



# BREECH=LOADING SWIVEL GUN

Portuguese, 15th to 16th century. Length: 93 cm.

Composed of forged iron parts, powder chamber and wedge preserved. Manufacturer's mark, its surrounding marine concretions conserved and a silicon cast taken from the surface.

## Provenance

It is a stroke of luck that we do know the exact provenance of the present swivel gun, which is lost in the majority of comparative cases. The diver Doug Barnard discovered it back in the year 1970 on a sea bed 60 to 300 meters off Seaford, Sussex, later nicknamed *The Buckle Garage Site*. Afterwards it went to Portsmouth for professional conservational measures that lasted 5 years, which explains the excellent and stable state of preservation. Finally the object was exhibited at the *Mary Rose Museum*, before it was sold to private hands.

After the Barnard find there were three further breech-loading swivel guns raised from the site over the following years, all bearing stylistically similar marks. One went to the *Newhaven Museum*, the second to the *Martello Museum* and another one to a private collection.

# Published in:

McDonald, K. (1985): Dive Sussex. A Diver Guide. Underwater World Publications, London, 203 and vi pp.



Fig. 3. Marine concretions that covered the mark.

The present swivel gun is a rare example for early breech-loading cannons used in the 15th and 16th century. Since it was not necessary to pull them back for loading, these arms could be placed in close quarters. On the one hand this was an advantage on ships, on the other hand these cannons were also installed on the walls of castles and strongholds.<sup>1</sup>

Our swivel gun corresponds in its forged construction to the early European types. It has a rest with a trunnion, which was inserted into a vessel's side or the wall of a castle. The antenna at the end, which is preserved in parts, served to turn the barrel and adjust the vertical angle. There is a rectangular opening at the back end where you can see a vessel with a touch whole. This is a powder chamber, which was firmly fastened inside the barrel by a wedge. A couple of these were prepared with black powder in advance and could be exchanged quickly during a combat situation. So, the great advantage of this principle is the high

<sup>&</sup>lt;sup>1</sup> Atzbach, R., Lüken, S., Ottomeyer, H. (2010): Burg und Herrschaft, p. 260.

rate of firing compared to muzzle loaded cannons.<sup>2</sup> Having said that, the connection between the powder chamber and the barrel did not close completely gas-proof. Hand crafted components do not fit with the necessary precision, which was not accomplished before the 19th century. Consequently, the operating distance was limited and these breech loading cannons were rather dangerous for the gunner.

Being a light cannon, which could be easily angled and reloaded quickly, the main purpose of the swivel gun was fighting against combatants. This weapon had a disastrous effect by firing langrages, a type of projectile consisting of a bag made of cloth and filled with pieces of lead or iron. <sup>34</sup>



Fig. 4. Drawing of the present piece.<sup>5</sup>

<sup>&</sup>lt;sup>2</sup> Ortenburg, G. (1984): Waffe und Waffengebrauch im Zeitalter der Landsknechte, p. 65.

<sup>&</sup>lt;sup>3</sup> Fritze, K., Krause, G. (1997): Seekriege der Hanse, p. 59.

<sup>&</sup>lt;sup>4</sup> Müller, H. (1957): Historische Waffen, p. 133.

<sup>&</sup>lt;sup>5</sup> McDonald, K. (1985): Dive Sussex. A Diver Guide, pl. Vi.

Since late medieval cannons were still imprecise and very expensive in both manufacturing and employment, the overall number of existing pieces was small even during their time of use. Iron was costly, so in the course of history those cannons that became obsolete were recycled. This is the reason for the rarity of comparable cannons. Nearly all present-day known swivel guns have been recovered as water founds.

#### Condition

Corrosion has affected our present example in the course of centuries. The antenna at the breech got lost in great parts except remains of about 12 centimetres in length. It is very positive that the rest with its trunnion is still there and also the powder chamber/wedge (handle lost, except a small part of 2,5 cm length). Comparable examples do often miss the latter. On the grounds of the professional conservation in Portsmouth lasting for five years, the current state is very fine and stable.

#### Comparable examples

I. New Haven Museum.

II. Martello Museum.

Further:

Deutsches Historisches Museum, Berlin, Inv. No. W431.<sup>6</sup>

Musée de l'Armee, Paris.

Armouries of the Tower of London, heute Royal Armouries Museum.<sup>7</sup>

<sup>&</sup>lt;sup>6</sup> Müller, K. (1977): Alte Geschütze, p. 20.

<sup>&</sup>lt;sup>7</sup> Ffoulkes, C. J., Oxon, B. L. (1915): Inventory and Survey of the Armouries of the Tower of London, Vol. II, p. 449.

### Literature

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