie (VOC). The ship had been sunken in battle by the Portuguese in 1613 in Jamestown bay, St. Helena island, Atlantic Ocean. The wreck was lying at a depth of 33 m. and deeply buried under the mud.

It is the hope of the Curator for Artillery for the Rijksmuseum to be able in the near future to install the WITTE LEEUW cannon in the room presently called "Nova Zembla" (2nd floor, 2.9) which already houses a selection of the Chinese porcelain recovered by the GRASP from the WITTE LEEUW and a number of very fine paintings relating to the VOC and its trading posts in Asia.

Dimensions of the two bow chasers: Calibre: 15cm., length: 3.80 m; weight: 2,800kgs.
The smaller piece (found amidships): Calibre: 13.8cm., length: 3.27m.; weight: 1,800 kgs.



The bronze cannons were covered with a thick coat of miscellaneous calcareous marine concretions and, mostly, of pepper (which constituted most of the return cargo of the WITTE LEEUW).



All bear the "A" of Kamer Amsterdam, the likeness of the same ship and the words "ENRICUS MUERS ME FECIT 1604" and a fine floral and classical decoration.



On the quay side of the wharf at Jamestown, under the harbour's crane.



The likeness of a VOC ship moulded as a decoration on all three pieces recovered from the wreck of the WITTE LEEUW, is probably a very good likeness of the latter ship and of most contemporary VOC ships. It is therefore in itself an important iconographic document.



“ENRICUS MUERS ME FECIT 1604”. The engraved figure 3568 indicate the weight of the piece in Amsterdam pounds (c. 1800 kgs). This is the smaller of the three guns recovered from the wreck. The square hole on top of the vent hole served to fix one of the four bars of the “crown piece” (of which there were usually three on the length of the cannon and which purpose it was to keep the cylindrical core of the cannon perfectly centred during casting). As is usually the case, the metal plug of the hole, introduced after casting, has been corroded away.

EDITOR'S ALBUM

AMSTERDAM

**SCHEEPVAARTMUSEUM
(NAVIGATION MUSEUM)**

There is no MLP LGA for this museum.

MUSEUM:
HET SCHEEPVAART MUSEUM
THE NAVIGATION MUSEUM

- Location: In walking distance from and actually in sight of the Amsterdam “Centraal Station”, in the “Oosterdock”.
- Postal address: Kattenburgerplein 1 — 11018 KK — Amsterdam — The Netherlands
- Telephone: ++31/ (0)2052 32 222
- Fax: ++31/ (0)2052 32 213
- Email: info@hetscheepvaartmuseum.nl
- Website: www.hetscheepvaartmuseum.nl or www.marritiemdigitaal.nl
- General Director: Mr Willem Bijleveld (Direkteur)
- Curator: For artillery and weaponry (one of eight specialized curators): Mrs Elizabeth Spits (Keeper of Ships and Technique, extremely helpful and competent). Telephone extension: 332
- Services offered: An excellent library. The keeper of the library is Mrs Marijke Vanden Esschert, telephone extension: 209. The staff are extremely helpful. It is open from Monday to Saturday from 9h30 to 17h and contains some 60,000 volumes. An approximate replica of the VOC (Dutch East India Company) ship *Amsterdam* (launched and lost in 1749) is moored next to the museum (a tourist attraction only).
- Opening hours: 9h30-17h every day. Closed April 30, December 25 and January the 1st.
- Recent catalogues and publications on the history of the building and its collections include: None related to artillery. There is an active “Friends of the Museum Association” or “Friend Fleet”: The “Vereeniging Nederlandsch Historisch Scheepvaart Museum”, which publishes a very fine magazine.
- History of the building: The large, impressive square building with courtyard was built in 1656 in the “golden age” of the nation, for the “Admiraliteit te Amsterdam” (the Admiralty) to serve as their “Zeemagazijn” (their Navy yard or Arsenal). The architect was Daniel Stalpaert. From January 2007 to July 2011, the building has undergone large scale renovation works and refurbishing and all modern amenities have been installed with due discretion. The courtyard has been covered by a transparent roof, the frame, of which reproduces the crisscrossed lines marked on Dutch and other ancient nautical maps for the benefit of pilots. The “Zeemagasijn” was originally built in red bricks (“baksteen”) like all buildings in the country at the time. But when rebuilt after the great fire of 1791, which gutted the building, the blackened walls were covered with a layer of clear mortar, the colour of light

sandstone. The museum was reopened in the summer of 2011. During the recent renovation works, the building has been repainted in off white, the result being quite pleasant to the eye.

History of the museum and its collections: Formerly known as “Het Nederlandsch Historisch Scheepvaart Museum” and located in Cornelis Schuijstraat 57 (the building now occupied by the Christie’s auction house). As a result of its recent facelift, the museum is expecting 200,000 visitors a year in the future.

The new Eastindiaman *Amsterdam*:

When the keel was laid for a new Eastindiaman in 1985, the plan was to build a spectacular tourist attraction. Built by over 400 volunteers, the replica is little more than “inspired” by the original vessel and not an accurate representation of the ship construction, cargo, defence, etc. The “Eastindiaman *Amsterdam*” leaflet, distributed by the museum, briefly but correctly, describes the ship’s all important cargo. The exhibit is not an accurate representation.

The collections:

From the moment the society named “Vereeniging Nederlandsch Historisch Scheepvaart Museum” was founded in Amsterdam in 1916, it began receiving numerous donations and loans, whilst making purchases of relevant artefacts as often as possible. The society succeeded in amassing one of the most valuable maritime collections in the world. In 1975, the collection was taken on loan by the Dutch state and is now managed and presented by Het Scheepvaart Museum. In its strategy for acquiring new items with a view to further develop its collections; the museum is considering five collection themes: (1) Dutch people and the World, (2) The Netherlands as a maritime nation, (3) The Sea as a Source of Inspiration, (4) The Sea as a new Challenge, and (5) Amsterdam as a Port.

The famous globes and yacht models are of course highlights of the exhibition. They are on show on the first floor of the eastern wing. On the second floor of the same wing are displayed the navigational instruments, the ships decorations, and the paintings. The paintings room certainly is the climax of the visit. The collection covers the Dutch maritime schools of painting from the early 16th century to present day. For any visitor, it is an artistic delight. For the connoisseur, it is an inexhaustible source of information about many aspects of everyday life on board, of details of the rigging and of the manoeuvres, on the manning and handling of the cannons, etc. It also shows vividly and realistically, the true story of war at sea. It is unfortunate that in the paintings room and in the big showcases of the ships decoration room, the lighting is disappointing — the lighting alternates, in all colours and

makes it difficult for visitors or photographers to study the collections. The beautiful figureheads, the lovely naked breasted ladies that once served as decoration on the top of the rudder of yachts and small vessels are alternatively blue, green, orange or yellow. The navigation instruments, on the contrary, are an exceptionally rich and well-presented collection.

The first impression of the visitor, when walking through the various floors of the only two wings of the museum, which are in use (2013), is an impression of emptiness. One remembers the quantity of invaluable artefacts that were exhibited in the same building before the renovation works.

The part of the museum in which naval artillery should be displayed is the part aimed at the youngest visitors. An exhibition on whaling, next, is quite interesting. Disappointing is the exhibition “See you in the Golden Age”, where “amazing people from an amazing era share their stories”. The exhibition pointedly tries to show how extraordinarily rich were the people in this golden age and how powerful the nation had to be to so monopolize the wealth that existed in Europe, from Turkey to northern Russia, Asia and America, but not a word is said to explain how the nation happened to become so rich and powerful. What made it all possible, were the guns on the decks of the Eastindiemen and on the war ships and the cannons bristling on the terraces of the Dutch forts all over Asia...

We know that the Netherlands, in the 17th century golden age, had become an international superpower and one of the richest countries in Europe, thanks to the spirit of enterprise of their people, their invigorating greed, the toughness and the physical courage of their merchants, soldiers and seamen, who had succeeded, sea battle after sea battle and conquest after conquest of the crucial trading areas or ports, to throw out the Portuguese, who had been established in Asia for a full century and to control and/or supplant their English, French and Scandinavian competitors in Asia. Again, this was made possible only by the gun and without artillery and gunners the “miracle of the golden age” would not have happened. Still, the cannons “ultima ratio mercatorum” one could say, are all but absent where they so obviously belong. There is only one cannon now (2013) exhibited in the whole of Het Scheepvaart Museum. This unique cannon is sandwiched between two other perpendicularly arranged cannons, which are bright and shining plastic cannons. The real cannon is not displayed on a true carriage, but is supported by two plastic devices, also white and shining. The name of the maker and the place of casting: “Johannes Maritz, the Hague, 1783”. The first reinforce of the gun is decorated with the shield and arms of Holland (the lion

rampant with the thunder in the left paw and the sword in the right one) over the crossed anchors of some admiralty. The shield is flanked by and surmounts three capital letters “P”. It is not known, to which admiralty this combination corresponds, although the museum’s inventory describes it as “probably of the Admiraliteit Amsterdam”. This brass piece is an 8 pounder, 204cm. long, which is known to have been, at one time, on board the warship *Delft*. Interestingly, it is obvious that the cannon has seen battle since its muzzle swelling bears the deep trace of the impact of a large size cannon ball.

The museum’s inventory list indicates that its artillery collection consists in 36 cannons (plus 1 harpoon gun for whaling). If most of the pieces are anonymous, a number of the guns, however bear the name of their founder, which are: Coenraet Wegwaert (about 1650), Aarendt Van Der Put (1618), Coenraet Wegwaert (1643), Johann Borchardt (1715), Johannes Maritz (1783, the one piece now on exhibit), Cyprianus Crans, Claude Fremy and Brezin (Paris, France). Three of the guns, bear the arms of the city of Enkhuizen.

The summary inventory of the pieces, which are now, but one, in the reserves, is available online. It has been stated by the very helpful and competent Mrs Spits, Curator for Artillery, that access to the pieces now in storage could be arranged upon previous arrangement (by letter) for bona fide researchers and that photographs can be taken of all of the pieces.

There are no plans at the present time (2013) to put on display more pieces of artillery, although it is “not impossible” that “in the coming years” the arrangement of the exhibitions could be changed so as to put alternatively on show one of another part of the valuable collections of the museum, perhaps including the artillery collection. In the meantime (2013), there is no need for any artillery specialist or for any historian to visit Het Scheepvaart Museum, Amsterdam, unless he has made previous arrangements in writing to have access to the reserves.



The recently fully renovated "Maritiem Museum, Amsterdam" in the former building of the "Amsterdamsche Admiraliteit", in many ways the predecessor of the Royal Dutch Navy (built in 1656 by the city architect of Amsterdam, Daniel Stalpaert).



MARITIME MUSEUM AMSTERDAM



In 1985, almost two hundred years after the bankruptcy of the Dutch East India Company, the keel was laid for an Eastindiamam based on the original AMSTERDAM. It is now permanently berthed next to "Het Scheepvaart Museum".





Small swivel guns or "hailshot guns", being man killers (as opposed to ship killers) were mostly placed on the gunwale of sloops or small boats or on the gunwales of the fore and aft castle of ships. They were used to repel borders at close range or occasionally to quell a mutiny on board.



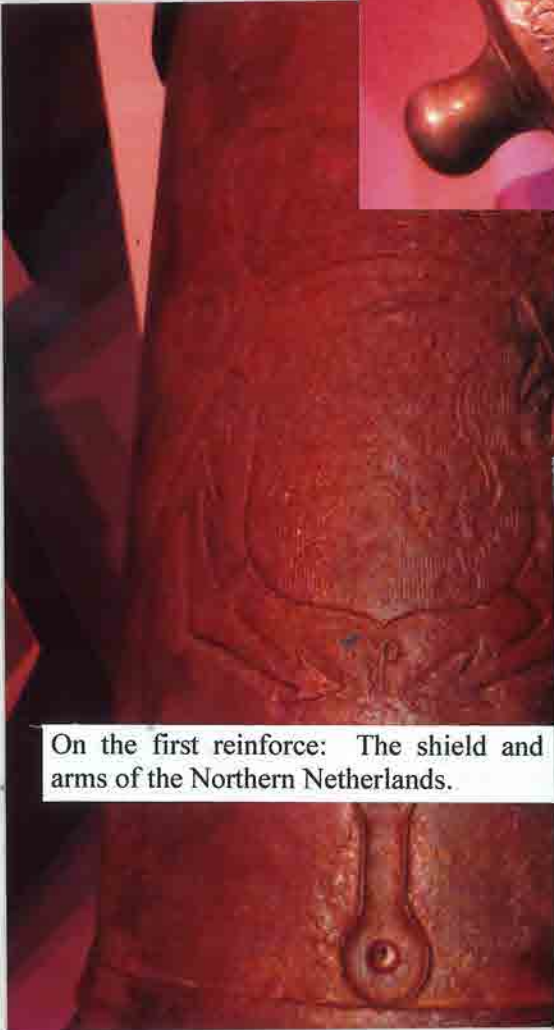
Dutch marine paintings, namely of the 17th century, are an inexhaustible source of information for the naval artillery historian and, indeed, for everyone. In this detail of a painting of Cornelis Claesz van Wieringem (the Battle of Gibraltar between the Dutch and the Spanish fleet April 26, 1607) we see a gunner cleaning and swabbing the tube of his muzzle-loader cannon from the outside. A dangerous manoeuvre to be sure, in the heat of battle, where the gunner is fully exposed to enemy musketry but much quicker than bringing the gun inside for cleaning after each shot.



The only naval gun shown (at this time 2013) in the fully renovated Amsterdam Scheepvaart Museum (whereas the rest of its fine collection is in the reserves), is presently sandwiched between two white and shining plastic "cannons". Difficult to view and it does not reflect the all-important role played in the history of the Netherlands, by its naval and land artillery.



Illuminated in red: The one and only cannon in the museum proves to be an indeterminate Dutch Admiralty piece.

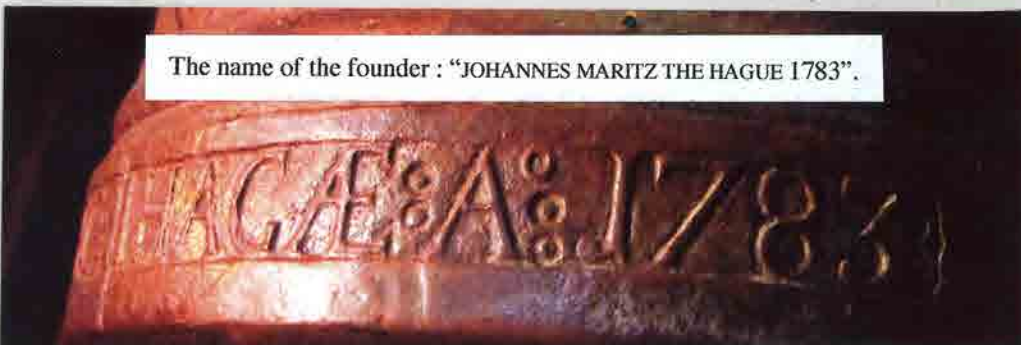


On the first reinforce: The shield and arms of the Northern Netherlands.



Illuminated in blue: The muzzle and tulip of the Johannes Maritz cannon shows that the piece had been in battle. It has received the direct hit of a large calibre enemy cannon ball.

The name of the founder : "JOHANNES MARITZ THE HAGUE 1783".





Shooting the last arguments. A detail of a painting by Reinier Nooms (alias Zeeman) depicting "a battle of the first Anglo-Dutch War" (c. 1656). The Maritime Museum of Amsterdam possesses the finest existing collection of Dutch naval paintings. It is unfortunate that the extraordinary, flashing, many-coloured lighting of the paintings makes them, actually, difficult to see.



EDITOR'S ALBUM

AMSTERDAM

**AMSTERDAMS HISTORISCH MUSEUM
(NATIONAL MUSEUM OF HISTORY AMSTERDAM)**

Two other museums not visited by MLP (for unknown reasons) have been visited by the Editor. They are:

MUSEUM:
AMSTERDAMS HISTORISCH MUSEUM
NATIONAL MUSEUM OF HISTORY AMSTERDAM

Location: Two blocks east of the “Singel” (a major canal) and just north of the “Begijnhof” (or beguine convent). It can be entered through four entrances located in Kalverstraat, in the Spue, in the Nieuwezijds Voorburgeval and in Sint Luciensteeg.

Postal address: Nieuwezijds Voorburgeval 357 — Amsterdam — The Netherlands.

Telephone: ++31/205 23 18 22

Fax: ++31/206 20 77 89

Email: info@ahm.nl

Website: www.ahm.nl

Curator: Paul Spies (Director).

Contact person: As above.

Services offered: The Museum staff are very helpful and will, upon request, mail to interested scholars, a copy of the detailed inventory list of their small collection of artillery pieces.

Opening hours: Monday to Friday 10h-17h. Weekends and holidays 11h-17h.

Recent catalogues and publications on the history of the building and its collections include: A free, summary one page leaflet (with detailed ground plan) is obtainable at the ticketing desk. It is very useful in view of the layout of the various museum areas, on three floors and reachable by four different entrances in so many streets.

History of the building: The reason for the confusing layout of the exhibition areas is: The museum has recuperated and connected various adjacent buildings, the main one having served as the city orphanage in past centuries. The “Governor’s Room”, where the Board of Governors of the Amsterdam Civic Orphanage held its regular meetings, has remained unchanged as of today (2013) and is part of the visitor’s circuit.

History of the museum and its collections: The collections are rich in important paintings (important by the number of square metres of wall they cover and also historically, more than artistically) and in miscellaneous antiques. Unfortunately, the days, up to the late 16th century, when Amsterdam was a walled-in city with fortified gates, towers and bastions, all brimming with artillery, there are few in the museum. The museum now concentrates on presenting a good initiation exhibition on the history of the VOC, (Dutch East India Company) and its

trade. It now exhibits only four small ordnance pieces related not to the city history itself, but, with one exception, to the Amsterdam Chamber (the main one) of the Dutch United East India Company and its ships.

The exception is a small 18th century bronze muzzle loader bearing a moulded-in unidentified coat of arms. (Might be fantasy?) Cast by D. Grave in Amsterdam, 1725.

The VOC pieces are:

- A VOC bronze muzzle-loader cast by A. Van Seest in Amsterdam in 1764 (length 1.20m.) bearing on the first reinforce the engraved VOC A initials of the Amsterdam Chamber of the Dutch East India Company.

- Two twin, very small field howitzers, presumably for use in Asia, on modern (?) field carriages, the initials “VOC” moulded in on the chase and the words: “ME. FECIT: C: CRANS IANZ/AMSTELODAMI. A: 1743”.

Among the “cannons” in storage, but described in the inventory are a number of apparently very fine contemporaneous scale models of:

- Lantaca 90cm. long on a carriage mad of “wood from Coromandel”,

- 19th century non-descript “cannon” (length 59cm.) on a naval carriage (plus its twin-brother),

- Model, at scale 1/6, of a field 24-pounder on its articulated field carriage (length 33cm.),

- Model, (also at scale 1/6, of another 24-pounder on a simple field carriage (length 33cm.).



The central courtyard of the Amsterdam Historisch Museum surrounded by the four ancient buildings it occupies.

One of the four entrances of the Amsterdam Historisch Museum, the one in Nieuwe Zyds Voorburgval.



The oldest surviving plan of Amsterdam is a bird's eye view painted in 1538 by Cornelis Anthonisz (c. 1507 - after 1553). As we see in this detail, the strategic spots of the walled city at the mouth of the river Amstel (population about 12.000) were defended by artillery. In this case a culverin and a half-cannon (?) defend the access by canal to a sails and riggings yard.

© Amsterdam Historisch Museum



Coat of arms on the breech of a small bronze canon (above left) cast in 1725 by D. Grave in Amsterdam. Calibre: 5.5cm., length: 1.10m., weight: 93 kilos. The coat of arms is unidentified (it may be fantasy).



Small bronze gun of the VOC (upper right on top photo) cast in 1764 by P. van Seest. Length: 1.20m. The piece bears the engraved initials of the Amsterdam Chamber of the VOC on the breech and at the level of the trunnions, the name of its founder and date.

Pair of small VOC howitzers (of the Chamber of Amsterdam) to be used in the Dutch East Indies. Cast in 1743 by C. Crans Iansz in Amsterdam.



On top of the vent: The proof mark (the three saltires of Amsterdam).



MENDEL L. PETERSON LGA

LEIDEN

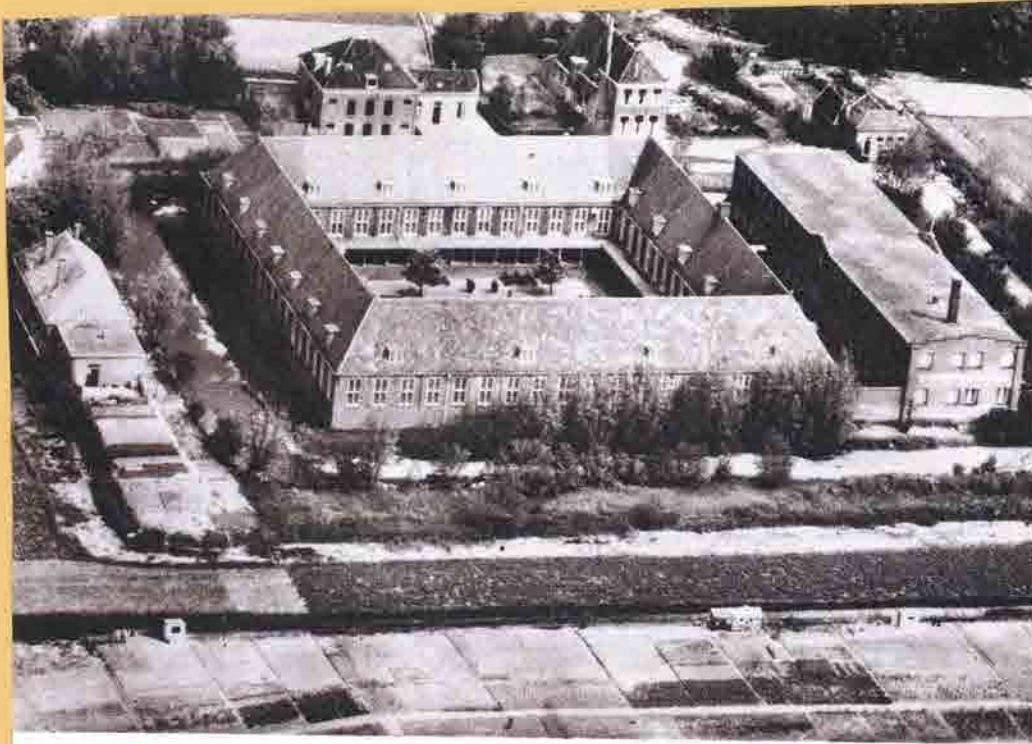
NEDERLANDS LEGER AND WAPENMUSEUM (GENERAAL HOEFER) (DUTCH ARMY AND WEAPON MUSEUM GENERAL HOEFER)

It is fortunate that this LGA should be one of the best organized and most complete of all, for the remarkable Leiden Museum no longer exists. Once more therefore, this album represents an irreplaceable historic document. (See Editor's album further on for the later history of some of the pieces photographed here.)

This album consists of 52 folios, some used on both sides.

The original MLP envelopes containing his carefully kept negatives and field notes were preserved with the album. The field notes, however, bring no more information than the summary captions typed on every folio.





Leger-en Wapenmuseum, Leiden. General view of the building.

The folios of this album are not numbered
but the cannons are numbered Leiden #1
to #52.

Leiden #1
Dutch iron naval gun
Caliber 12 Cm Length 287 Cm
Model 1842



Leiden # 2
Iron naval gun (Dutch?)
Caliber 17 Cm Length 324





Leiden # 3
Iron naval gun (Dutch?)
Over button "86B
1809"



LATE 17th or

Leiden # 4
Iron naval gun
eighteenth century
Caliber 11 Cm Length 268.5
Button removed



CB rt. tr.



G left tr.

Leiden # 5
Dutch iron mortar
Marked "LUIK (FOR LIÈGE)
1821
No. 2"
Caliber 29 Cm



Leiden #6
Dutch iron mortar
Marked "STEEN MORTIER 1823 No.4"
Caliber unknown, on muzzle



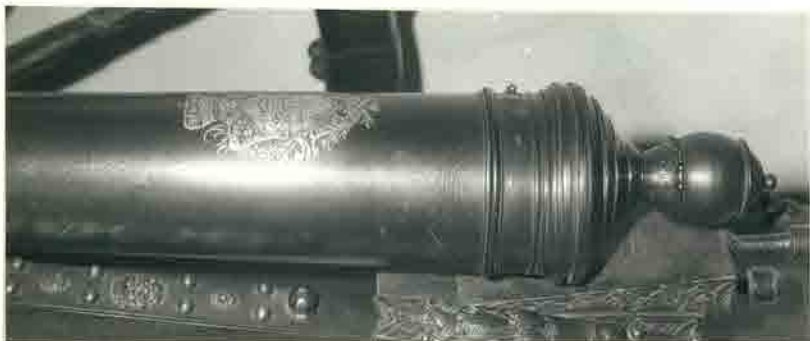
Leiden # 7
Iron howitzer on iron truck carriage
Marked "FONDERIE IMPERIALE DE LIEGE 1812, 8191"
Caliber: Length



Leiden # 8
Wrought iron mortar
Caliber 51.5 Cm Length 103 Cm



Leiden # 9
Bronze, gold inlaid presentation gun. (rifled)
Caliber 4.5 Cm Length 160 Cm



Leiden # 10. (# 111)

~~Muzzle~~ loading, wrought iron swivel gun
Caliber 4.5 Cm Length 115 Cm O.A.



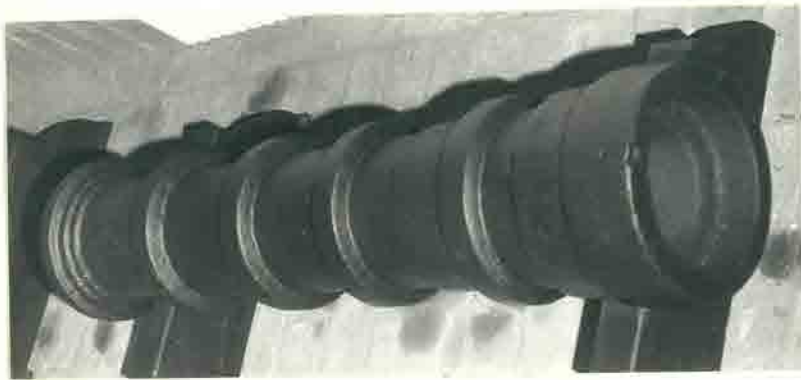
Leiden # 11 (#OK 3)
Breach-loading wrought iron swivel gun
Caliber 8.5 Cm Length 88 Cm



Leiden # 12 (OK2)
Breach-loading wrought iron swivel gun
Caliber 7.8 Length 118 Cm



Leiden # 13
Cast bronze gun in form of wrought iron
Caliber 13 Cm Length 115 Cm



Leiden // 11 Wrought iron field piece on carriage
Caliber 17.5 Cm Length 111 Cm
Late 15th. century



Leiden # 15 (#2/105)
Breech-loading wrought iron swivel (verso)
Caliber 6 Cm Length 250 O.A. Length of tube- 160.5 Cm



Leiden # 16 (#125)

Cast iron gun, trunnions removed and replaced with
wrought iron trunnions

Caliber 7 Cm. Length 201 Cm

Probably sixteenth century



Leiden # 17 (#39/2)
Bronze gun
Caliber 7.5 Cm Length 82 Cm



Leiden # 18 (#17/121)
Cast iron gun
Caliber 8 Cm Length 165 Cm



Leiden # 19 (#10367)

Bronze gun

Caliber 3 Cm Length 118 Cm

Signed "ASVTRVS KOSTER"

Ship on chase, cypher of Dutch West Indies Co.
was probably on 1st. reinforce originally, now
obliterated (See Albany ,New York collection)



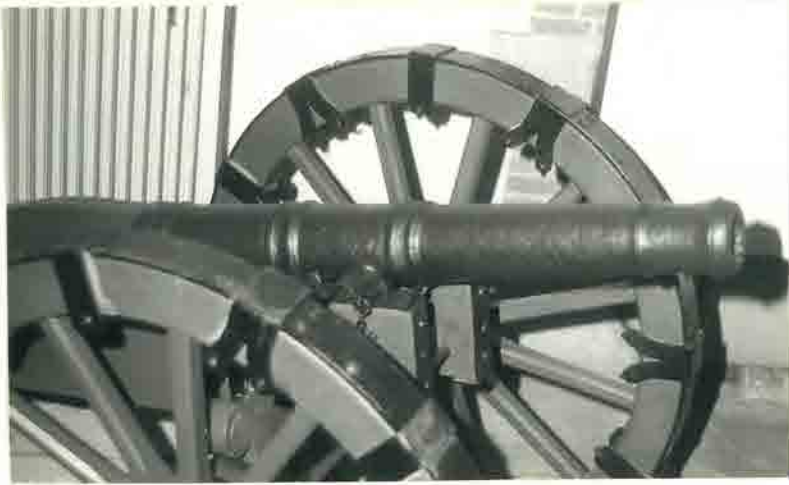
Leiden # 20
Bronze hanging mortar in carriage
Caliber 9.5 Cm Length 33 Cm



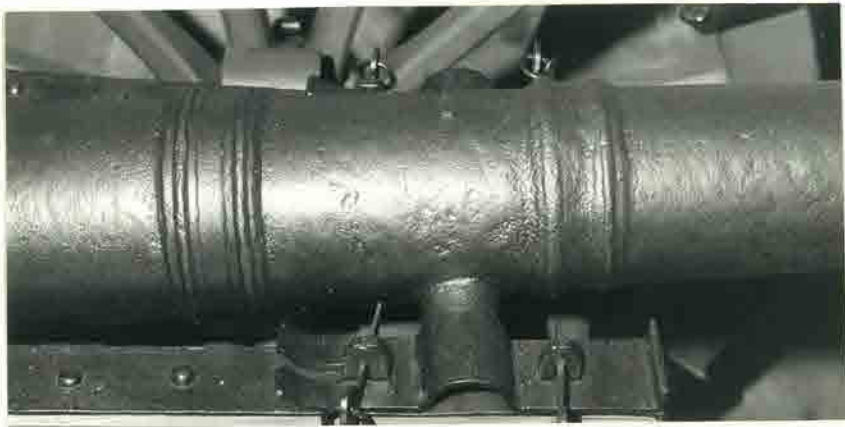
Leiden # 21
Iron hanging mortar
Caliber 33 Cm Length 92 Cm



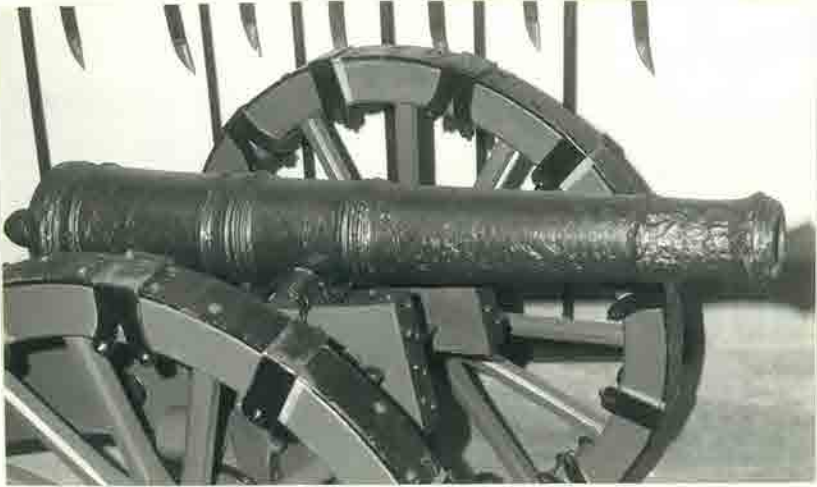
Leiden # 22 (# 213)
Cast iron regimental gun
Caliber 5 Cm Length 106 Cm



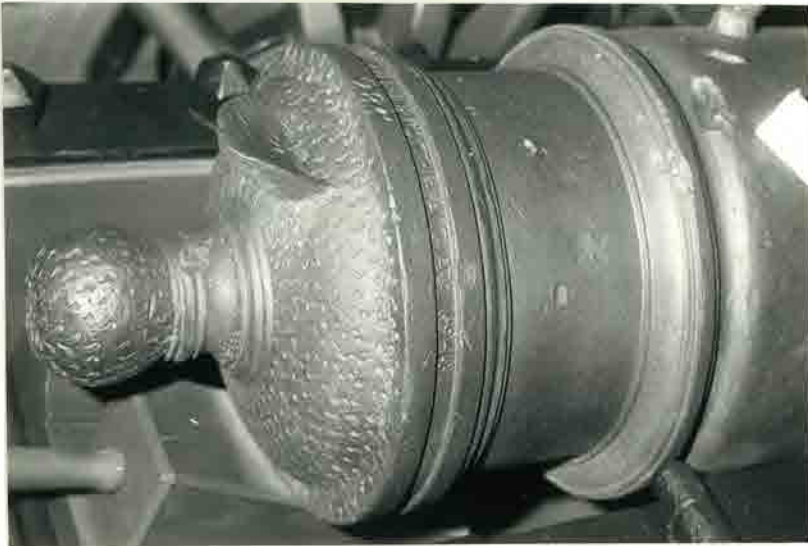
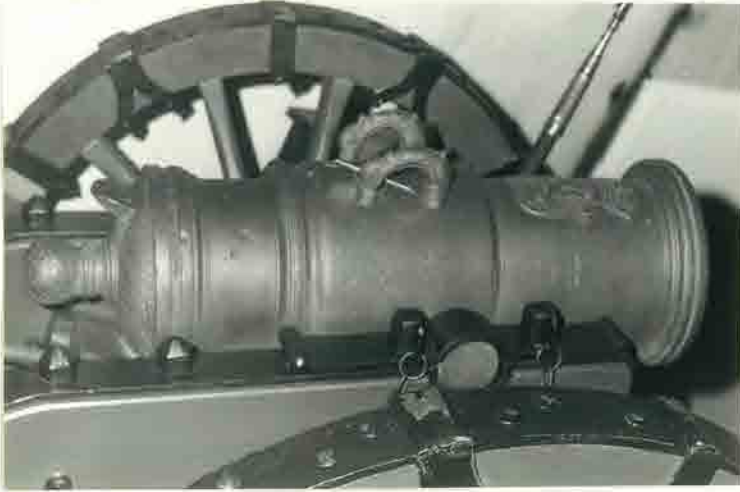
BREECH SHOT
NOT PRINTED



Leiden # 23 (212)
Cast iron regimental gun
Caliber 6 Cm Length 131 Cm



Leiden # 24
Dutch bronze howitzer
Caliber 21 Cm Length 110 Cm
Signed "NIJPOORT MF WEGT HAGAE 1694"



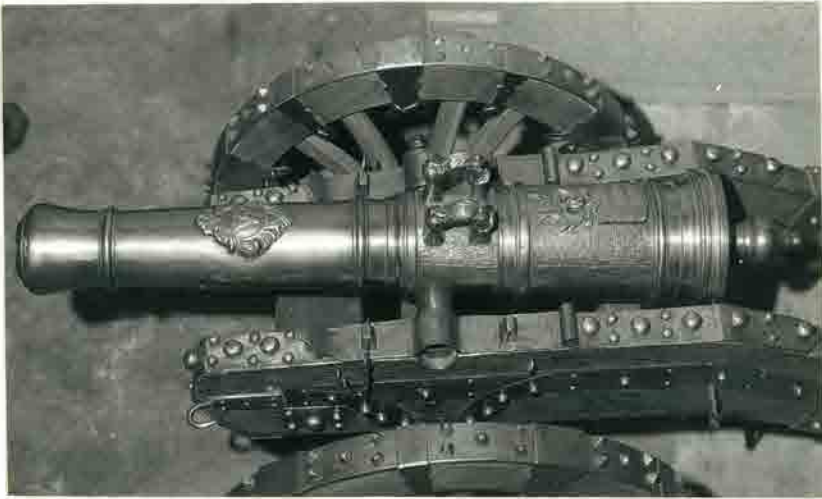
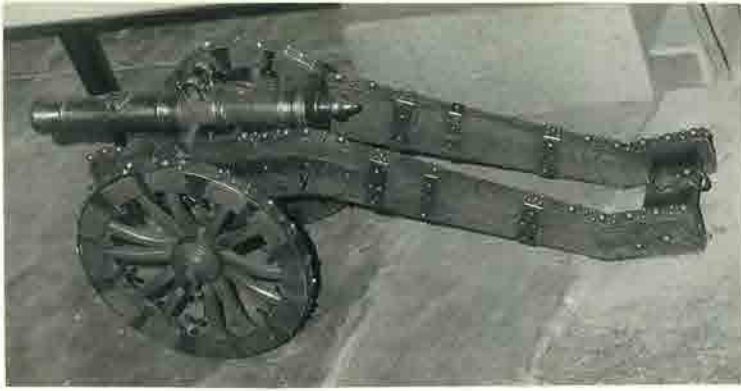


Leiden # 25 (10370)
Bronze
Caliber 6 Cm Length 169 Cm
Unsigned

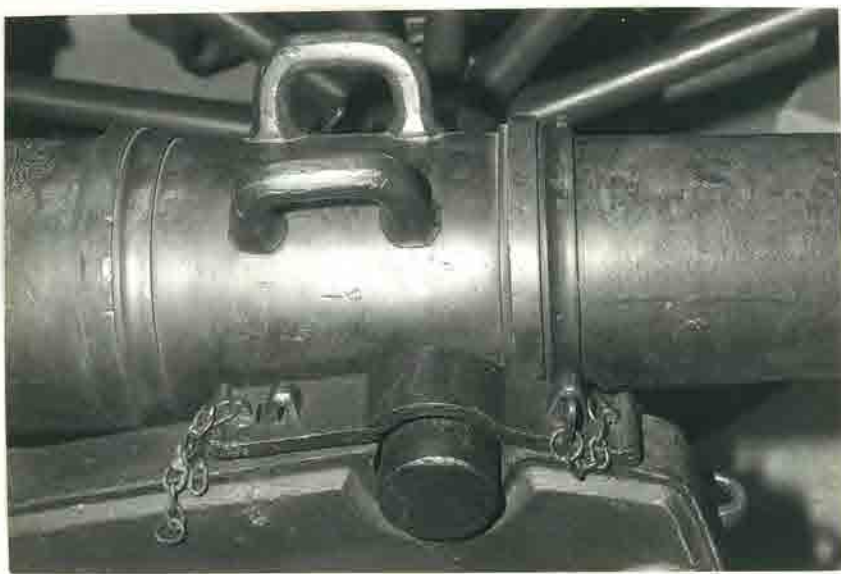


MUZZLE SHOT
NOT PRINTED

Leiden # 26
Bronze "Chateaux piece"
Caliber 3.2 Cm. Length 64 Cm

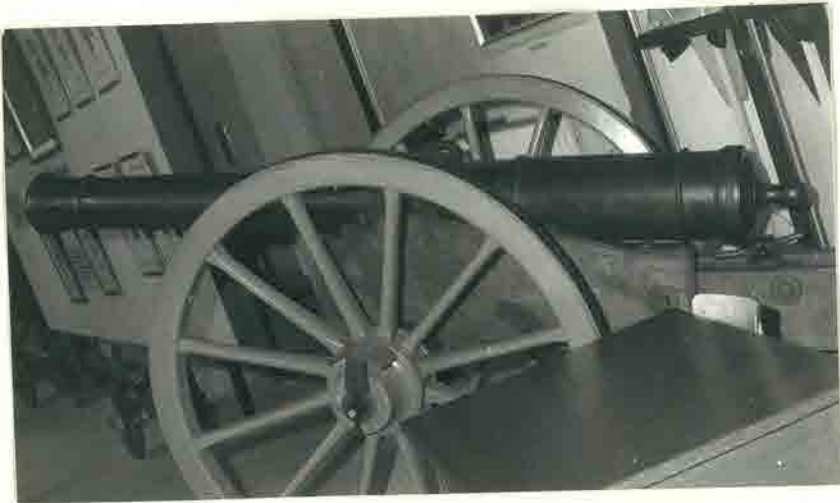


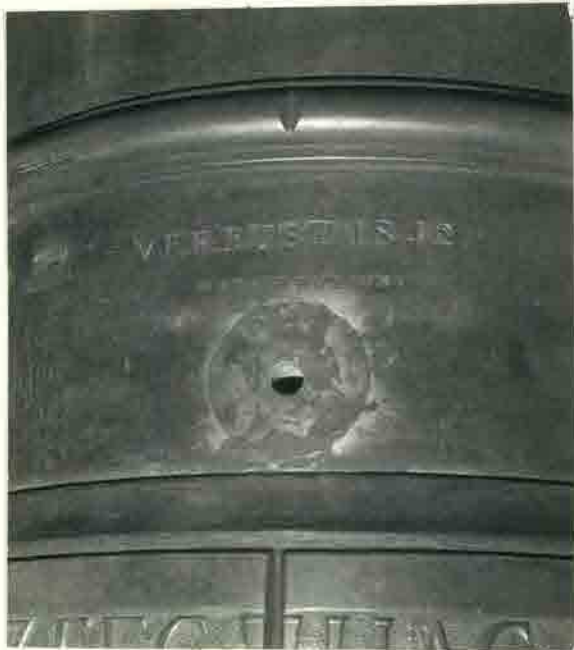
Leiden # 27
Bronze fieldpiece, Dutch
Caliber 7.2 Cm Length 1118 Cm
Signed "IOH. 'ARITZ FECIT HAGAE A° 1773"





Leiden # 28
Dutch fieldpiece, bronze
Caliber 9.5 Cm Length 275.5 Cm
Signed "JOH. MARITZ FEC HAGAE A° 1789"





Leiden # 29
Bronze fieldpiece (Dutch ?)
Caliber 6 Cm Length 173 Cm
Signed: "ANNO DIVVH 1688"

DIU - PORT. INDIA ?
Founder W.H. S.





Leiden # 30
Dutch bronze swivel
Caliber 7 Cm Length 130 Cm
Dutch East India Co. cypher
Signed: "P SWE(H)T A° 1781"
Indian cypher on muzzle bell



Leiden #31 (127)
Bronze muzzle-loading swivel.
Caliber 3.5 Cm Length 110 Cm. (OA)

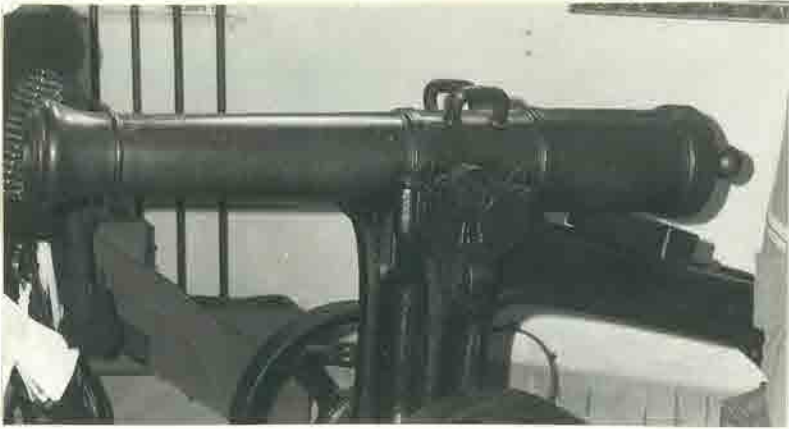


Leiden # 32
Cast iron toggle type carronade
Caliber 11 Cm Length 131 Cm
on top of tube "No. 844"
on side of lug "No. 30
1829"



Leiden # 33

Bronze fieldpiece or fortress piece on two truck mount
Caliber 9 Cm Length 176 Cm



Chambers of Dutch East India Company

oVc had six

Amsterdam-----A

Middleburg-----M *or Zeeland*

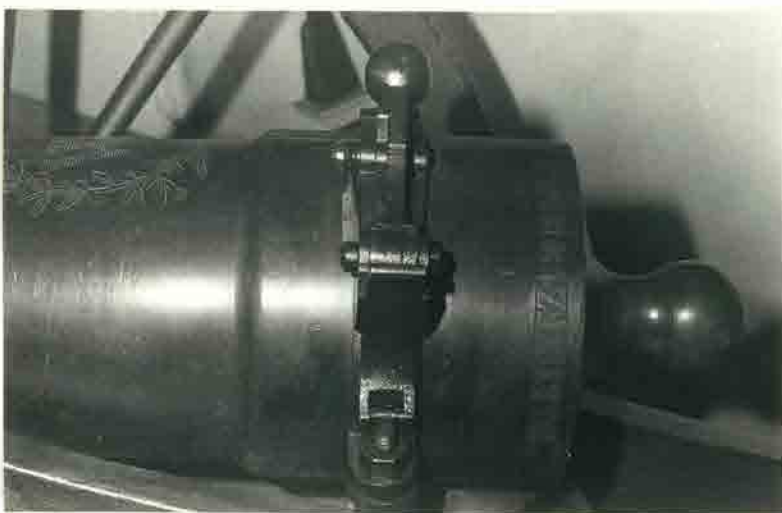
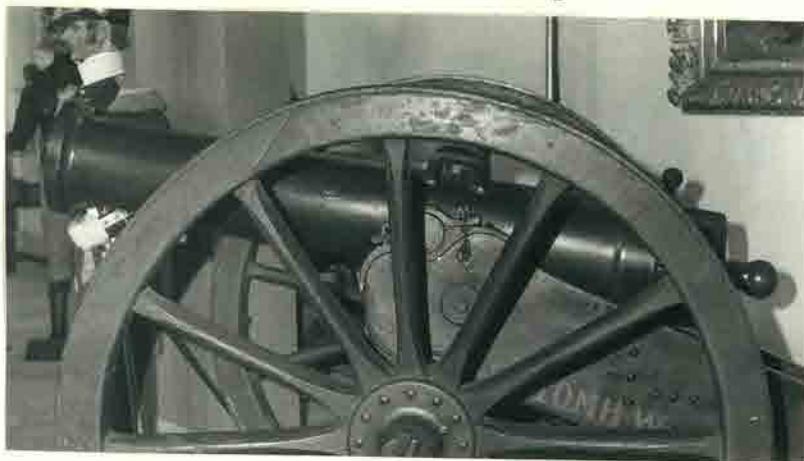
Delft-----D

Rotterdam-----R

Hoorn-----H

Enkhuizen-----E

Leiden # 34
Dutch bronze gun howitzer
Caliber 15 Cm Length 183 Cm
Signed "MARITZ WT FILS* FEC.HAGAF A° 1837"



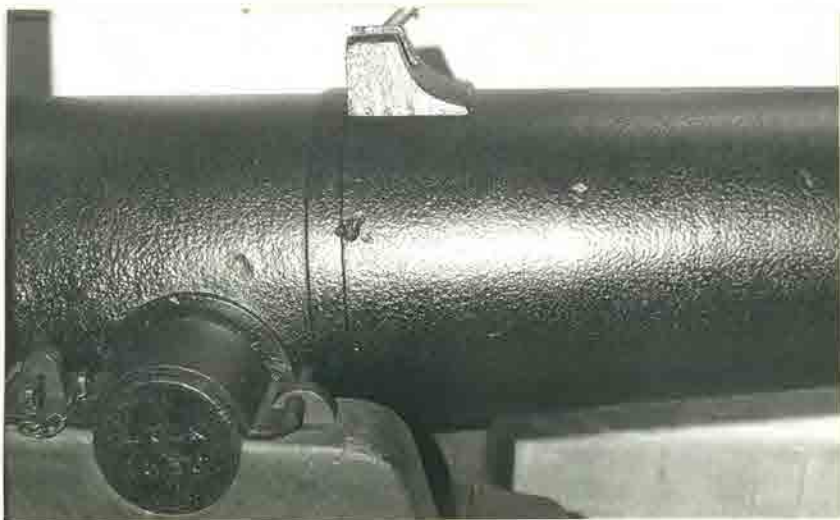


Leiden # 35
Dutch bronze fieldpiece
Caliber 8.5 Cm Length 162.5 Cm
Signed "MARITZ ET FILS PRO HAGAE A^o 1843"





Leiden # 36
Dutch iron truck naval gun
Caliber 22 Cm Length 283 Cm
Signed on right trunnion : "LUIK
1856"
On left trunnion: "No 1
80 F" (?)

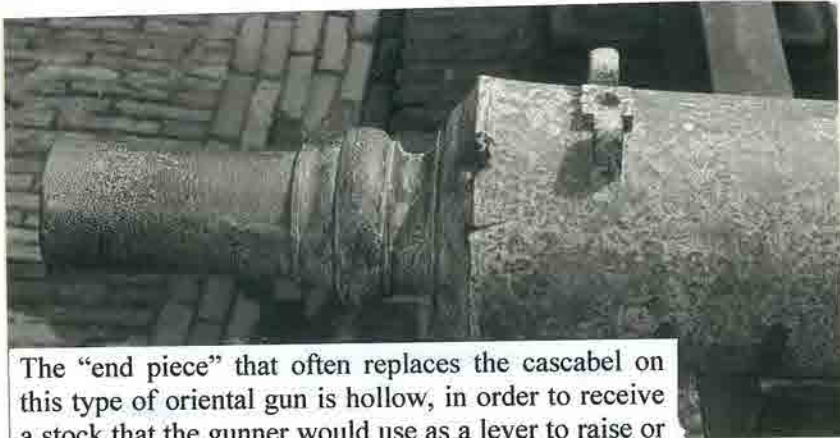




Leiden # 37
East Indian bronze
Caliber 7 Cm Length 334 Cm.

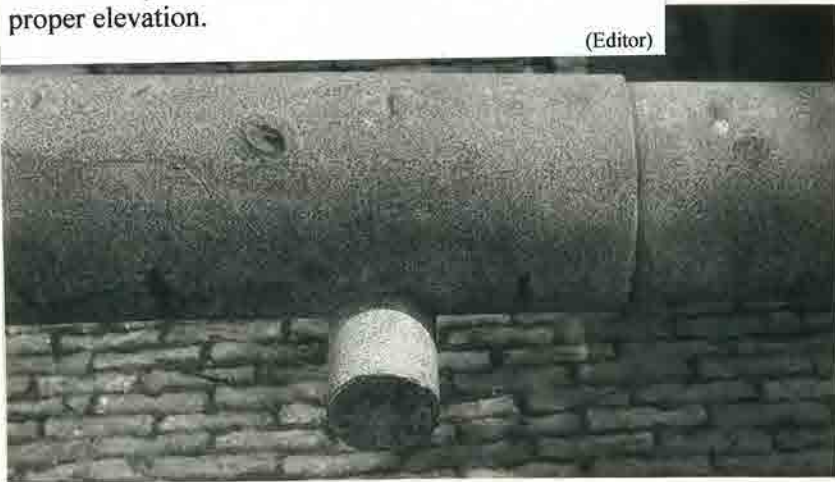


Collection of "lantakas", presumably from the Dutch East Indies.
(Editor)



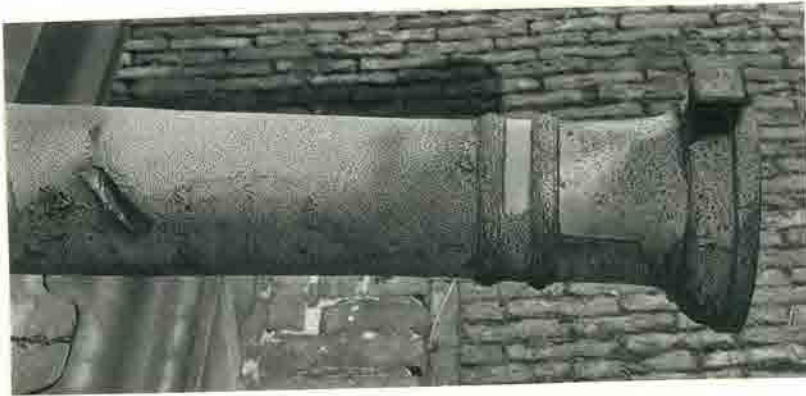
The "end piece" that often replaces the cascabel on this type of oriental gun is hollow, in order to receive a stock that the gunner would use as a lever to raise or lower the piece on its trunnions, when setting the proper elevation.

(Editor)

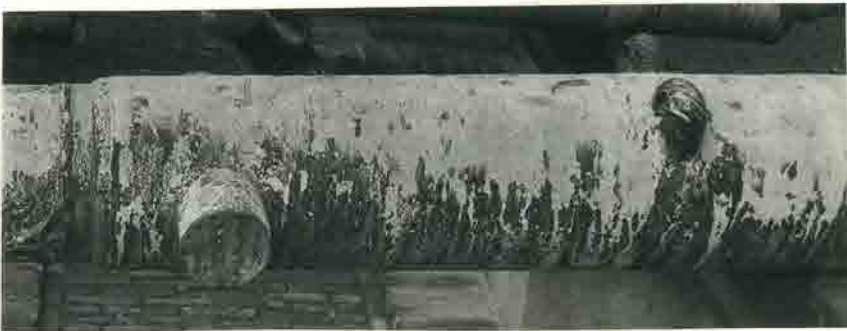
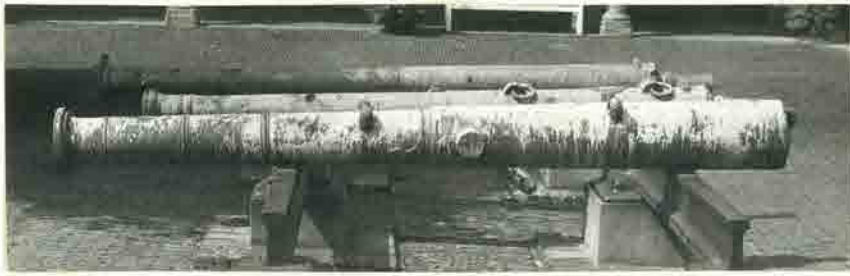


Leiden # 38
East Indian bronze swivel gun
Caliber 7 Cm Length 289 Cm
See # 37 for G.A. shot

Dated A.H. 1232 9
(1817 A.D.)



Leiden # 39
East Indian Bronze
12 Cm Caliber, length 298 Cm



Leiden # 40
French bronze
12.4 Cm caliber
Signed "BTRENGER DOVAY 1787"

Named "LE MOUCHEUR"

no photos

Leiden # 41
French bronze
12.4 Cm caliber
Signed: "DARTIGN 1786"

Named: "LA FLECHE"

No photos

Leiden#12
Dutch bronze gun
Caliber 9.5 Cm Length 276.5 Cm
Signed: "JOH. MARITZ HAGAE 1793"



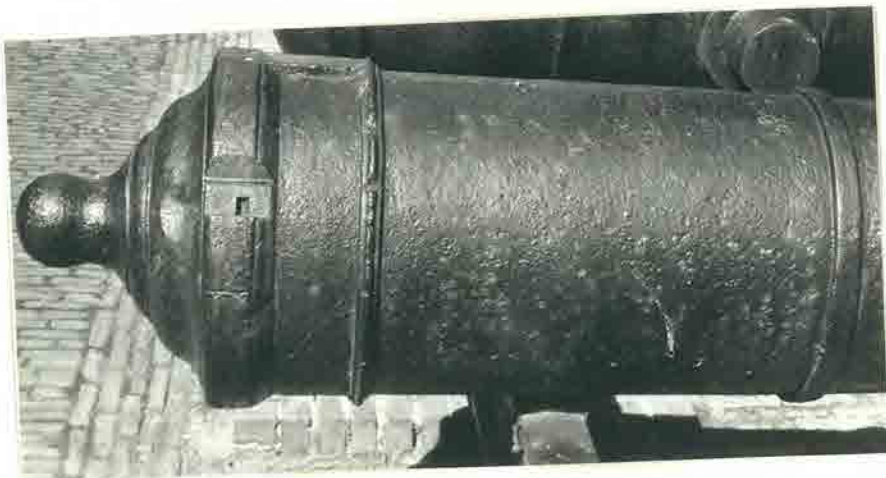
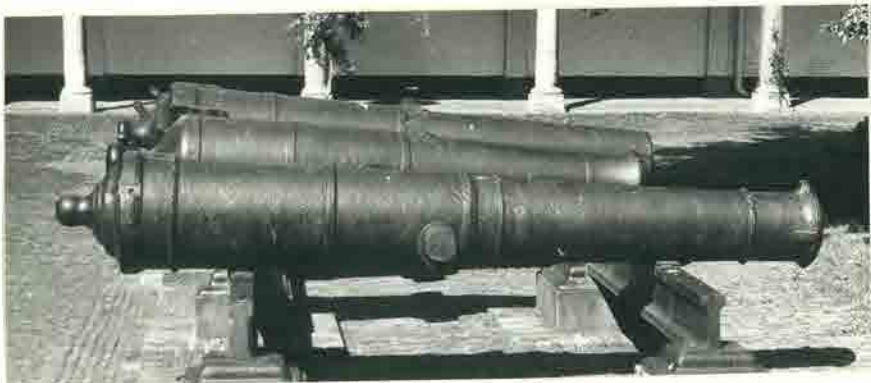
Leiden # 43

British iron gun with rifled bronze sleeve
inserted in bore

Caliber 12.5 Cm Length 289 Cm

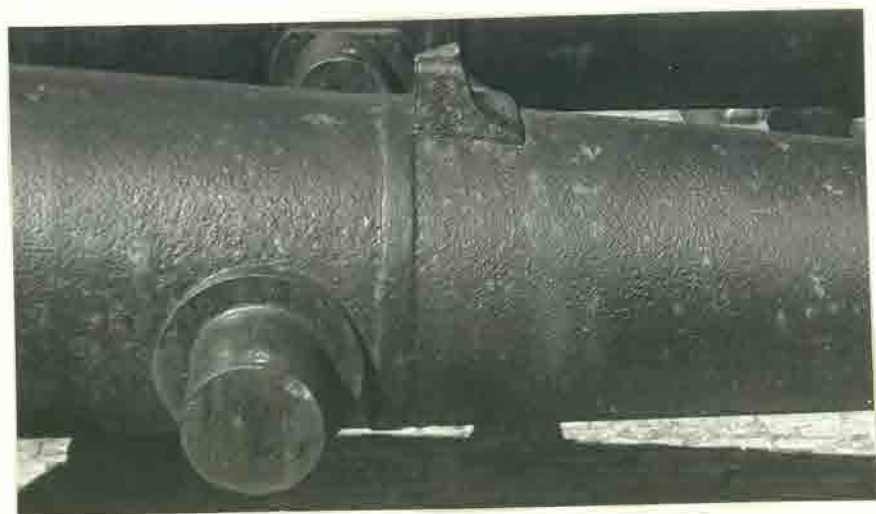
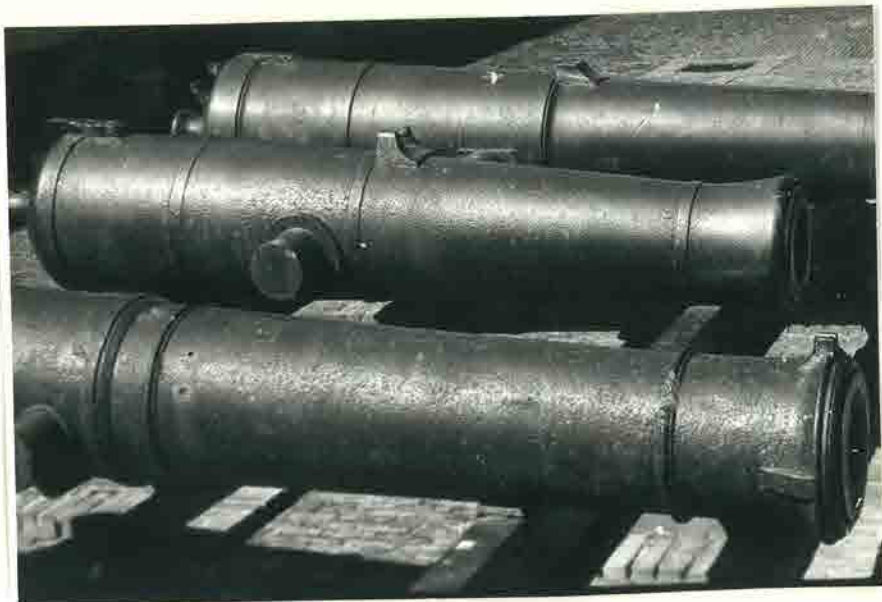
Signed on left trunnion: "41000
CARRON
1785"

On right trunnion: "No 95
NP 1641"





Leiden # 44
Dutch iron gun
Caliber 18 Cm Length 243 Cm
Signed on right trunnion: "LUIK"
1844"





Leiden # 45
British iron gun
Caliber 17 Cm Length 288 Cm
Signed on left trunnion: "W Co"
Crowned "P" on first reinforce
Above button: "E 1839"

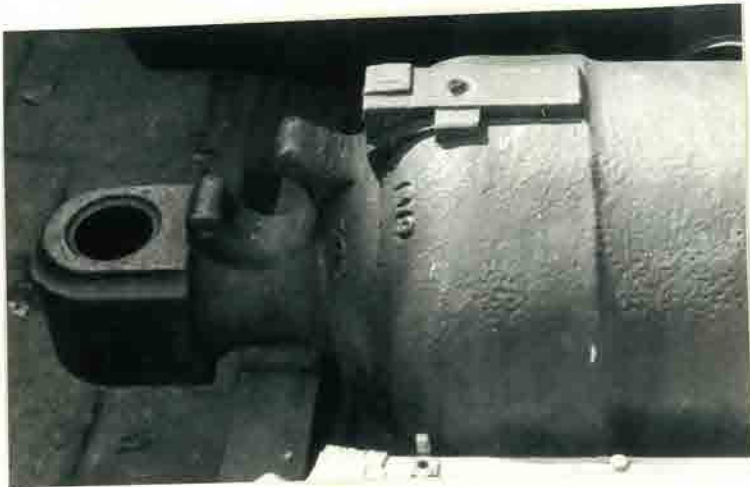




Leiden # 46
Dutch iron gun
Caliber 16.5 Cm Length 288.5 Cm
Signed on right trunnion: "LUIK
18-3"



Leiden # 47
Dutch carronade
Caliber 15 Cm Length 174 Cm
Signed on cascabel: "LUIK 1819
III 30"
Anchor on rear sight

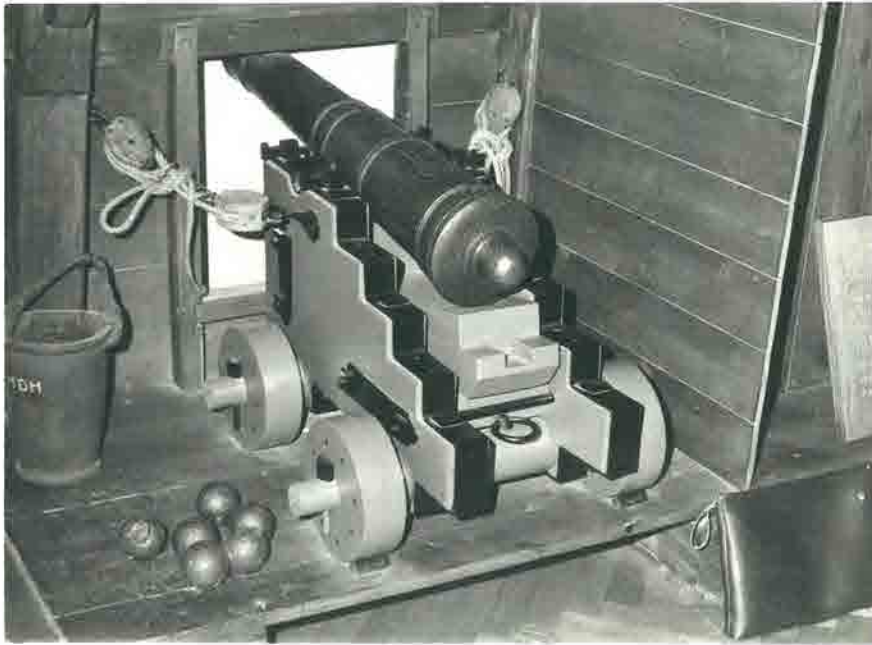


The city of Luik, which was part of the Netherlands in 1919, is now the city of Liège, Belgium.

(Editor)



Leiden # 49
Dutch bronze ship gun
Dutch East Indies Company
Hoon chamber
Caliber 5 Cm Length 120 Cm



Leiden # 50
Dutch bronze ship gun
Dutch East India Company
Caliber 5 Cm . Length 120 Cm
Middleburg Chamber of the Company

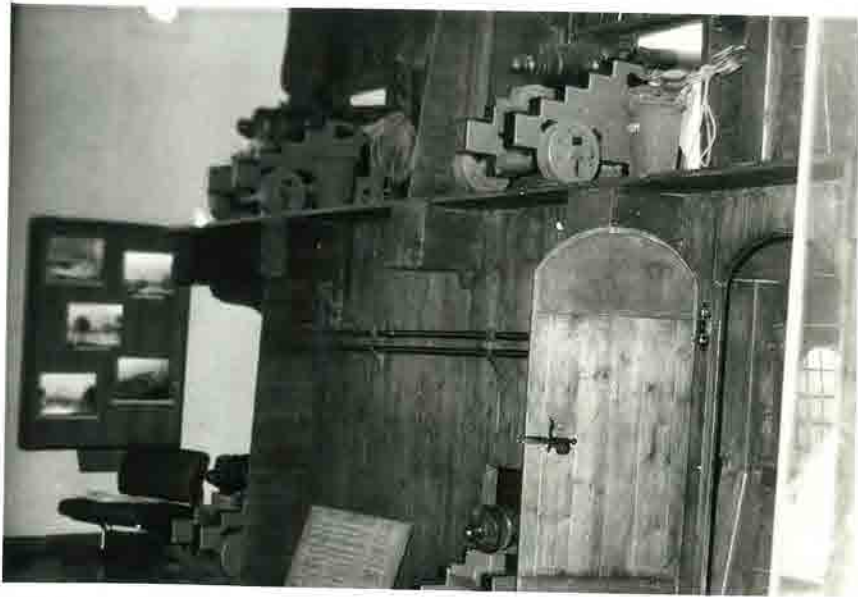
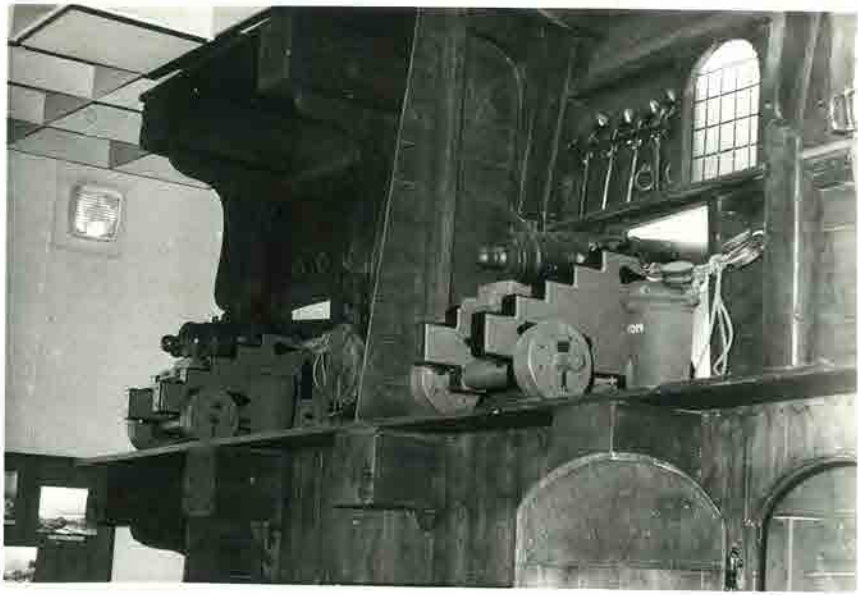
Stamped "tower"- proofmark of Middleburg



Leiden # 51
Artillery in visual storage



Leiden # 52
Dutch bronze ship guns in mockup of ship



The history of the Dutch Army Museum begins with a museum no longer exists. A museum that Mendel Peterson visited at length and the superb artillery collection, of which, he fully recorded just in time.

MUSEUM:

**HET NEDERLANDS LEGER-EN WAPENMUSEUM “GENERAL HOEFER”
DUTCH ARMY AND WEAPON MUSEUM “GENERAL HOEFER”**

History of the museum and its collections: That museum started as an independent foundation, staffed, however by Minister of War personnel and in the service of this Ministry.

It was founded in 1913 by a Dutch officer, Frederick Adolf Hoefer (later a general), who had brought together a number of military collections already existing in The Netherlands, which he added to his own private collection. It was housed in Doorwerth Castle, near Aarnem, which Hoefer had bought for that purpose. The name of the general was added to the earlier official name “Dutch Army Museum” at his death, in 1938.

During WWII, part of the collections was destroyed just as it was being decided to move it all to the “Pesthuijs” (formerly a leper-house built from 1658 on) in Leiden and in an adjacent 19th century building, later used for more exhibition rooms, for offices and for the library. (The address of the now extinct museum was Pesthuijslaan 7, Leiden). It was in the middle of the relocation process, in 1944, that Doorwerth Castle was bombed by German planes and that a major part of the collection was lost.

The museum was partially reopened to the public in 1949, in Leiden, and officially inaugurated in 1956. At that time, a relatively small “study collection of military material”, part of the collection, had been located in Delft, in the Armamentarium. In later years, a division was decided upon between the ancient weapons and cannons that remained in Leiden, and the “modern” armament, which moved to Delft. Finally, in 1983-1984, the “Leiden Nederlands Leger-museum”, was closed down and moved in its entirety to the Armamentarium, in Delft, where the new museum opened its doors, in 1986. Very little, however, of the remarkably rich collection of cannons and mortars of the Leiden museum is now exhibited in Delft. Most of it has been and apparently will remain buried in the reserves of the Armamentarium.

The album of photographs, constituted a few years before the extinction of the Leiden Museum, by Mendel Peterson constitutes therefore an irreplaceable, highly important pictorial document. It is presented in full on the previous pages in its original form.

Catalogues and publications on the history of the building and its collections:

See special chapter “Leger-en Wapensmuseum Generaal Hoefer” in *European Military Museums* by J. Lee Westraete, Washington, 1961.

EDITOR'S ALBUM

LEIDEN

**NEDERLANDS LEGER AND WAPENMUSEUM (GENERAAL HOEFER)
(DUTCH ARMY AND WEAPON MUSEUM GENERAL HOEFER)
(NO LONGER EXISTS)**



EDITOR'S ALBUM

DELFT

**NEDERLANDS LEGERMUSEUM
(ARMY MUSEUM OF THE NETHERLANDS)**

No longer exists, since January 2013 and to be now transferred to Soesterbert, on the grounds of the present day Air Force Museum, where it is expected to reopen in the year 2015.

**MUSEUM, ARMOURY AND ARTILLERY DEPOT:
NEDERLANDS LEGERMUSEUM
ARMY MUSEUM OF THE NETHERLANDS**

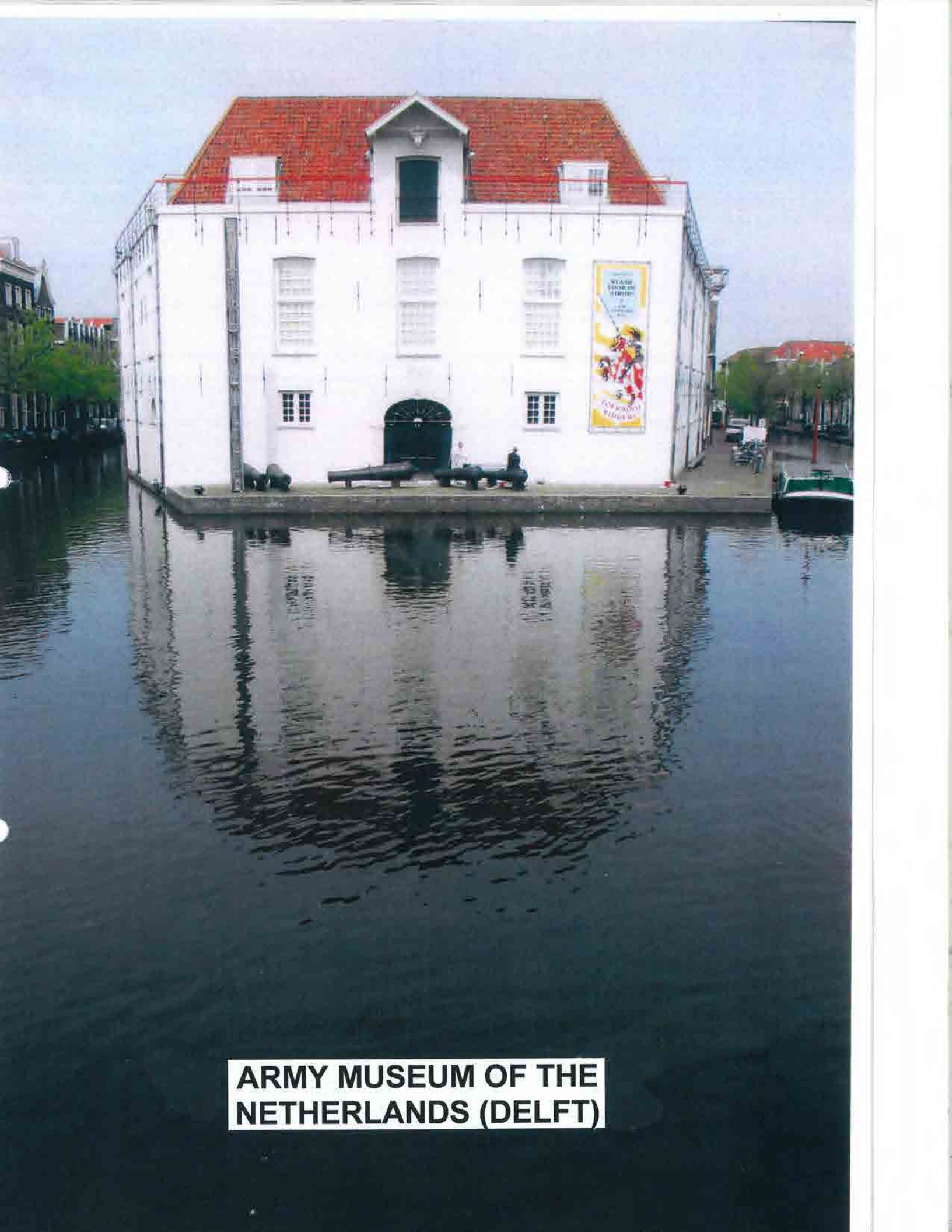
- Location: In the southern, the old part of the city of Delft, between the “Oude Delft” canal and the “Korte Geer” canal.
- Postal address: Korte Geer 1 – 2611 CA Delft – The Netherlands.
- Telephone: ++31/15 215 05 00
- Fax: ++31/15 215 05 44
- Email: cic@legermuseum.nl
- Website: www.legermuseum.nl: www.armymuseum.nl
- Curator: Curator of firearms: Mathieu Willemsen.
Curator of artillery: none.
- Contact person: Head curator: ++31/15 215 05 12
- Services offered: A well-staffed library (opened to the public on appointment) contains the former Leiden Museum’s collection of books, documents and iconography, plus the Old Library of the Ministry of War and many documents from the Royal Archives. It seems to be by far the largest military history library in the country. The association “Vrienden van het Legermuseum”, on the other hand (the Friends of the Army Museum) publishes a thick yearly illustrated book, titled *Armamentaria*, which contains valuable articles on military history or current military affairs and on the collections of the museum. The same association also publishes a shorter colour magazine to bring the latest news of the museum and of its acquisitions to the attention of the members.
- Opening hours: Tuesday to Friday 10h-17h. Saturdays, Mondays, holidays 12h-17h.
- Recent catalogues and publications on the history of the building and its collections include: There are brief, free brochures in English available at the ticketing desk. There is also a guide to the Army Museum (in Dutch only), with very little on the subject of artillery. It is: Bronder, Helen et al, *Legermuseum Gids*, Delft, 2009.
- History of the building: The “Legermuseum”, today (2013) occupies most of the old “Armamentarium”, the large armoury and artillery depot built from 1601 on, in the middle of the Eighty Years War (1568-1648).
At the time of the uprising of the Dutch people led by Prins William of Orange and his brothers against the Spanish rule over the country, there was no permanent army in the Netherlands and consequently no permanent military structures or buildings. In case of war or invasion, the burghers took arms or hired professional soldiers. Prins William believed in a permanent army with permanent training and regular pay and he started forming one with the

help of the representatives of the cities and provinces. This army was put to the orders of his brother, Prins Moritz (1567-1625). He also invented new tactics to more efficiently fight the well-organized Spanish “tercios” or armies and he organized the first national military infrastructures, which included the building in Delft of a central armamentarium, a place to store weapons, artillery, ammunition, powder and supplies. During the following centuries, the building was extended and enlarged.

History of the museum and its collections: The museum contains and manages more than 200,000 objects, or 400,000, or 500,000, according to which page of the website or of the various museum publications you prefer to believe. These objects include weapons of all kinds, uniforms, instruments, armours and the like, also books, handwritten documents, paintings, prints and photos, not to mention a collection of vehicles that includes tanks and rockets of WWII. Artillery, (2013) however, has become here also the poor relation of the exhibits family. The museum is organized roughly in two parts. The areas devoted to temporary exhibitions and the interactive areas, which are focused to the younger visitors, on the left, and, on the right part of the building, the permanent exhibition. The museum collection of firearms is truly remarkable, most of them having been made in the justly called Dutch Golden Age, the 17th century (and coming from the Visser Collection) and so is the collection of cut and thrust weapons. There is, no artillery room or area. The exhibition is organized thematically and chronologically with, on the ground floor: WWI, WWII and UN led operations; on the second floor: the Golden Age of The Netherlands (17th century as said before), the French Period (1795-1815), the Belgian Revolt (read Independence War, 1830-1839), and, on the third and top floor: The exhibits devoted to the Roman Era, the Middle Ages and the Eighty Years War. The Eighty Years War, having been mostly a siege war where artillery was all important one might have expected to find in the rooms devoted to that period a quantity of the decisive cannons and mortars that allowed the insurrected Dutch to in the end, beat the armies of King Philip II. Cannons, in small number, are scattered in various rooms as a background to each general period concerned. The Delft Army Museum is not, the successor or the equivalent of the now extinct “Leger and Wapenmuseum Generaal Hoefler of Leiden”. As for the large and extremely important collection of historic ordnance pieces of the said former Leiden museum, it is now in deposit in the reserves of the Delft museum. The cannons, etc. are in theory accessible upon request to *bona*

fide researchers, but they are reportedly impossible to either inspect or photograph, due to their being stored practically on top of each other in a mass. These ordnance pieces are “in temporary deposit” only, and their future was not decided at the time of publishing.

For the future in any case, what seems certain is that the “Legermuseum” of Delft and the “Militaire Luchtvaartmuseum”, will be merged in the year 2014 (a tentative date) to form the new National Military Museum (the name is not definitive), which will be housed on the grounds of the former airbase of Sosterberg. The announced policies of this new future museum sound quite disquieting again to the artillery scholars: The new museum, as per the new duly modern concept, will be “innovative, aimed at the general public and interactive”. The chances that the superb collection that once was housed in the old Leiden museum should be unearthed and exhibited again, seem slim in view of such a programme...



**ARMY MUSEUM OF THE
NETHERLANDS (DELFT)**



In front of the present day (2013) entrance to the Delft Army Museum on the Korte Geer: A French 18th century bronze piece. Calibre: 12.5 cm., the name of the founder inscribed on the base-ring as "A DOUAY PAR J. BERENGER LE 17 FÉVRIER 1787". The first reinforce bears the monogram of King Louis (XVI). The gun was named "LE MOUCHEUR", meaning "The Blower of the Enemy's Nose", i.e. the gun that puts the enemy in his place. The "dolphins" are plain.



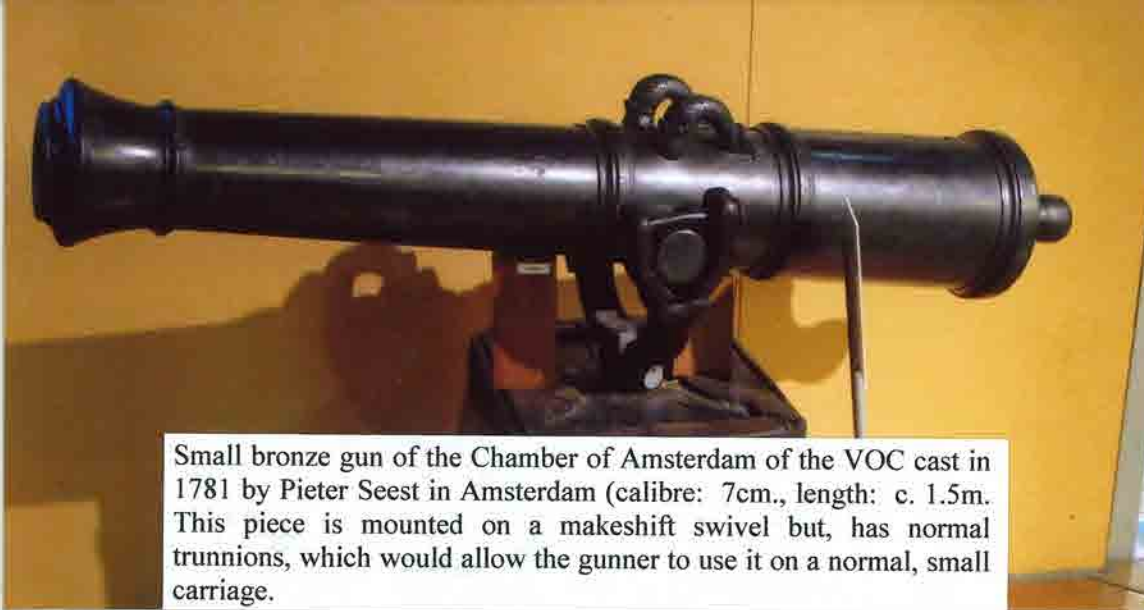
The original entrances to the old Armamentarium on the Oude Delft Canal.



Above: Cast iron, 16th century breech-loading swivel gun. It could be called “base” or “esmeril”. The tripod is a replica.

Centre: Early, remarkably thin “blow gun”, in cast iron and a muzzle-loader.

Below: Small bronze, hexagonal muzzle-loader described as an “atjeshe vuurwapen” (“a fire arm from Atjeh”, i.e. from north Sumatra) of the “lantaca” type.

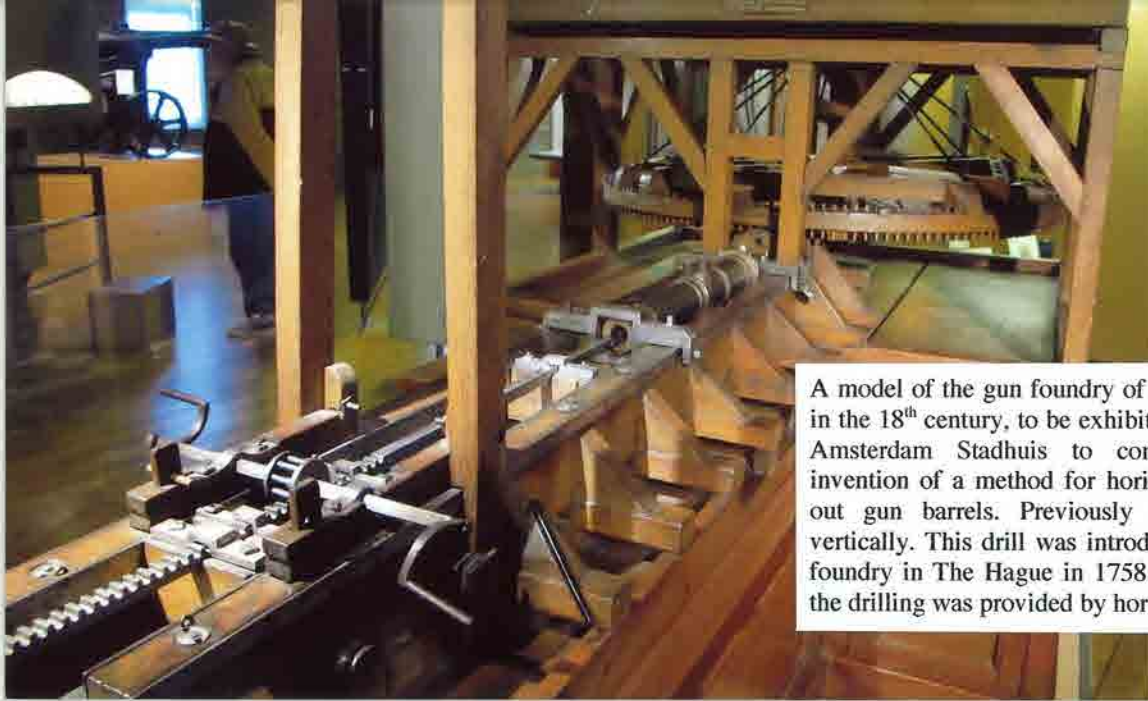


Small bronze gun of the Chamber of Amsterdam of the VOC cast in 1781 by Pieter Seest in Amsterdam (calibre: 7cm., length: c. 1.5m. This piece is mounted on a makeshift swivel but, has normal trunnions, which would allow the gunner to use it on a normal, small carriage.



A bronze naval gun, a 1-pounder (calibre 5,5 cm). It was cast by Michael Everhard in Middelburg (Zeeland) in 1764. On the first reinforce is the partly erased monogram of the Zeeland Chamber of the Dutch Vereenigde Oost-Indische Compagnie (VOC MZ).





A model of the gun foundry of Jan Verbruggen in the 18th century, to be exhibited at first in the Amsterdam Stadhuis to commemorate his invention of a method for horizontally drilling out gun barrels. Previously this was done vertically. This drill was introduced in the gun foundry in The Hague in 1758. The power for the drilling was provided by horses.



A finely decorated bronze muzzle-loader (calibre 8 cm), cast in 1688, founder unknown. The carriage is a credible modern reconstruction.



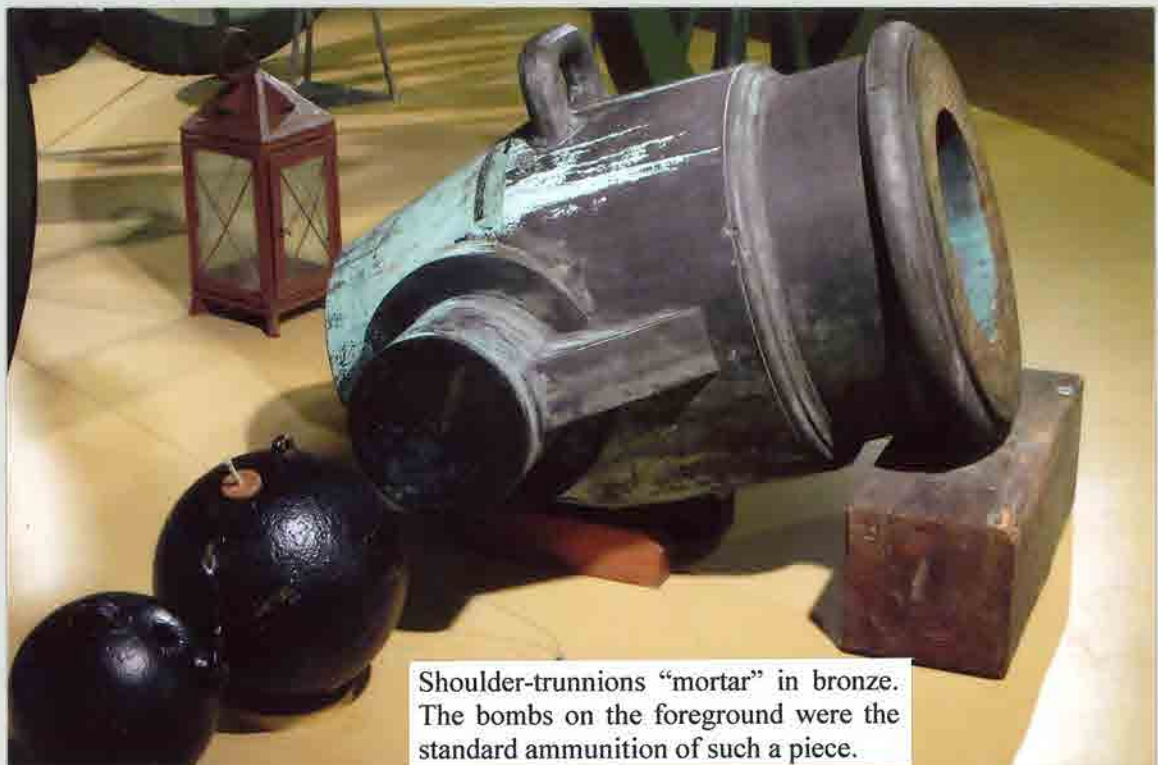
A rifled bronze cannon. This gun, originally a smooth bore 6-pounder, was modified around 1860 into a rifled 4-pounder to increase its accuracy and range. In use between 1861 and 1876. The firing speed was c. 1 round per minute, the range c. 2000 m.

A vertical cut through a model of a bronze trunnion mortar showing the powder chamber, the hollow bomb and the charging cylinder.

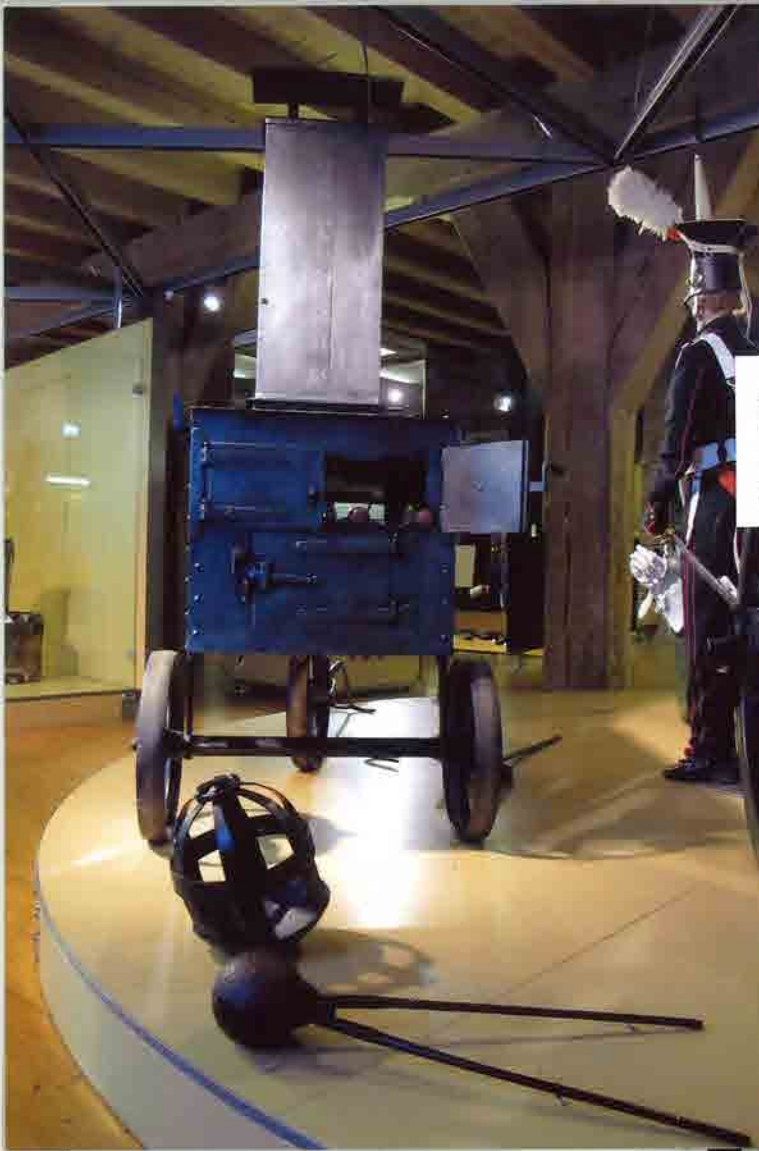


Suspended mortar.

Two 19th century mortars.




Shoulder-trunnions "mortar" in bronze. The bombs on the foreground were the standard ammunition of such a piece.



An artillery oven, to heat until red-hot mortar balls and cannon balls. Late 18th - early 19th century, used in siege warfare. Similar, adapted ovens were used also on board ships.

Howitzer, model 1693, calibre 205 mm, cast in the Hague in 1694 by Johannes Nieport. The model was in use until the 1870s. The carriage is in part original (the iron parts).





A fine series of Dutch ordnance scale models showing the evolution of the artillery from 1750 to 1850. Mostly made in recent years but useful for teaching purposes. Below, an original model made in 1758 in Low Arden.



A contemporary model of a bronze field piece on an articulated "wagon".





At the entrance to the museum: A howitzer cast by J. Maritz in The Hague in 1820 (calibre: 20.5cm.). The crowned monogram with wreath of King William I decorates the chase.

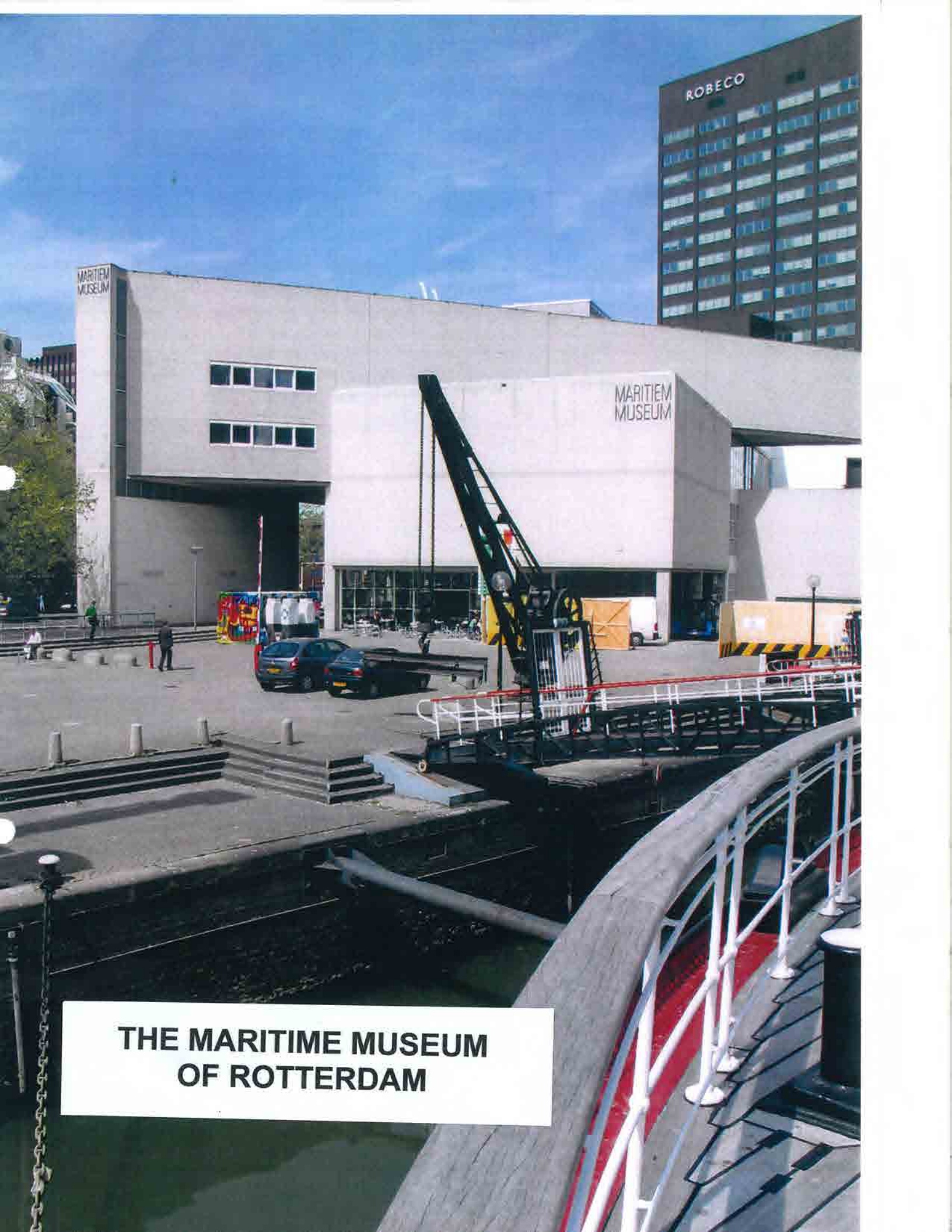


Exhibited outside, these late 18th century pieces are models originally developed in 1786 for the French Navy. The Dutch adopted them in 1795. Originally, these cannons were shooting massive iron balls of 36 pounds. Around 1830, the piece in the foreground was re-drilled so it could shoot “granaten” or explosive shells of 20 cm diameter. It is marked n°35 (its serial number in the Navy) and, on the breech mouldings : “36 Lb” and “1809” (the year it was cast).

EDITOR'S ALBUM

ROTTERDAM

**MARITIEM MUSEUM ROTTERDAM
(MARITIME MUSEUM OF ROTTERDAM)**



**THE MARITIME MUSEUM
OF ROTTERDAM**

MUSEUM:
MARITIEM MUSEUM ROTTERDAM
MARITIME MUSEUM OF ROTTERDAM

- Location: On the “Schiedamse Dijk”, north of the “Nieuwe Maas” in the old “Wijnhaven” (the old wine harbour), in a corner of the 17th century harbour and docks that were anciently reserved to the unloading and duty collecting of French and other wines. It is next to the Beer Harbour.
- Postal address: Leuvehaven 1 – 3011 EA Rotterdam – The Netherlands.
- Telephone: ++31/104 13 2680
- Fax: ++31/104 13 7342
- Email: information: vrienden@maritiemmuseum.nl
- Website: www.maritiemmuseum.nl
- Curator: C.O.A. Schimmelpenninck Van der Oije.
- Services offered: The museum has an exceptionally good scientific, technical and historical library managed by an competent and helpful librarian. And it is one of those fully open shelves libraries where you walk around, browse, pick up a book or two and start reading. The history of Artillery is very well represented as one would expect from a library that has actually been in existence since 1857. It started life as the modest library of the “Koninklijke Nederlandsche Yacht-Club” (The Royal Dutch Yacht Club) founded by Prins Hendrik, and it has continued to expand. The librarian’s direct telephone is: ++31/104 02 9261.
The Museum’s Friends Association, the “Vereeniging Vrienden van het Maritime Museum Rotterdam” publishes the high quality *Maritime Museum Magazine*, which keeps a good balance between maritime actuality and the presentation of one after the other departments of the museum.
- Opening hours: Week days 10h-17h. Sundays 11h - 17h.
- Recent catalogues and publications on the history of the building and its collections include: None, on the building history, but for an indirect glimpse at a small part (two cannons only) of the artillery collection, one may read the very instructive catalogue of an exhibition organized in 1999 by the “Historisch Museum Rotterdam” and published by them, under the title: *Kanonnen, Klokken, Kandelaars. Koper en Brons uit Rotterdam*, Zwolle, 1999.
- History of the building: Inaugurated in 1986, architect: W. G. Quist.
- History of the museum and its collections: The “Maritiem Museum Prins Hendrik Rotterdam”, to give it its full official name, is the oldest maritime museum in the country. It was founded in 1873 and for a hundred and ten years it remained in its old location on Jacobsplaats, a busy centre of learning for maritime and other historians, including specialists of naval artillery. At the

time, the museum exhibited a small but fine collection of naval guns and VOC (Dutch East India Company) guns, as well as a very large collection of excellent ship models, globes, navigation instruments, paintings, ships decoration, as well as maps and documents of all kinds.

Sadly, in 1986, none of the naval ordnance pieces of the museum made it to the galleries of the new building. All of them are today in the cellars, in the reserves, and the only “cannon” that can be seen in the museum’s galleries and exhibition rooms is the symbolic cannon, which together with a coil of rope, serves as a conventional attribute on the pedestal of a statue of the great Dutch naval hero: Admiral Michiel Adriaensz. de Ruijter (1607-1666).

The real cannons, in the reserves are in principle available to *bona fide* researchers by previous arrangement (2013).



LESSER DUTCH MUSEUMS
RAPIDLY VISITED BY MENDEL L. PETERSON
NOT VISITED BY THE EDITOR

MENDEL PETERSON LGA

ENCKHUIJSEN

THE TOWN HALL OF ENCKHUIJSEN

This "LGA" consists of 1 folio

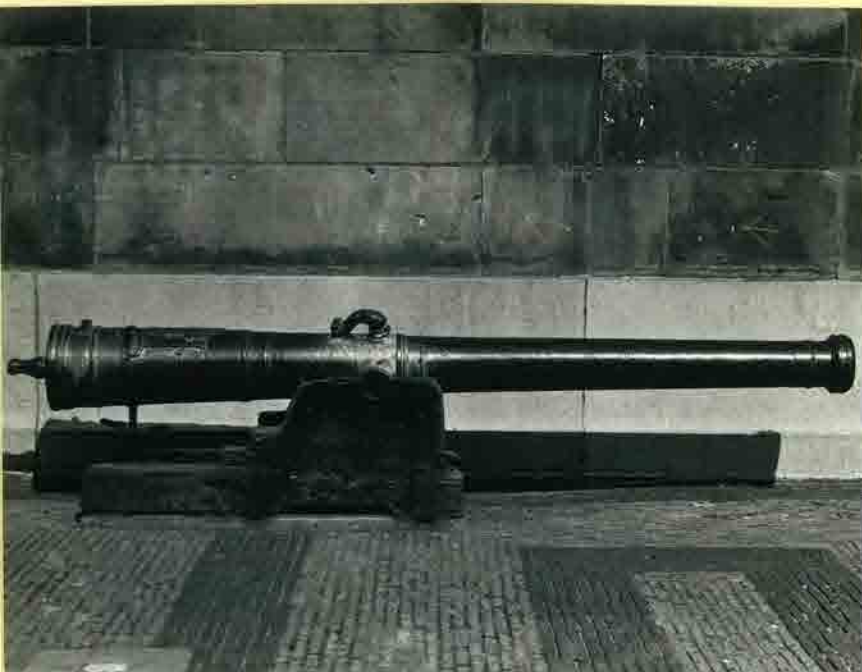
MENDEL L. PETERSON (MINI) LGA

ENCKHUIJSEN

ENCKHUIJSEN MUSEUM



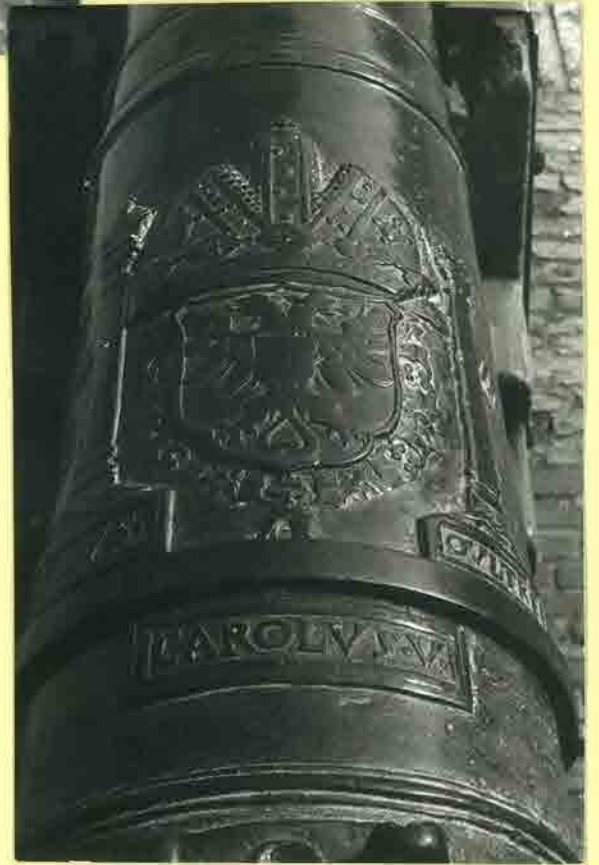
The old warehouses and offices of the Enkuizen Chamber of the Dutch East India Company



Enckuijsen City Hall.
Fine bronze culverin. Calibre:
9.5cm., length: 337cm.
The piece is marked:
"OPUS.REMIGY. DE.HALLUT.
ANNO 1551"

It is decorated with the crowned
imperial coat-of-arms of Emperor
CHARLES V (CHARLES I in
Spain), between the Pillars of
Hercules, and bears the caption
"PLUS OULTRE" and the name of
the Emperor in a rectangle.





MENDEL I. PETERSON (MINI) LGA

SCHOKLAND

SCHOKLAND POLDER MUSEUM

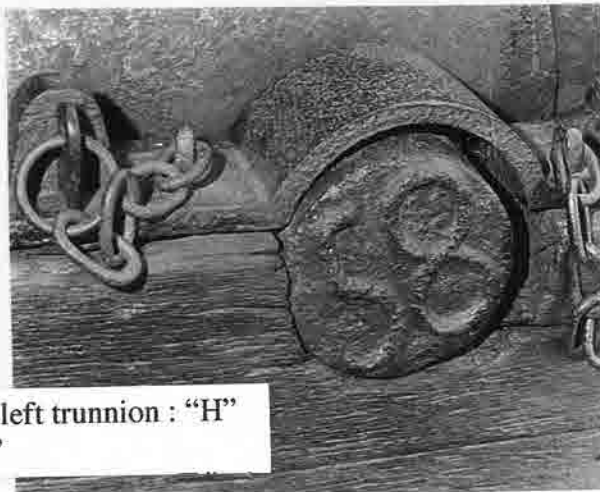
SCHOKLAND POLDER MUSEUM



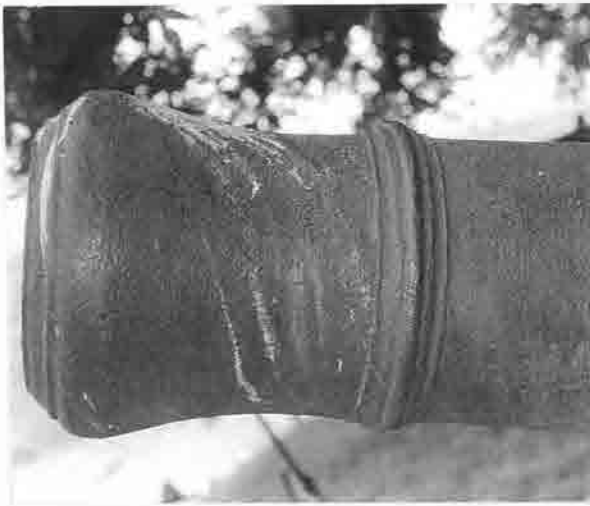
Cast iron cannon, undated.



Named "HOLLANDIA" on the first reinforce.



On the face of the left trunnion : "H"
On the right : "58"



On the base ring: an indication of the weight, partly unreadable: "??34"



Cast iron muzzle loader dated 1844 (on the moulding of the breech) under a weight indication: "206".

EDITOR'S ALBUM

SCHOKLAND

**MUSEUM SCHOKLAND POLDER
(SCHOKLAND POLDER MUSEUM)**



MUSEUM/VILLAGE:
MUSEUM SCHOKLAND POLDER
SCHOKLAND POLDER MUSEUM

Location: In the “Noordoostpolder” (a “polder” in The Netherlands is a piece of land conquered from the sea or from coastal marshes by draining, filling in and damming), close to the village of Nagele and, roughly, between Kampen and Emmeloord, or just north of the Ketelmeer (which lies east of the Zuiderzee).

Postal address: Museum Schokland — Schokland — Middelbuurt — Noordoostpolder — The Netherlands.

Telephone: ++31/527 251 396

Fax: ++31/527 251 286

Email: —

Website: www.schokland.nl/pageid=118/Museum - Schokland.html

Curator: —

Contact person: —

Services offered: None that an artillery historian might wish to make use of.
.Opening hours: 11h-17h. From April 1 to October 31: Tuesday to Sunday. From November 1 to March 31: Friday to Sunday.

Recent catalogues and publications on the history of the building and its collections include: None

History of the building: The “Museum Schokland Polder” consists in fact of a group of old local houses typical of the “Noordoostpolder area”. This collection of typical buildings is situated all around the historical small church of the “Middelbuurt”. The “Middelbuurt”, the central hamlet, is one of the three last “woonterpen” of the area called Schokland (a “woonterp” is a mound, artificially built, in order to settle on it in the middle of a floodable, low lying area). The houses are typical of the early Zuiderzee area and the museum is meant really, not to teach to anyone anything about the history of artillery, but to explain the geology and archaeology of the “Noordoostpolder” and what the life of the inhabitants of the Schoker area used to be in the past centuries. The drying of the “Noordoostpolder” is explained in detail, both in the inside and the open air exhibits.

History of the museum and its collections: There are in fact no collections of artillery at Schokland Polder, but only a small number of miscellaneous iron cannons, which have no direct relation with the site where they are exhibited. The Schokland Polder Museum is mentioned here because Mendel Peterson did actually visit it

and considered its cannons important enough to be photographed and recorded in his albums.



MENDEL L. PETERSON (one page) LGA

HOORN



Old warehouses and offices of the Hoorn Chamber of the VOC.



The many old iron cannons used in all harbours as bollards or blocks in town, have not escaped Mendel Peterson's attention.

OTHER MUSEUMS IN THE NETHERLANDS

NOT VISITED BY MENDEL L. PETERSON

**MUSEUM AND PRACTICE GROUND:
NEDERLANDS ARTILLERIE MUSEUM
DUTCH ARTILLERY MUSEUM**

Location: On a military base, in the province of Overijssel, between the cities of Zwolle and Appeldorn, near Epe (a hamlet).
Postal address: Eperweg 149 - 8084 HE 't Harde - The Netherlands.
Telephone: ++31/525 657 310
Fax: ++31/525 657 311
Email: NAM.artillerie.museum@mindef.nl
Website: www.nederlandsartilleriemuseum.nl
Curator: Paul van Brakel
Contact person: A.P. Friesen Lkol. Retired
Services offered: A documentation centre with a library of 4,000 volumes and photographic archives. The library is open on Fridays only, from 10h to 15h, by appointment. It is located in the former "Pesthuis" or lazaret and is somewhat isolated for that reason.
Opening hours: Tuesday to Thursday 13h30-17h. Friday 13h30-16h.

Recent catalogues and publications on the history of the building and its collections include: None, at this time.

History of the building: The "Nederlands Artillerie Museum" is situated on part of an artillery shooting range called the "Legerplaats", which has been in operation since the late 19th century. It was called at the time the "Oldebroekseheide" (the Heather of Oldebroek). The collections of the museum are now displayed on over 750 square metres, spread in four of the light buildings and pavilions of the former shooting range. The official mission of this new, the most recent military history museum in the country, is "to assemble, conserve and display objects which were in use by the Dutch artillery forces, as well as photographs and documents, which concern the history of the Artillery Arm". In order to achieve this eminently worthwhile purpose, several pavilions have been adapted and today (2013) exhibit the following artefacts:

- Pavilion 1, formerly a bicycle garage, displays the part of the collection that tells the general story of Artillery in the Netherlands, prior to 1900.
- Pavilion 2, formerly the guard room, now houses a representative collection of fortress ordnance and coastal artillery, as well as a number of portable firearms.
- Pavilion 3, the result of assembling the kitchens of the base, the powder room and the laundry room, is now the largest of the various pavilions. It displays the artillery pieces that were in use from 1900 to about 1950. It also includes an area devoted to the history of the Artillery Forces in the Netherlands Indies.

- Pavilion 4, formerly used as classrooms and, later, as dormitories, has not yet received its final destination.
- As for the isolated ward, the “Pesthuis” or lazaret, the smaller of the pavilions, is being used, as said above, as the museum’s library and archives repository.

History of the museum and its collections: It seems that at the origin of the collection was a didactic ammunition collection assembled for in-house use, for instructing future artillerymen. It is very recently only that this very young museum, officially founded in 1961 as the “Stichting Artillerie Verzameling Oldebroek”, and usually referred to as the “Stichting Nederlands Artillerie Museum”, began to organize. It is later yet, from 1971 on, that the ammunition collection expanded into an artillery collection. In 1980, only that the scope of the permanent exhibitions was widened to such a wide subject as a chronological display of two thousand years of Dutch artillery (including of course proto-artillery, that is catapults, ballists, onagers and similar stone throwing or fire throwing war machines, as used by the Romans).

That story is told by means of exhibiting, with comments, models of war machines and reproductions of antique weapons, ammunition and projectiles of all kinds, aiming and targeting instruments, uniforms and personal equipment, teaching devices, as well as flags, military mementoes, medals and the like. In fact, on the background of the history of the artillery in the Netherlands, it is the whole worldwide history of the art of throwing things at the enemy in order to kill him or to destroy his place that is told there, mostly by mock-ups, models and panels.

Obviously, such a young museum cannot be expected to show the visiting artillery connoisseur genuine, ancient ordnance pieces, but the collections here, for the ones of us, who specialize in the 19th and early 20th centuries are certainly worth the trip.

There is a fine (and growing) collection of images of Santa Barbara.