

Collecting Historic ENT Instruments*

Wolf Lübbers, Hannover

The important thing in collecting is:

Knowing more about instruments than dealers do in general.

Collect and studying old instrument catalogs and secondary literature.

Since 1912, we have four generations of ENT doctors in our family :

all of them were and still are collectors. And since we always kept to the old English saying,

“Never throw anything away,” we were in the meantime able to build a small, privately held, museum in the basement of our house in Hannover Herrenhausen.



A small selection of historical instruments from the Author´s collection

Contacting the author:
Dr.med.Wolf Lübbers
Ringelnatzweg 2
30419 Hannover
Germany
w.luebbers@dr-luebbers.de

**Abstract of a Lecture given by Dr.Lübbers in Heidelberg on the 9th Meeting of the International Society of History of Otorhinolaryngology, September 9th 2015*

Following instruments are ear speculums invented by **Jean Marc Gaspar Itard (1774-1838)** and **Wilhelm Kramer(1801-1875)**



Jean Marc Gaspar Itard



Itard's speculum by Charrier



Wilhelm Kramer



Kramer's speculum

The history of the ear examination started with a “*shoehorn*” model which was followed by general one-, bi- or even trivalve specula used for all cavities of the human body. The first scientific ear examinations were conducted with bivalve specula. We have two well-known models. The first one is by Itard, the other one by Kramer. But we do not know who came first. The French pretends it was Itard, the Germans affirm it was Kramer.

Some pictures of the Itard speculum are round in the old catalogs. Itard’s is very small, curvier and not so handy.

Kramer constructed his own “Ear Speculum” and left us the “Kramer Speculum”, the mother of all bivalve nasal specula as used today in a modification of Hartmanns Speculum.

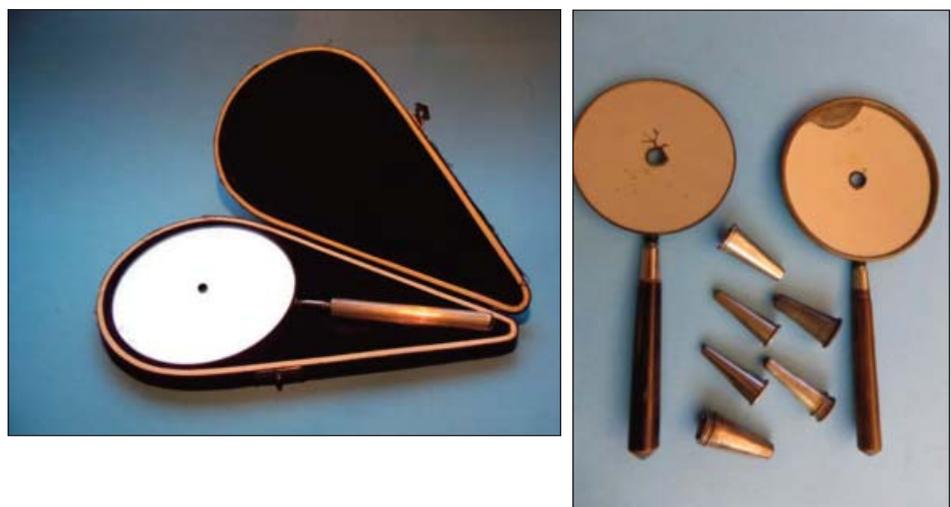
Anton von Trölsch

The next item is the reflecting mirror by Anton von Trölsch (1829-1890). However, this is not the first of its kind: Trölsch did not know that **Hofmann** of Burgsteinfurt, close to Münster had already invented a reflecting mirror with the same purpose in 1841. But since he had not read Hofmann’s publication, he reinvented his own handheld mirror fourteen years later.

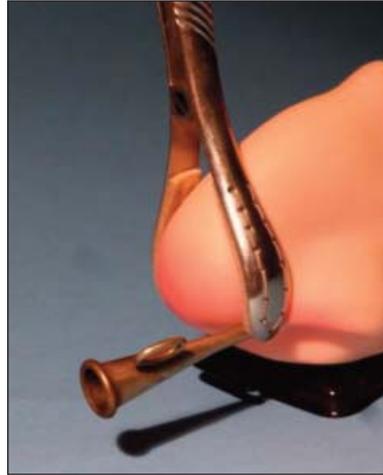


The Hofmann mirror
Würzburg University ENT Clinic

THE TRÖLSCH MIRROR



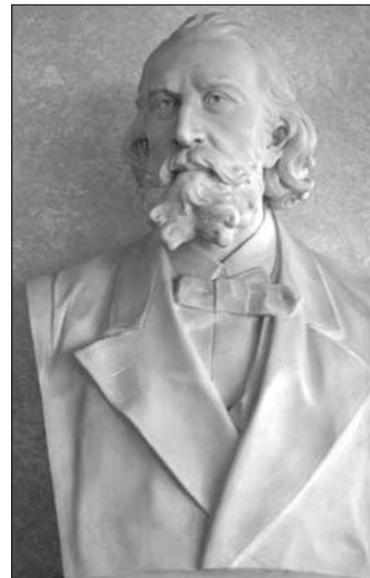
During a stay in Paris in the winter 1855/56, Trölsch presented this “new” concave mirror with a central hole in the middle to reflect sunlight on our area of work. Above two examples of quite early mirrors designed by Trölsch, and the Trölsch earfunnels which he copied from Toynbee.



A set catheter instruments designed by Trörltsch. A peculiar device in this set is the nose clamp (right) to fix a catheter in the nose.



Illustration from a German gazette showing Trörltsch operating a child. Interesting are the instruments at the bottom left of this engraving from 1870: the Trörltsch mirror, a Politzer balloon and Hartmann's ear funnels...

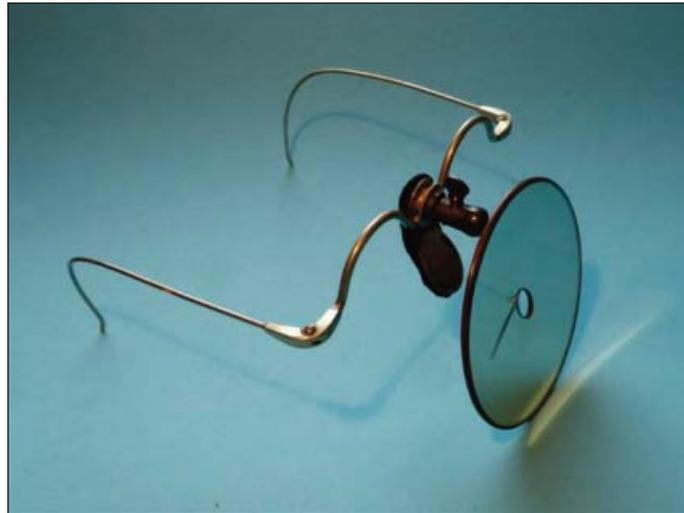


The Trörltsch bust at the Würzburg University ENT Clinic.

Friedrich Semeleder (1832-1901)

Friedrich Semeleder worked in Gumpendorf; Austria, close to Vienna. He became later personal physician of Maximilian von Habsburg and went with him to Mexico. At last, he settled in Cordoba.

Semeleder was a pupil of Czermak in Vienna who had established laryngoscopy as a clinical examination. But Semeleder's main focus of interest was rhinoscopy. He published 1862 *Die Rhinoskopie und ihre Werth für die ärztliche Praxis* (Rhiscopy and its value in medical practice). To use both hands while treating the nose, he mounted a reflector on a pair of glasses. This model was also used by Gruber and Politzer and adopted by Morrel Mackenzie.



The Semeleder reflector

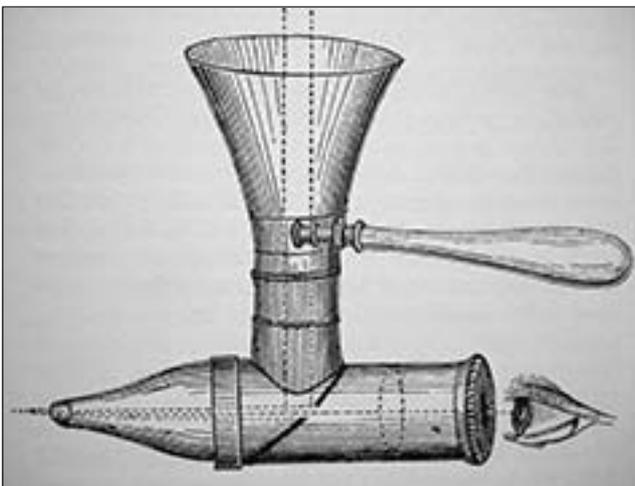
John Brunton (1835-1899)

Brunton invented one of the most important ENT instruments of his time. In England, he is regarded as the inventor of the otoscope, which was then known as the "Brunton Auriskop." In the British science journal "Lancet" from 1865, John Brunton pointed out, that he was dissatisfied with the present possibilities of otological diagnosis.

Brunton's instrument consists of a brass tube. At its one end, a funnel speculum can be inserted. At the other end, there is an eyepiece with a low magnification lens. The eyepiece can be turned to focus the object. In the tube itself, a perforated concave mirror is installed at an angle of 45 degrees. In a right angle to the instrument's body, a funnel of polished silver is used for collecting the light so that it falls on the concave mirror. There, the light rays are reflected and bundled and directed into the ear.

The design is so simple because Brunton did not even try to integrate any artificial light sources (for example a candleholder). Brunton himself praised its universal capability and indicated that the instrument could also be used for the inspection of the nose.

For many years Brunton's otoscope was the standard instrument for ear examination in England and on the European continent. Despite all the criticism, the Brunton otoscope was a best seller, especially in England. The silver items are hallmarked according to the rule and are decorated with the royal coat of arms of Scotland and England. The whole instrument came along with three or four different other ear funnels in a coated wooden case, which was lined with fine velvet. And by the way, you can still use it today, in sunlight of course.



Way of light in Brunton's instrument



In practice

*Remark in regard of the speculums used in Britain and in Continental Europe:
 Most, but not all British speculums are oval and except a few, most other speculums from other countries are round. There too there are very few exceptions.
 There exist also very few speculums which ends are cut in oblique. A specific reason for these different forms is unknown, except maybe that some practitioners believed an oval end would better fit the aural canal.*

Friedrich Weber-Liel (1832-)

Weber-Liel was a student of August Lucae and became 1884 Professor for Otology in Jena. A position he already gave up a year later for health reasons. Weber-Liel founded 1867 with Voltolini, Gruber and Ruedinger the journal *Monatschrift für Ohrenheilkunde* in which journal he published countless papers of which particularly an important one about tenotomy of the tensor tympani muscle. Weber-Liel was the first to perform this operation. He also authored 1873 a monograph titled *Über das Wesen und Heilbarkeit der häufigsten Form progressiver Schwerhörigkeit*.

Weber-Liel designed a peculiar, beautiful otoscope called “era microscope”. But except himself near no one was able to use it.



The Weber-Liel otoscope



Johann Constantin August Lucae (1835-1911)

Lucae was a German physician and otologist. A pupil of Trötsch, Toynbee, and Virchow he became later, in 1871, the first Professor of Otology at the Berlin University and 1874 Director of the University-Policlinic for Otology and 1881 director of the Royal University for Diseases of the Ear.



August Lucae

Beside his admirable work as a doctor, he left us some remarkable instruments. We know Lucae especially for his bayonet shaped Paracentese knife and one of the most valuable instruments for all ENT doctors: the “geknöpfte Zerumenhäkchen.” (the buttoned Cerumen hook). Both are still in daily use by ENT doctors. The main work of Lucae was hearing test with tuning forks.

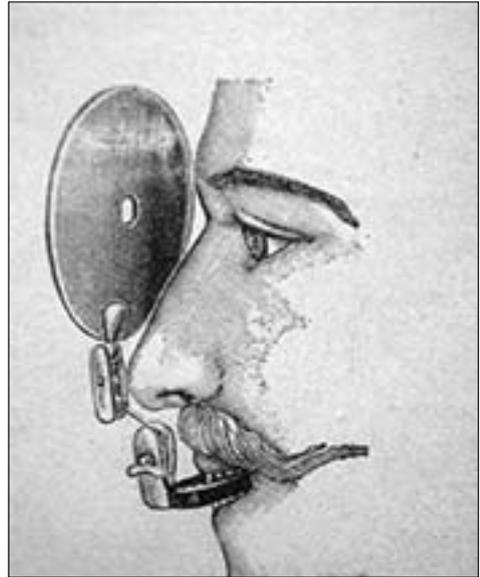


Lucae's tuning fork with a sprung hammer.

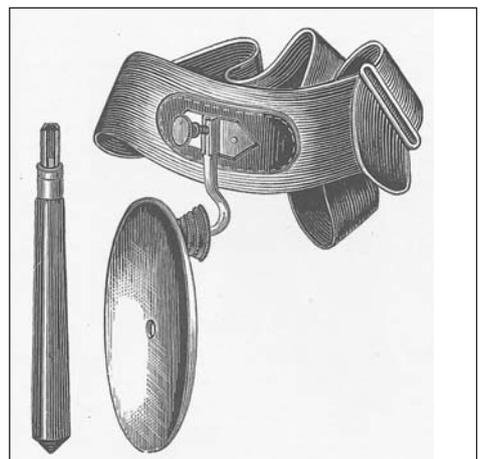
Johann Nepomuk Czermak (1828-1873)

It was the idea of Czermak to hold the mirror with clenched teeth to keep both hands free for examination and treatment. Following the suggestion of August Lucae, an individual dental impression should be made by a dental technician in order to obtain a stable individual splint. This construction has been well documented by pictures in Czermak writings and in old instrument catalogs. C. Zarniko wrote in 1925 in his article: *“I have known surgeons of high rank that use the Lucae mouth holder constantly for surgery, during office hours and outside the house. So it must have benefits, that have remained hidden from me so far, because I find it disgusting. The salivation and speaking with the plate between the teeth affected my feelings in a very unesthetic way ...”*

While Tröltzsch used a handheld mirror, Semeleder the specular mirror, Czermak and Lucae used a mouth piece for fixing the mirror. Apparently it was Türck who first used a forehead reflector. Fortunately, the tooth holder for the reflector is no longer in use.



The tooth holder and how to use it.



The Türk Reflector

THE ELECTRIC DEVICES.

Conrad Clar (1844-1904)

Clar was an Austrian geologist, laryngologist, pulmonologist and a balneologist. Since 1874, he developed different models of his “*illumination apparatus for laryngological investigations,*” and an electric light which was called “*Photophore*” (*illustration*). After these first models of electric lights, the *CLAR 55* was presented by Storz at the World Congress in Konstanz in 1955 with a diameter of 55 mm. The Karl Storz company developed the *CLAR 74* in 1974 which had only 44 mm diameter. As an interesting addition, you see a Brüning’s reflector and a lamp from Denecke.



Clar's Photophore



The *Clar 55* presented by Storz at Konstanz in 1955



A lamp after Denecke



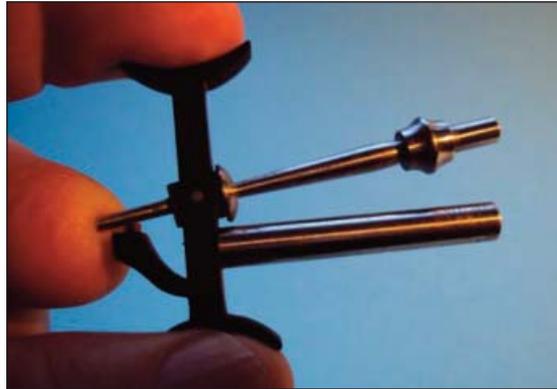
Brüning's reflector



The original CLAR lamp

Adam Politzer (1835-1920)

Politzer is considered to be the father* of Otology on the continent, he was the teacher of generations of otologists, inventor of the Politzer balloon and of a tiny little instrument for hearing tests.



Hearing test instrument
by A. Politzer



A complete set of the famous Politzer Balloon

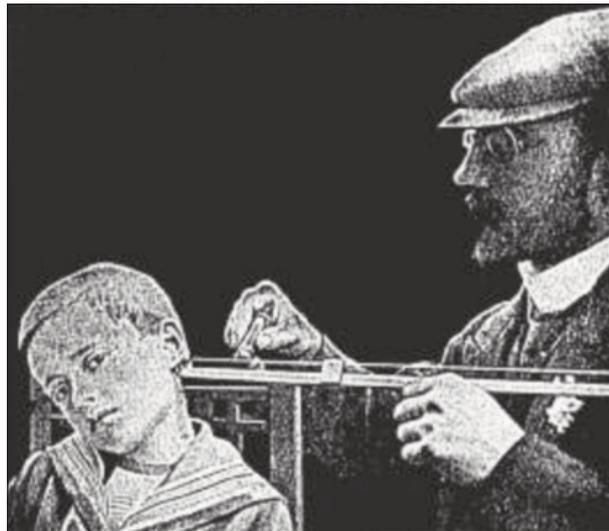
*Albert Mudry: *Adam Politzer-A Life for Otology*, Wayenborgh, Paraguay 2010

Struycken, Hubert J. L. (1869-1950)

Struycken was a Dutch ENT physician who, with Julius Hegener (b.1870) studied the direct way for the photography of the larynx. Interesting here is his mono chord instrument shown below.



Struycken's instrument for hearing tests.



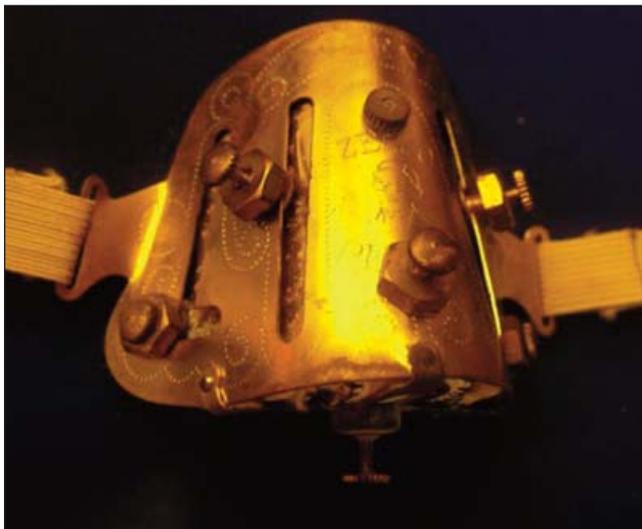
Dr. Struycken's mono cord hearing test instrument in action

RHINOPLASTY

We now move our focus of attention from the ear to the nose. As an ordinary guy (or girl) in the early wild 20th century, one could go with a nose like this (below) to the famous surgeon Jacques Joseph in Berlin or alternatively to the barbershop around the corner and ask for help....and the barber was actually able to help you. He would sell you a Zello-Point-Nose-Former for cheap money and then you became “the man with the golden nose”.



Advertising for the Zello Nose Corrector: 1-8 „before“ and the last one, the ideal „Greek-Roman“ nose....thanks to their device *Zello-Punkt*.



The *Zello-Punkt* nose corrector.



The *Zello-Punkt* nose corrector in use

NOSE RINSING

If your nose hurts or is dry or you suffer from post-surgery symptoms, there are many possibilities to ease the pain. The first is the Arabic way: take water with your hands and suck it through your nose. Then spit the water out of your mouth.

A few methods for nose rinsing



Model after Harke



Model after Frankel

Hugo Beckmann (1861-1907)

Hugo Beckmann was primarily a laryngologist in Berlin where he had his own clinic. Beckmann held a lecture on his method of adenoidectomy in 1893 in the Berlin Medical Society. Four years later he already reported about 5,000 conducted adenoidectomies with his “window knife”. In addition to the indications for surgery as we know today, he was convinced that adenoids were the entry door for child’s tuberculosis. Accordingly, his operation frequency was high. Hugo Beckmann has incidentally also designed the curved nasal speculum, which has prevailed only in the old catalogs in spite of really having an ergonomic shape.



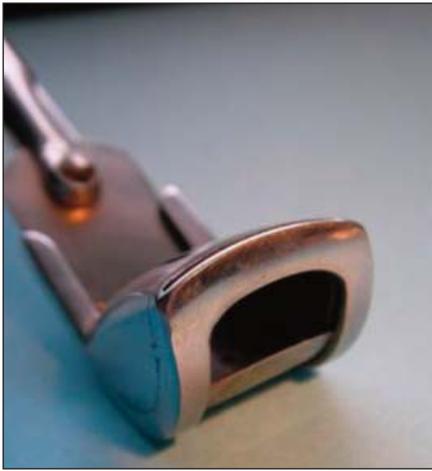
Beckmann's window knives



Beckmann's curved nasal speculum

Burt D. La Force (1869-1947)

It takes some efforts to find traces of Burt D. La Force (1869-1947). There is a two-line note by Emil Meyer in the “International Central Journal for Laryngology, Rhinology and related sciences,” edited by Sir Felix Semon, that on January 14, 1908, a certain Burt La Force has introduced a new “Adenotom” in the Journal of the American Medical Association. (Quote: “This - in three sizes - prepared Adenotom is provided with a device, which prevents, that the cut piece falls down.”) The Adenotom of La Force was extremely popular among the contemporary surgeons, because there was the chance and danger that the resected tissue was swallowed or aspirated by the patient especially when the adenoidectomy was conducted in a sitting position (for example on the lap of a nurse). The cover, where the “guillotine” was placed, was equipped with a collecting filter which proved to be very useful. Until recently, the La Force Adenotom was still listed in every ENT instrument catalog. Today, it is exactly like the tonsillotome by Fahnestock a medical souvenir, that belongs in a cabinet and not a garbage dump.

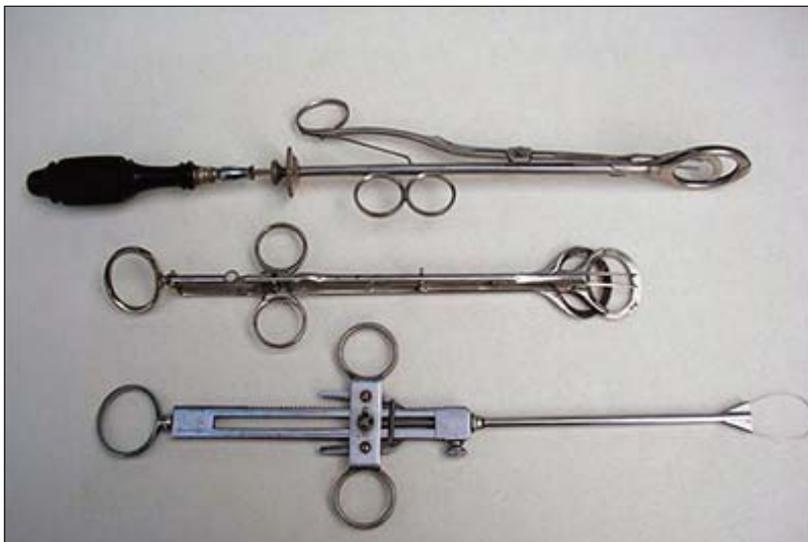


Adenotom of La Force



Tonsillotome

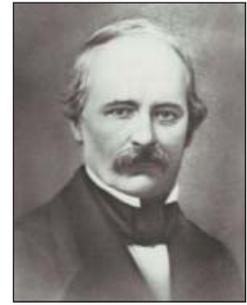
“Still having tonsils is an illness for itself” is a quote from an American throat doctor
It is actually very funny: the wildest surgeons of tonsillectomy come from the Wild West:
Philip Physick (Philadelphia (1768-1837)1828, Fahnestock 1832, Philadelphia, Greenfield Sluder(1865-1928 Washington 1911, only Albert Mathieu (1855-1917) came from France where he had a manufactory for medical instruments.



Tonsillotomes by
Fahnestock, Mathieu and Brünings

Ludwig Türck (1810-1868)

It is said that Türck was the man who was always late with the publication of his papers, but he constructed his own instruments in time. Here you can see an instrument case designed by him personally about 1860.



Ludwig Türck



Set of instruments “in Türck’s style” for laryngoscopic examination

The prestigious Viennese instrument maker Friedrich Reiner offered this instrument set “in the style of Türck” for laryngoscopic examination. It is covered with embossed leather and the instruments are arranged on velvet wooden trays.

The reader may have heard of the “Türcken War” between Türck and Czermak. For Türck it was important that the laryngoscope mirror was oval rather than square with rounded corners as the Czermak mirror. Also the curvature of the handle of the mirror was subject for debate. Türck has designed the mounting of the reflector mirror on a headband. However, a special feature is his “tongue pusher”. What a complicated instrument that in today’s daily routine is replaced by a simple wooden spatula or even a tablespoon.



Türck’s “tongue depressor”

Plaquette issued at the occasion of the first International Congress of Rhino-Laryngology and showing busts of Türck and Czermak

Theodor Simon Flatau

who was a laryngologist in Berlin (1860-1937). He left us this very early electric endoscope, especially to be used when the patient's mouth is shut.....



Flatau's electric endoscope



Votive Offerings

A votive deposit or votive offering is one or more objects displayed or deposited, without the intention of recovery or use, in a sacred place for broadly religious purposes. Such items are a feature of modern and ancient societies and are generally made in order to gain favor with supernatural forces. Some offerings have apparently been made in anticipation of the achievement of a particular wish, but in Western cultures from which documentary evidence survives it has been more typical to wait until the wish has been fulfilled before making the offering, for which the more specific term *ex-voto* may be used. Votive offerings have been described in historical Roman era and Greek sources, although similar acts continue into the present day, for example in traditional Catholic culture¹.



A small selection of votive offerings related to ENT

Notice:

A large collection of weblinks leading to further illustrated informations about the Lübbers Collection (in German language) can be found at www.dr-luebbers.de

¹*Wikipedia*

