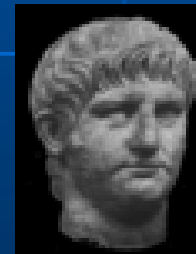


Welcome to the
presentation
of the

History of Glasses and Contact lens

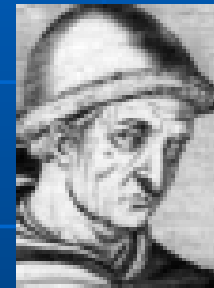
ANCIENT HISTORY

- The history of optics and optical devices begins in ancient Greece.
- But no visual instruments existed at the time of the ancient Egyptians, Greeks, or Romans.
- In the Roman Empire Seneca noted the magnification of objects seen through water-filled transparent vessels.
- The Emperor Nero used an emerald held up to his eye while he watched gladiators fight.
- The Chinese are sometimes given credit for developing spectacles about 2000 years ago.



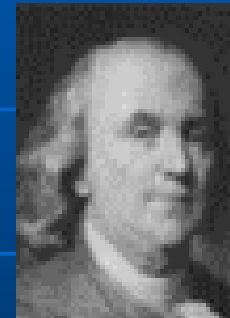
The Middle ages

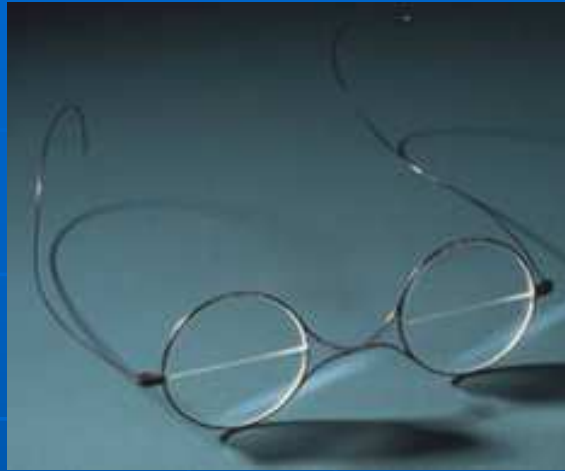
- Around 1000 A. D. the reading stone, what we know as a magnifyingglass, was developed.
- About 1262 Robert Bacon made the first recorded reference to the magnifying properties of lenses.
- The first spectacles were probably made between 1268 and 1289. (their's first inventor probably was Alessandro della Spina)



The Modern period - bifocals

- Johannes Kepler appeared a good correct explanation of their operation until 1604.
- At the same time references about correction at a distance was beginning to appear.
- In the 1780's Benjamin Franklin developed the bifocals.
- One hundred years later a version with the lenses cemented together was invented. Bifocals with the sections fused together were not invented until 1908.

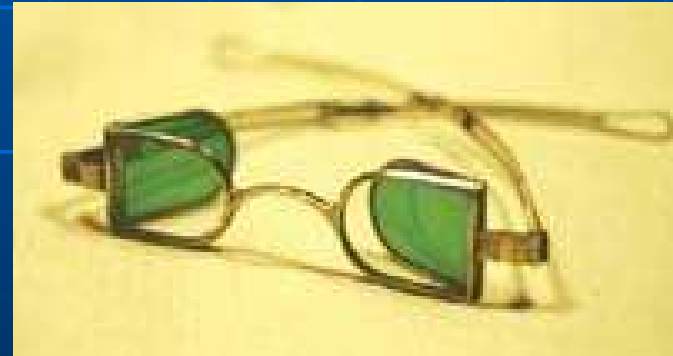




Bifokals in compliance with Benjamen Franklin about 1860.



Bifokals, about 1870.



Bifocals. Combination Spectacles with Folding Lenses, ca. 1820 (silver, glass)

19th and 20th century

- In the late 1800s, Teddy Roosevelt and Calvin Coolidge made trifocals, while cylindrical lenses for astigmatism became available.
- In 1827, George Airy introduced the use of a cylindrical lens to correct astigmatism.
- 20th century brought the big and absolute development of eye's optics – plastic lenses, highindexical, tinged, polycarbonated, multifocal glasses etw.

A few about spectacles frames and fashion

- Problem how to keep glasses on wasn't solved for almost 350 years.
- The frames had various size, shape and firmness.
- At first spectacles had a typical V shape and balanced on the nose.
- Later spectacles makers experimented with ribbons that could be attached to the frames and then looped over the ears.
- In 1730 Edward Scarlett perfected the use of rigid sidepieces that rested atop the ears.

A few about spectacles frames and fashion

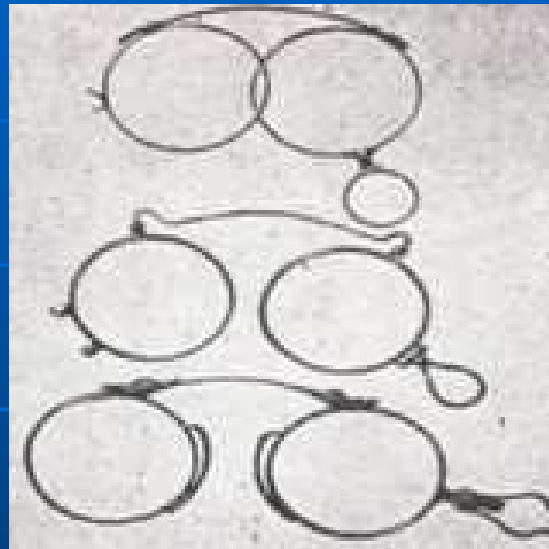
- In the year 1830 monocle occurred in Berlin first time, Glasses on one eye.
- Monocle happened big hit. Later is style pincocle, goggles without spectacle frame.
- Nevertheless, the largest enlargement glasses experienced in design, which we know today- glasses with sides. Beside glasses has contact lens foot-hold, will insert directly into the face of eye.



**Horn, ca. 1500
(horn, glass)**



**Temple Spectacles,
ca. 1750
(iron, glass)**



**Rigid Bridge, ca. 1600
(leather, glass)**



**Lorgnette, ca. 1925
(gold, glass)**



Hard way soft contact lens

- About 1508 Leonardo da Vinci dreamed about primitiv contact lenses but his ideas weren ´t developed.
- The first contact lenses to have been worn were invented by the physiologist Adolf Fick in 1887.
- Plastic kontakt lens was originated by Kevin Tuohy in 1948, too...

First soft contact lens

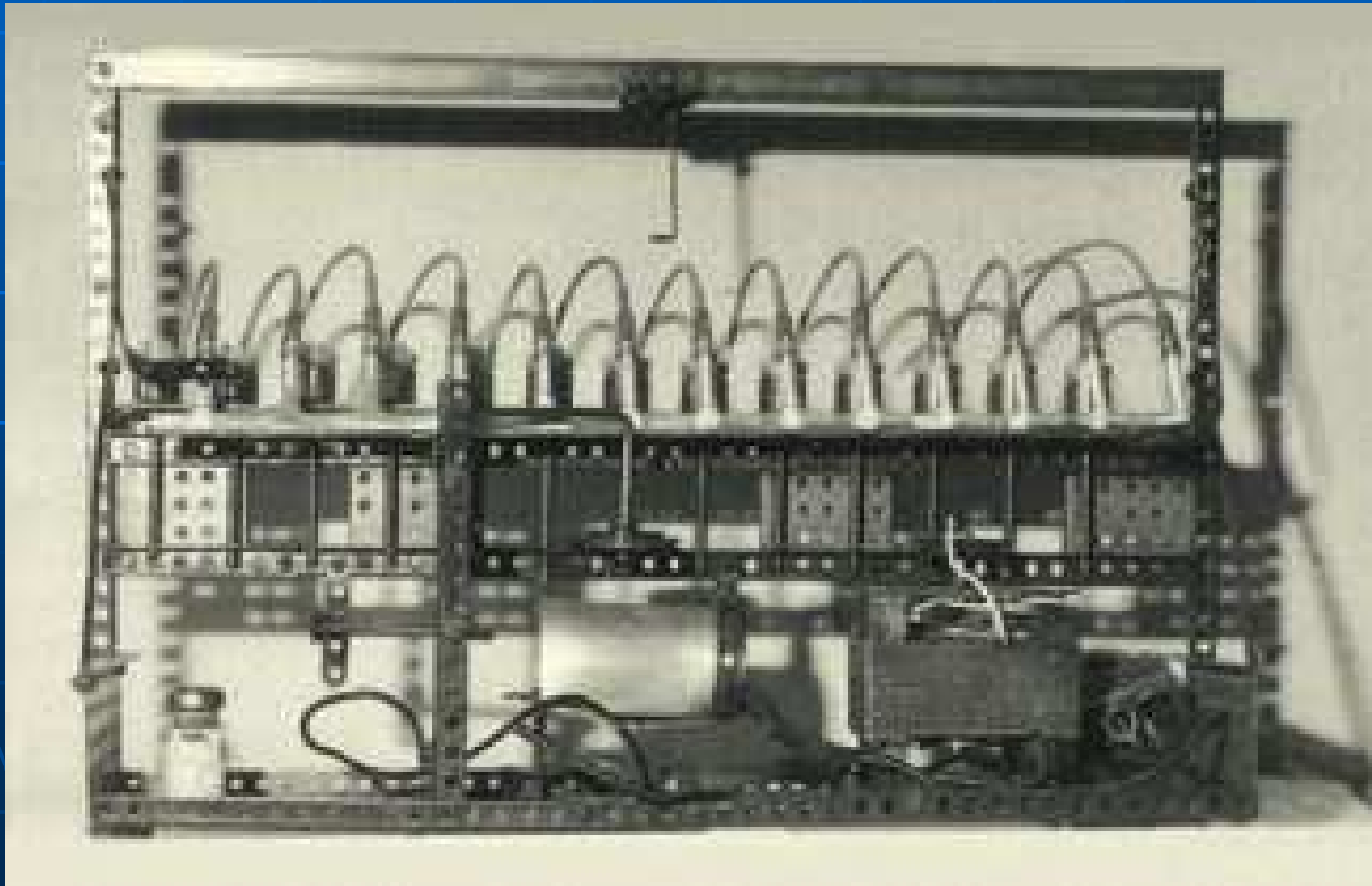
- First contact lenses were made from glass. They weren't comfortable and so they weren't popular.
- Good contact lenses was invented before 50 years by Otto Wichterle. From this material was produced soft contact lens.
- Since 1952 he was specialized at progress hydrophile gels, which used to implantation into eye.

Professor Otto Wichterle



- In 1961 Wichterle patented material and productive engineering.
- Czechoslovak's Academy of sciences sold to the USA patent without Wichterle's mind and authorization.
- Since the time is in progress mass production of contact lens just in the USA.
- By 1964 over 6 million people in the United States were wearing contact lenses, 65% of them female.

First Lensmachine made by
professor Wichterle from set of
blocks „Merkur“



Vocabulary

- Magnification - Zvětšení
- Set of blocks – Stavebnice
- Qualities - Vlastnosti



Do you have any questions?



And Small joke at the End :

Optician: You need glasses.

Patient: But I'm wearing glasses.

Optician: Then I need glasses.

!!Thank you
for your
care !!



