No heroes without masks

The summer months follow upon a period of strict isolation. The Military Museum has now re-opened its doors and puts its generously-sized galleries at the disposal of curious visitors. The Educational Service chose the currently mandatory wearing of facemasks to stop the spread of the coronavirus as the guiding principle for a tour through the centuries, when other masks for other purposes and made out of other materials were utilized.
Floor markings draw the attention of the visitors to the selected objects and QR codes supply a short explanation. Those wishing to learn more can download this leaflet with additional information.
The tour successively takes you through the Arms and Armour Gallery, the 14-18 Gallery and the Aviation Hall, before turning back to the 14-18 Gallery and climbing the stairs of the two floors in the Bordiau Gallery.
We wish you a most pleasant walk.

Armour

Gallery introduction
Armours, both a protective item and a power symbol, characterize mediaeval warfare.
Rich noblemen can afford made-to-measure armours, whereas less moneyed knights have to make do with "off the peg" pieces sometimes provided by the suzerain and stored in large arsenals. A complete armour can count up to 250 pieces and weigh some 25 to 40 kg.
Armours follow civilian fashion, as you will be able to observe through the various protective helmets we selected.

Frogmouth helmet, late 15th century, early 16th century

Jousting or tournament great helms are quite occlusive. The jousting armour is heavier than the combat armour and can weigh up to 70 kg. It is more efficient, but also more dangerous when its wearer takes a tumble. The helmet attached to the cuirass is shaped like a frog's mouth, leaving very restricted outlook for the fighter who has to peep through a narrow slit. To look in front of him, the knight has to bend forward.

Shaffron

Armour for horses appears as of the 14th century. The shaffron protects the horse's head from the ears to the nares and is equipped with both blinders and a hinged part covering the neck. The shaffron often sports a rondel with pin. This defensive pin, some 20 cm in length, is meant to deflect lance strokes. The shaffron can be topped with feathers in the rider's colours.

The horse's protection is completed with a body armour covering back and flanks, resting on a piece of heavy fabric to prevent injuring the horse. Another plate covers the neck and is linked to the shaffron. Only the horse's belly and legs are left bare.

To be able to carry a man wearing armour, the horse has to be quite sturdy. It usually is a crossbreed between an Arabian stallion and a Brabant, Ardennes or Frisian draught horse.

German armet with bellows visor, 1510-1530

The helmet has to protect the head, the neck and the face, and has to deflect lances, swords or arrows, but at the same time has to provide outlook and be relatively lightweight (some 3 kg).
The first great helms, appearing in the 13th and 14th centuries, are cylindrical, first with flat and later with conical apexes. They cover the entire head. However, they eventually cannot withstand the ever-heavier swords and maces.
By the late 14th century bascinets replace great helms on the battlefields. These iron headdresses, derived from the skullcaps worn underneath the great helm or even the hat, are round or conical in shape and equipped with a neck cover. A mobile visor with breathing holes protects the face and can be lifted when its wearer is not engaged in battle. The movement made to lift the visor led to the military salute we know today.
The armet replaces the bascinet in the 15th century. It is lighter and fits the head more closely. It consists of a skullcap, a neck cover, a face guard opening laterally at cheek level and a pointed or domed "nose".
The crest on top of the headdress displays feathers, aigrettes, wooden pennants or a thin metal leaf the shape of which identifies the wearer.

Houndskull bascinet, 1390-1410

The conical visor improves ventilation. It can be lifted as it is hinged on both sides.
The pointed shape in the back is accentuated to deflect sword and mace strokes. This helmet is worn during the 100-Year War (1337-1453).

The tour takes the visitor to the First World War Gallery.

14-18 Gallery

Gallery introduction
The First World War is the first all-encompassing conflict mobilizing servicemen, civilians, industry and society as a whole. Initially based on 19th century tactics it eventually turns into a modern war with innovative technologies that will display their full capacities during the Second World War. Gas, tanks and flame-throwers take fighters by surprise. Terrified soldiers have to find protective measures and equipment.

Breathing device for fire fighters

This is a smoke mask of the Draeger type. Insulating respiratory devices make it possible to enter toxic and asphyxiating spaces such as galleries dug to lay mines underneath enemy trenches.

Asbestos hood for flame-throwers, Italian army

The Germans first use the flame-thrower in Verdun in February 1916. They then deploy it against the British in July 1916, causing much panic in the opponents' lines. However, the weapon is abandoned because of its many defects. As it has to be handled by soldiers on foot, it can only be used from a trench. Moreover, the barbaric contraption is cumbersome, very difficult to handle and only has a limited range. Flame-thrower operators are incredibly vulnerable and only very rarely taken prisoner, especially when their targets survive. The British and the French develop their own systems but discontinue their usage. The German army deploys it all through the war, usually in groups of six.

Gasmasks

The Germans first use gas on 22 April 1915 against the French and Canadian troops at Steenstrate-Poelkapelle near Ypres..

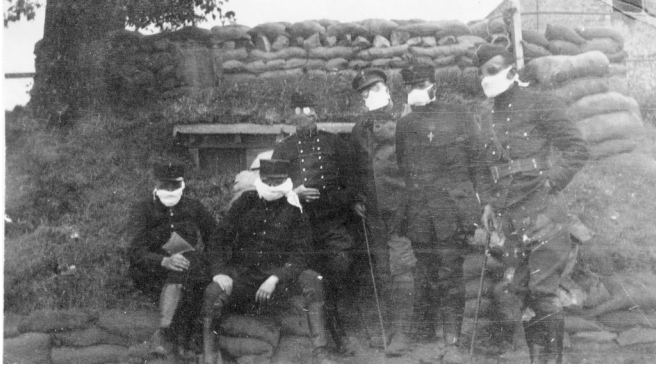
Gasmask for dogs

Dogs are widely used in the army, on battlefields, in the trenches or in the rear lines. They perform various tasks: the artillery dog draws machineguns, in the tradition of Belgian draught dogs pulling milkmen's or greengrocers' carts; the messenger dog carries messages from and to the front line or between various positions and even crosses enemy territory if needed; the telegraph dog with its heavy reel of telephone wire runs the length of the trenches, crawls under barbed wire fences and worms his way through shootings and bombings in order to re-establish disrupted communication lines; the sanitary dog locates victims, indicates their positions to the stretcher-bearers and pulls stretchers; the guard dog silently growls or takes a menacing attitude (without barking) when the enemy approaches; the rat dog, finally, is the soldier's friend and chases rats in the trenches.

Gasmask for horses

During the war of movement, before the war is bogged down in trench warfare, countless horses are used for transporting men and artillery pieces, as well as in the cavalry.

Horses endure a lot during the war. These delicate animals require quite some attention: they need to be shod and have to be groomed daily, they need lots of fodder early in the morning or late at night (in an ideal situation): 6 kg of oats, several kilos of hay, bran once a week and most of all regular drinks of water. Just like the soldiers they are wounded by projectiles, choked by gasses and have to endure the terrible noise of explosions. The deplorable circumstances cause injuries and diseases. Because of cold and humidity, they suffer from respiratory illnesses.



Gasmasks

These first gas attacks take the soldiers by surprise and the men protect themselves with whatever is at hand: socks or handkerchiefs soaked in water or urine and wet straw are held against the nose.

Tampon P (standard polyvalent protection) with white bag

As of August 1915-February 1916 the Belgian army uses a gauze envelope stuffed with oakum or cotton-wool soaked in hyposulfite and sodium carbonate to be attached in the neck and covering mouth and nose.

The first complete Belgian gasmask shielding eyes and airways appears in the first half of 1916. It protects against bromine and chlorine vapours. The cotton-wool tampon always has to be infused with hyposulfite or carbonate. However, insulating powers are negligible and gas penetrates everywhere

The **ARS** (**appareil respiratoire special or special respiratory device**) appears in 1917. It runs on an active charcoal filter (wood charred at 800°C, crushed, charred a second time and impregnated with dextrin). Masks have to be donned as soon as the alarm sounds, without first inhaling toxic fumes.

To be informed of a gas attack the soldiers sometimes keep caged canaries in the trenches. Even the smallest concentrations of gas are lethal for these very sensitive little birds. The men in that way know the enemy launched a gas attack.

The optimization of gasmasks reduces death rates. 40% of soldiers are intoxicated in April 1915. The following month, this number falls to 25%, to 6% in 1916 and to 2,5% in 1918. In comparison, bullets and grenades claim 28% of all casualties. However, the psychological impact and the fear generated by this treacherous weapon remain enormous.

Water suit

Soldiers serving with military engineering wore this suit to patrol flooded areas and to supervise locks and dykes. They were armed with trench daggers.

“Chainmail” mask for tank crews

The tank was developed to provide the bogged-down trench warfare with a new offensive momentum and to counter machineguns dooming all infantry attacks. The idea was to circulate mobile guns over all terrains, while protecting the crews. Life on board tanks was hard. The men (8 of them in a Mark IV) worked in a tiny overheated cabin, in deafening noise and amidst fuel vapours. They were forced to wear protective masks. The steel mask, with cut-outs for the eyes, was equipped with a metallic chainmail deflecting metal shards coming off the tank side when that was hit by a projectile.

The tour then passes through the Aviation Hall, stops in front of the area dedicated to the paratroopers before going to the first floor for an encounter with the First World War pilots and planes.

Aviation Hall

Camouflage outfit for a paratrooper

The paratrooper wears a ghillie suit, a piece of clothing covered in burlap strips, fabric or twine made to look like foliage or shrubbery. This camouflage breaks up the silhouette and moves in the wind like real leaves. It is often used by sharpshooters.

The word “ghillie” comes from Scots Gaelic (but is a mis-spelling) and refers to dwarf-like creatures able to change into leaves or plants when they need to go into hiding.

Helmet for airplane pilots

In his open cockpit the First World War pilot is exposed to the elements. He faces oxygen shortage, cold and height variations, and is hardly protected. The helmet resembles the one used by motorcyclists. It sometimes is completed with a leather mask and goggles.

Oxygen and communication mask for pilots

Planes fly higher and faster than ever before. Although cockpits are now hermetically closed and are a far cry from the 14-18 open-air balconies or the 40-45 wind-swept fuselages, pilots still have to be protected against cold, lack of oxygen and dizzying accelerations. Equipment once again matches new realities.

Air Force fighter pilots are supplied with Kevlar helmets. These are lightweight and fit the head perfectly, have two visors (a clear one and a tinted one), a chin strap, headsets, an oxygen mask and two valves (inhalation and expiration) for easy breathing. An exact fit is essential, as the face has to be protected when the pilot is forced to activate his ejector seat. est essentiel car en cas d’éjection il assure une bonne protection du visage.

The tour brings the visitor back to the First World War Gallery to pursue the theme of the pilot helmets.

14-18 Gallery

Helmet for a French pilot

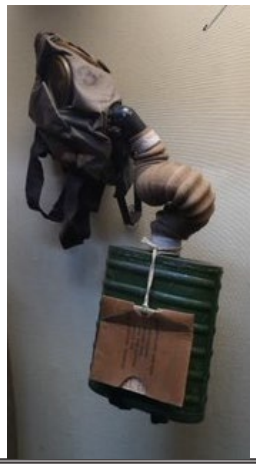
This French pilot wears a Roold helmet. Roold was a Parisian department store that asked inventor M.F. Goutte to develop a protective helmet for pilots in 1910. The helmet was based on colonial helmets, with a double cork layer covered in rubber. The French army adopted it in 1911.
The first pilot helmets had to protect the pilot's head in case of crash or hard landing, when he was thrown from the plane or hit his head against the plane's structure.
As airplanes increased their speeds, altitudes and flight times the pilot's face had to be protected against cold, wind, oil spills or even flames. The helmet fitted the head more snugly and could be equipped with a headset and an oxygen mask.
For high-altitude flights (bombings, photographic recce) the equipment could be completed with a respiratory device connected to a compressor. Some armies supplied their pilots with oxygen masks kitted out with headsets, thus enabling wireless communication between crewmembers or with ground teams.

Helmets and protections for British pilots

"Alfred Dunhill" helmet. Some luxury brands contributed to the war effort. The "Alfred Dunhill" helmet, used by British pilots during the First World War, is such an example. The luxury brand, specialized in leather goods and men's fashion, created items for automobile drivers (gloves, goggles, picnic baskets, etc.) and quite naturally applied its expertise and know-how to aviation, the new fashionable sport. As the first aeroplane pilots encountered the same conditions as motorcyclists they obtained their gear from the same suppliers.

The **"Warren" helmet**, created by W.T. Warren, was based on the French Roold model and was manufactured by Tautz & Co, a London-based sports clothing specialist.

American gasmask



When the United States enter the war they do not have gasmasks. They initially use the French model, before adopting the British Small Box Respirator. In 1918 the Americans start producing their own models, with however some optimizations to increase comfort.

This fabric mask with glass or resin eye shields is equipped with a valve-regulated tube to be placed on the mouth. The nose is pinched in order to force breathing through the mouth. The tube is linked to a box containing charcoal made from fruit kernels or nutshells. This charcoal imbibed with a chemical absorbent purifies the air breathed by the soldier.

Protection for fire fighters

American fire fighters use this leather protection since the 19th century. The mask linked to an oxygen cylinder worn on the back protects the fire fighters against gas, smoke and debris. Mica disks shield the eyes from the heat.

The tour leaves the First World War Gallery for the Bordiau Gallery, where the inter-war period and the Second World War are illustrated. The next masks are on display on the second floor.

Inter-war period

Gallery introduction
This era linking two world wars is characterized by fears engendered by the new technologies invented during the First World War. Fear of gas attacks haunts both soldiers and civilians. In the 20s and 30s the progress booked by aviation, and particularly by bombers, is such that aerial attacks on large cities are not imaginary.

Gas equipment for babies

Combat gasses appear during the First World War. Their psychological impact is huge and feeds the authorities' fears. Protection of both people and animals (picture of the prototype of a gasmask for horses) becomes a priority. The British government supplies the public with gasmasks as of 1938. Even babies are included in the distribution. This mask is conceived for children up till the age of two. It covers the entire body and only leaves the legs bare. The bellows with filter, placed to the side, have to be activated to supply the baby with air.

Passive defence: protective helmet for fire fighters

The fear of combat gas, inherited from the First World War, generates the most pessimistic hypotheses: if gas bombs are dropped, civilian population will be annihilated and by a chain reaction the entire human race will be destroyed. People everywhere are informed of this danger and taught how to protect themselves.

In the framework of passive defence ensured by civilians protective gear and gasmasks are distributed in huge quantities. Shelters are built in all cities. Civilians are trained to assist the first aid teams.

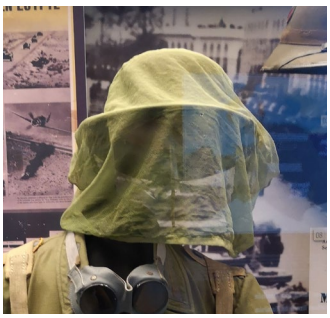
The visit then continues in the galleries dedicated to the Second World War, spread over two floors.

Second World War

Gallery introduction

The various operation theatres (sea, air, desert, jungle,…) require an evolution not only in combat

techniques but also in the equipment provided for the fighters. Our galleries contain several examples of this principle. The war not only implies millions of fighters but also crushes civilians who have to be very inventive to survive the chaos.



Afrikakorps mosquito nets

The clouds of desert mosquitos spread diseases that affect countless soldiers. The German army supplies its men with mosquito net helmets and distributes insect repellent ointments.

Spark resistant hoods Royal Navy

To shield themselves from wind, cold and water seamen wear water repellent gear consisting of leather trousers, gloves, slickers and a hat with flaps protecting forehead and neck. Artillerists wear hoods with nose protection against sparks, as well as masks and gloves. These items are made from fireproof cotton. Initially designed for artillerists only, the equipment eventually spreads to all naval officers and seamen as of 1944.

Various kits for airplane pilots

The Second World War hugely widens the importance of aviation as a combat weapon. All camps carry out strategic bombings on defined military and economic targets to disrupt the war economy, as well as terror bombings on cities to demoralize populations.

The equipment worn by pilots and other airplane crews has to protect against intense cold (-30°C at the cruising altitude of 7 to 10,000 m) and lack of oxygen. Leather helmets supply oxygen over the entire duration of the operation (ranging from 8 to 12 h). Crewmembers can communicate between themselves or with ground personnel through integrated headsets. To ensure a perfect fit for the oxygen masks pilots have to shave carefully.

Gasmask for German civilians

With the First World War still very much in mind Germany also fears gas attacks. As they are concerned about aerial gas attacks German authorities supply people with gasmasks as of 1937. In September 1938 a "Mask Week" is organized throughout the Reich to sensitize populations about the use of protection. 45 million civilian masks are distributed and come in three sizes (men, women and children). They are easy and cheap to produce but less efficient than the military models. They are indeed only supposed to protect the wearers for some twenty minutes, a timespan deemed sufficient to reach the nearest shelter. They are however useless against firebombs that "suck up" oxygen.

Meharist soldier, French army

This soldier with the indigenous desert (Sahara) troops wears the typical Tuareg headdress. The long veil (some 6 to 15 m) is wrapped around the head to protect the face against glare, hot winds and sand. Only the eyes are left uncovered.

Back on the first floor the theme of occupied Belgium is broached.

Gasmasks for children

The fear of gas attacks inherited from the First World War pushes all European governments to supply their populations with gasmasks. In Great Britain people are supposed to carry their gasmasks wherever they go. To make this quite constricting protection more attractive for children the mask comes in cartoon colours, with Mickey Mouse as the main character.

German jet pilot (Me 262)

The Messerschmitt 262 is a bomber-fighter with jet engines deployed by the end of the war. Its unmatched speed (950 km/h) turns it into a dreaded opponent for the Allies. However, this speed also proves a handicap for the German pilots who are not equipped with adequate suits able to withstand abrupt acceleration (a.k.a. the G-suit). The required test and training flights cannot be performed because of fuel shortages. Roll-out comes too late in the war to deprive the Allies of their supremacy in the skies.

Diverted objects

In April 1945 Berlin is destroyed by allied bombings and fighting. Civilians have to survive in the ruins, without running water, electricity or gas. Daily life becomes a trial requiring imagination, inventiveness and resourcefulness. Military equipment is recuperated and turned into everyday utensils. The filter of a civilian gasmask is for instance transformed into a support and reservoir for a petrol lamp.

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