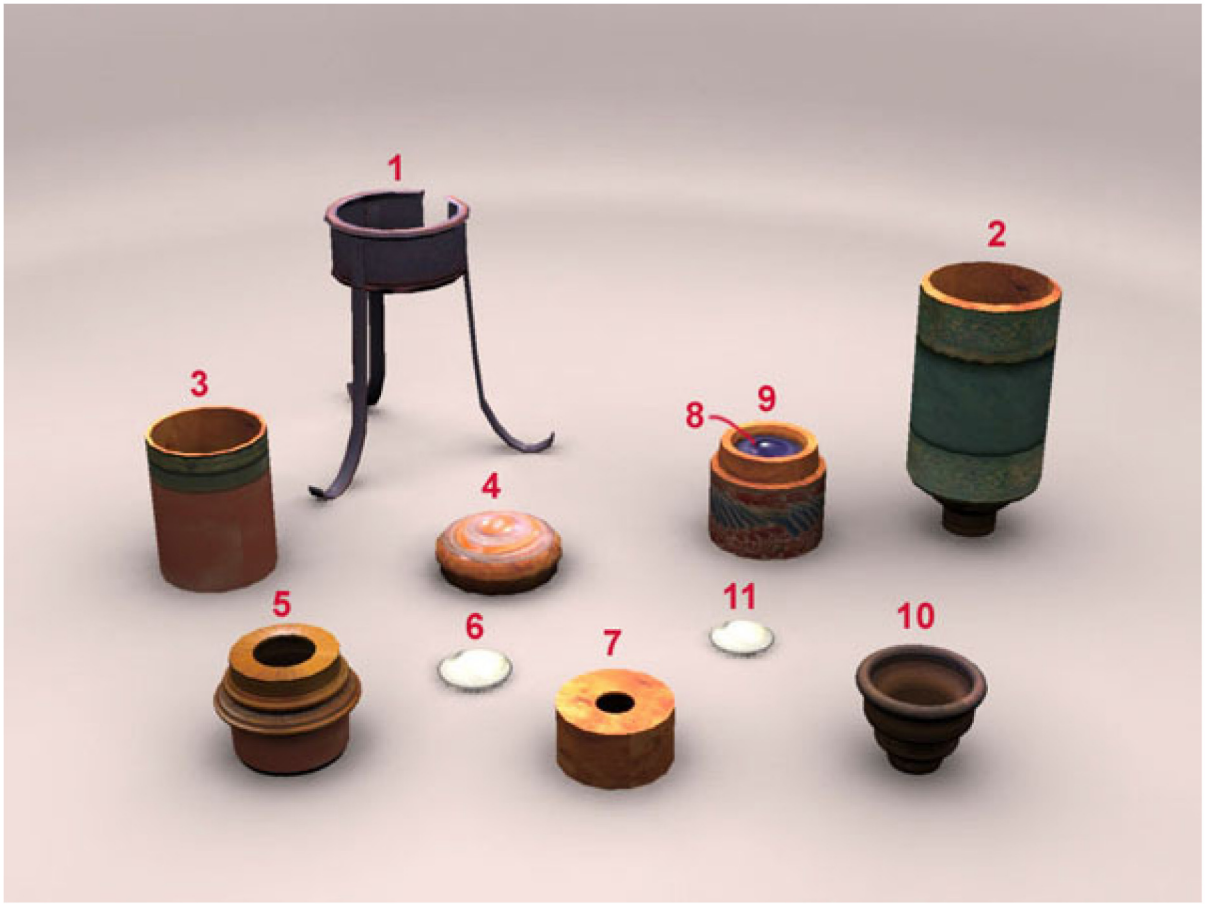
ISTITUTO E MUSEO
DI STORIA DELLA SCIENZA

## The instrument




**Components**

1 

**Support**

The iron support consists of a ring with three curved legs fixed to it. The body-tube can slide into the ring, allowing "fine" focusing. In addition, there is a certain clearance on the nails fastening one of the legs to the ring, allowing the objective to be moved briefly nearer to or further away from the object to obtain a clearer image.

2 

**Body-tube**

The main optical tube, inserted in the support, is the largest tube. Made of cardboard, it is covered in vellum decorated with gold tooling. It shows signs of use and bears markings for positioning it exactly on the support, thus fixing the distance between objective and object. The retractable tube and the cylinder housing the field lens slide inside it.

**Retractable tube**

The retractable optical tube slides inside the body-tube, with a leather ring serving as stop. Screwed

3 

onto the end is the eyepiece holder, with a wooden diaphragm inside. Some original inked markings on the tube facilitate coarse focusing, with an ample but poorly sensitive traverse, "without having to seek the point with fatigue".

4 

**Eyepiece guard**

Boxwood cap that screws onto the outside of the eyepiece holder. It serves to protect the lens from dust. The instrument was fitted with a similar protective cap on the objective, now missing.

5 

**Eyepiece holder**

Boxwood cap with internal and external thread. The internal thread serves to fasten the eyepiece holder to the retractable optical tube, while the protective cap screws onto the external one. The lens is inserted in the eyepiece holder, positioned 6 mm from the outer edge.

6 

**Eyepiece**

The eyepiece is the lens (or system of lenses) through which the eye observes the image formed by the objective. In its simplest form, the eyepiece consists of a single converging lens of short focal length. This microscope has a biconvex lens with some bubbles in the glass.

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**Diaphragm**

Wooden diaphragm with 16-mm hole. It is fixed to a light cardboard cylinder; the latter, which can be moved, has a travel of 40 mm. Next to the objective is another diaphragm with a 3-mm hole.

8 

**Field lens**

The field lens is used to augment the visual field. This microscope has a biconvex lens placed at a distance of 70 mm from the eyepiece and inserted in a small mobile cylinder. The glass is amber-green, with air bubbles: it has a ground edge that is chipped.

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**Field lens cylinder**

The mobile cylinder that houses the field lens rests on the bottom of the body-tube. It can be used correctly in one direction only, that is, with the section bearing the lens turned toward the eyepiece. It can also be removed and used alone, as a simple microscope.

**Nosepiece**

10 

Made of boxwood, the nosepiece is shaped like an upside-down truncated cone. The larger base serves as support for the cylinder housing the field lens. Like the eyepiece holder, the nosepiece was fitted with a protective cap, now missing.

**Objective**

11 

The objective is the lens positioned closest to the object observed, of which it forms a magnified image. The objective in this microscope consists of a biconvex lens whose glass has a high degree of transparency and few flaws; the edge is ground and is slightly chipped in places.