

LIGHT and DARKNESS

This theme following the route bellow studies the OPHTHALMOLOGY and BLINDNESS.

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LIGHT AND DARKNESS

INTRODUCTION

The primitive man was already concerned with the protection of his eyes. When he became sick, he would go to the shaman or priest, which would use plants and many other products to attempt cure.

During millenniums the development of this science was slow, a real advancement happened only in the last century.

Ophthalmology as an independent medical speciality has around one hundred years. The invention of the ophthalmoscope, in 1851, can be considered the beginning of this age.

The recent development have contributed a lot to prevent blindness, but it's still big the number of persons without vision.

Private and governmental institutions have been trying, throughout institutes and professionalizing schools, to integrate blinds into society as useful citizens.

I have made this collection as an homage to the patients I wasn't able to cure, although as an utopia wishing the whole humanity to have "occhiobello".



OCHIOBELLO - ITALY - 1840

CHAPTER I - THE LIGHT

HISTORY OF OPHTHALMOLOGY

Egypt

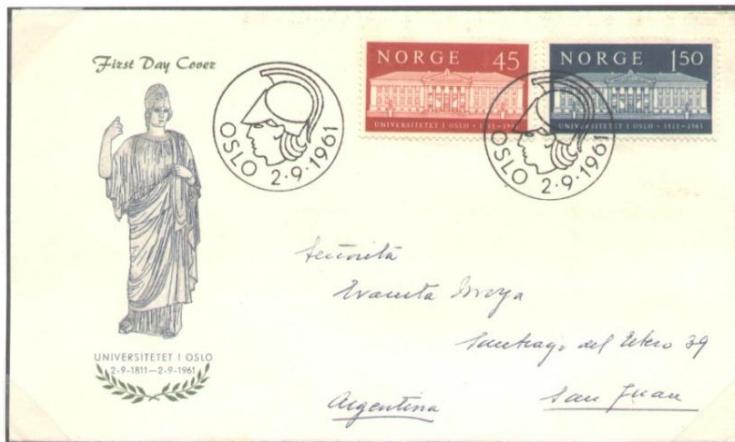


Eye, Mythology and Folklore



The eye of HORUS has become a symbol to protect against eye diseases.

Greece



PALLAS ATHENA also called Pallas Ophthalmic was the protector of the ill eyes and the blinds.



ULYSSES blinded Cyclops POLYPHEMOS by plunging a hot stake in his only eye. He escaped by hiding under the belly of a sheep.



OEDIPUS blinded himself when noticed he had killed his own father and married his mother

HISTORY OF OPHTHALMOLOGY

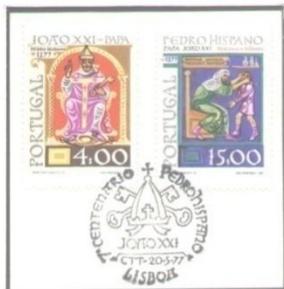
Ophthalmology in Ancient Time



AVICENA (Ibn Sina) (980-1037) enclosed all arabian knowledge about ophthalmology in his book "CANON OF MEDICINE".



AVERROES (Ibn Rusd - 1126 - 98) wrote about optic and suggested that the retina and not the lens was the photoreceptor.



PETRUS HISPANICUS (1210 - 1277) wrote a non original ophthalmological compilation - "LIBER de OCULO".

HISTORY OF OPHTHALMOLOGY

Optic Studious



IBN AL HAITHAM (965-1039) or Al Hazen was the author of the first great scientific treaty about vision.



NICOLAUS CUSANUS (1410 - 64) was the first to propose lenses to correct the refraction deficient.

Ophthalmic Optic



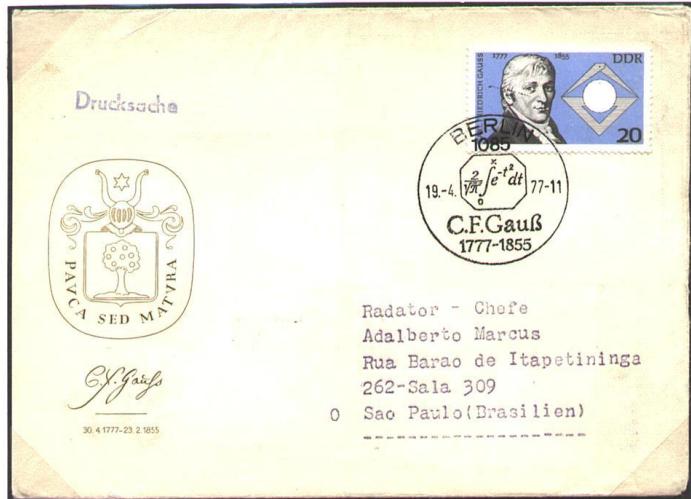
JOHANNES KEPLER (1596 - 1630) studied the eye dioptric System and optic in myopia.



RENE DESCARTE (1596-1650) wrote two books about optic, in which he studied the visual system functionality (The stamp on the left has a wrong inscription)



CARL F. GAUSS (1777 - 1855) introduced the concept of the focal distance of a lenses system.

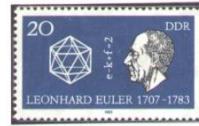


HISTORY OF OPHTHALMOLOGY

Optic Studious



LEONARD EULER (1707 - 83) wrote 3 volumes about optic and described the crystalline as an achromatic lens.



proof



JOSEPH A. F. PLATEAU (1801-83) was one of the first to study physiological optic. In 1843 a bilateral uveitis blinded him.

HISTORY OF OPHTHALMOLOGY

Anatomists and Physiologists



LEONARDO DA VINCI (1452-1519) left us magnificent drawings of the eyes anatomy, collecting the knowledge of his time.



ANDREA VESALIUS (1514 - 1564) proved that the optical nerve hadn't a tubular formation.



MARCELLO MALPIGHII (1628 - 94) studding the hen embryo, he described the optic vesicle.



ANTON VAN LEEUWENHOEK (1632-1723) described the cornea epithelium, the crystalline fibbers and the retina rods and cones.



NIELS STENSEN (1638-1686) - his name was perpetuated in duct of the parotid glands. He described the vortical vein of the eye.



HERMANN BOERHAAVE (1668 - 1738) described the muscular fibbers of the ciliary body.



ALBRECHT VON HALLER (1708-77) described the vascular tunic of choroid and the arterial circle of optical nerve

HISTORY OF OPHTHALMOLOGY

Anatomists and Physiologists



JONS BERZELIUS (1779-1848) swedish chemist analysed the aqueous humour in 1832.



THEODORE MEYNERT (1833-1892) demonstrated the localisation of the visual perception in the occipital cortex and described the cellules that take his name (1872).



WILHELM HIS (1831-1904) histologist and embryologist, wrote "Beitrage zur normalen und pathologischen anatomie der cornea" (1856).



Today's knowledge of the retina histology were essentially solidified by SANTIAGO RAMON Y CAJAL (1852-1934).



JOHANN WOLFGANG VON GOETHE (1749-1832) the famous writer was also interested in the colours sight, having published the treaty - "ZUR FARBENLEHRE" (1880) on the subject.

OCULAR ANATOMY & PHYSIOLOGY



The configuration of the lids is a racial characteristic.



1. cornea
2. anterior chamber
3. lens
4. vitreous body
5. optic nerve
6. retina
7. choroid
8. sclera



Stereoscopic vision, that is, the perception to profundity is due to the simultaneous use of both eyes.

I. caruncle, II. Iris, III. Pupil, IV. conjunctiva

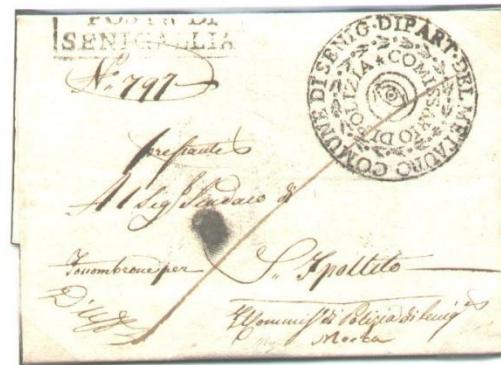


FERMO - Italy - 1811

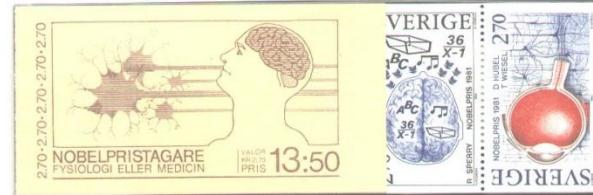
OCULAR ANATOMY & PHYSIOLOGY



RHAZES (850-932) was the first to describe the pupillary reflex to light.



METAURO - Italy - 1813



The 1981 Nobel Prize of Medicine and Physiology was given to R.W.SPERRY, D.H.HUBEL and T.N.WIESEL for their contribution in the comprehension of the cerebral hemispheres functioning and the vision mechanism.

SIGHT AND TRAFFIC



The driver, to be approved in the ophthalmic examination must have good visual acuity, bright adaptation and perception of colors.



Review periodically your ophthalmic examination.

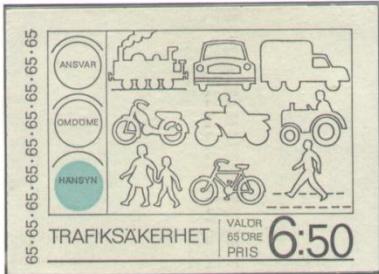


The seat belt is an important protector for your eyes.

SIGHT AND TRAFFIC



Don't obfuscate - prevent accidents.



Color-blinds have trouble in recognizing the color (red/green) used in semaphore.

OPHTHALMOPATHIES

HYPERTENSION



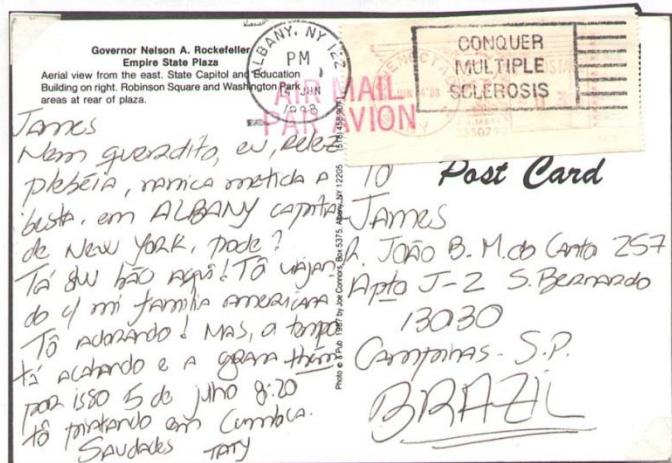
Arterial and intracranial hypertension causes serious retina and optic nerve changes.

DIABETES



Diabetes is the cause of retinopathy which is responsible for many cases of blindness.

MULTIPLE SCLEROSIS



MULTIPLE SCLEROSIS, disease of the nervous system, affects the ocular system in a great number of cases.

OPHTHALMOPATHIES

TRACHOMA



HIDEYO NOGUCHI (1876 - 1928) isolated a microorganism that he called *Bacterium granulomatis*, while studying trachoma.

ACUTE EPIDEMIC CONJUNCTIVITIS



KOCH described, in 1883, the Koch-Weecks bacillus cause of acute epidemic conjunctivitis.

GONORRHEAL EYE INFECTION



CREDE METHOD (1819 - 92) avoids contamination of newborn children eyes by gonorrhea.

GLAUCOMA

AVON GRAEFE, in 1856, introduced the iridectomy as the effective operation for the acute glaucoma.



AMBROISE PARÉ (1510 - 90) called BUPHTHALMOS the congenital glaucoma, one of the main causes of infantile blindness.

CATARACT



HERMANN BOERHAAVE (1668-1738) disseminated knowledge of the cataract being opaque lens.

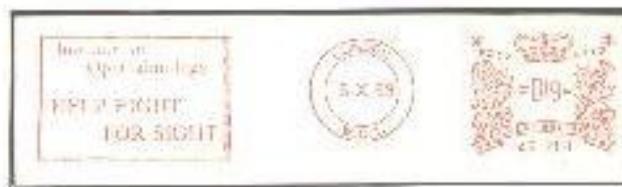
RETINOPATHIES



Indirect ophthalmoscopy is useful in the diagnosis of retinopathies.

OCULAR THERAPEUTIC

OPHTHALMOLOGIC HOSPITAL

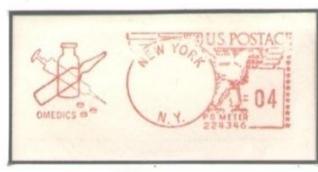
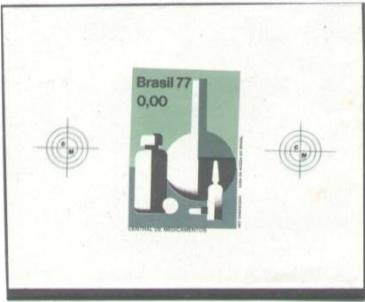


Civilian and military hospitals, specialized clinics and research centers have been contributing to the struggle against blindness all around the world.

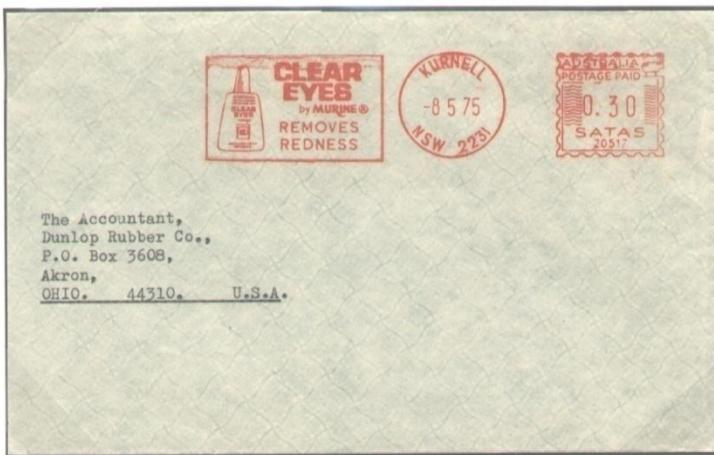
OCULAR THERAPEUTIC

MEDICAL THERAPEUTIC

MEDICAMENTS



The medicaments in ophthalmology are used orally, intramuscularly or locally.



The external use medicine such as collyrium and ophthalmic ointment are widely used.

OCULAR THERAPEUTIC

RADIOThERAPY

PHOTOTHERAPY

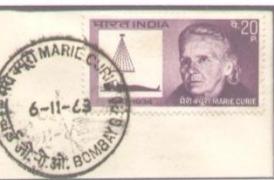


NIELS R. FINSEN (1860 - 1904) was the first to apply phototherapy in ocular therapeutic.

CHEMOTHERAPY



PAUL ERHЛИCH (1854 - 1915) was the introductor of chemotherapeutic drugs in therapeutic.

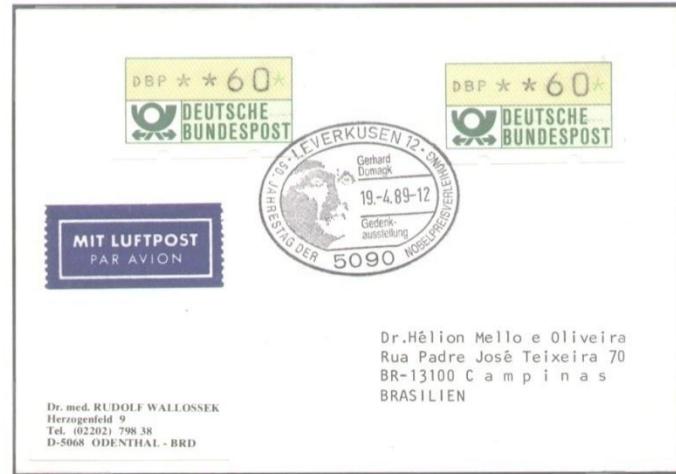


RADIUM discovered by MARIE CURIE (1867 - 1934) is used in the treatment of ocular and palpebral tumors.

ATROPINE



Extracted from *Atropa belladonna*, and used since 19th century, as collyrium.



GERARD DOMAGK (1895-1964) won the 1939 Nobel Prize for Physiology or Medicine for his discovery of the antibacterial effects of PRONTOSIL, the first of the sulfonamide drugs.

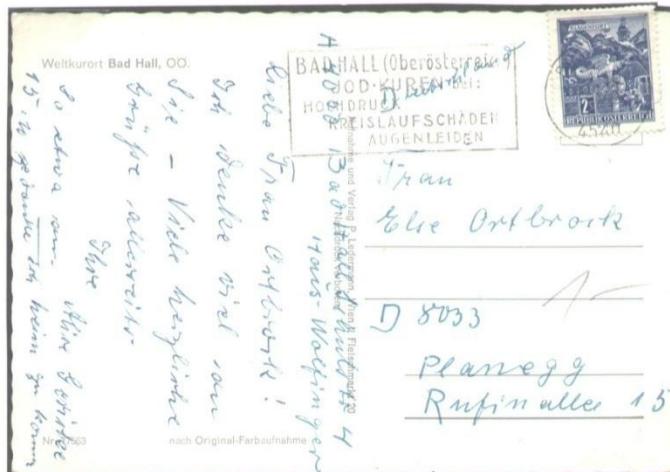
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OCULAR THERAPEUTIC

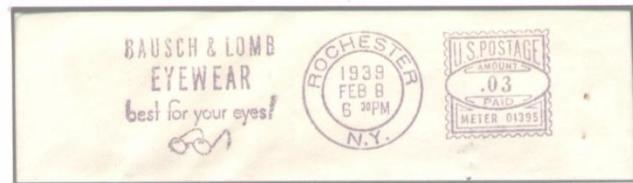
HYDROTHERAPY

Health resorts like BAD HALL, in Germany, have been indicated for treatment of hypertension, circulatory and ocular diseases.



OCULAR THERAPEUTIC

Optic Therapeutic



The gaelic proverb says
"A GOOD LOOKING GLASS
IS THE EYE OF A FRIEND".



OFFICIAL FREE - OFFISIEEL VRY

AIRGRAF sent from
Scotland to South
Africa in 23.7.45

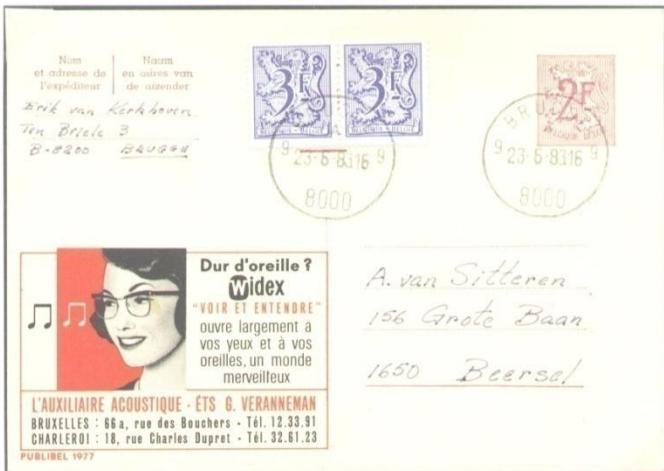
OCULAR THERAPEUTIC



Glasses for presbiopia and hipermetropia were already used in 18th century.

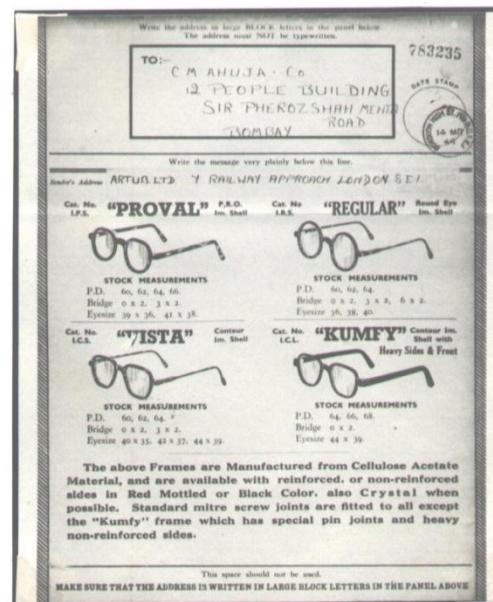
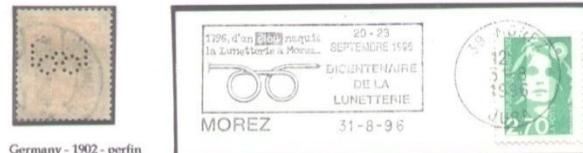


Spectacles are also used as a support for hearing aids.



OCULAR THERAPEUTIC

Optic Therapeutic



Spetacles are made of different materials, but fashion evolution determines their shapes meeting the esthetical preferences.

OCULAR THERAPEUTIC

Optic Therapeutic



The SUN GLASSES filter the inconvenient radiation for the eyes.



OCULAR THERAPEUTIC

Optic Therapeutic

Glasses have been showing a big variety in shape since its invention.

PINCE-NEZ



proof

proof



proof

MONOCLE



Pinche-nez and monocle are reserved for the use of gentlemen.

OCULAR THERAPEUTIC

Optic Therapeutic

LORGNETTE

Optical correction for one or both eyes, assembled on a holder was used by dames.



OCULAR THERAPEUTIC

Optic Therapeutic



The pince-nez and lorgnette give the airs of elegance to gentlemen and ladies in the finish of the XIX century.



OCULAR THERAPEUTIC

Optic Therapeutic

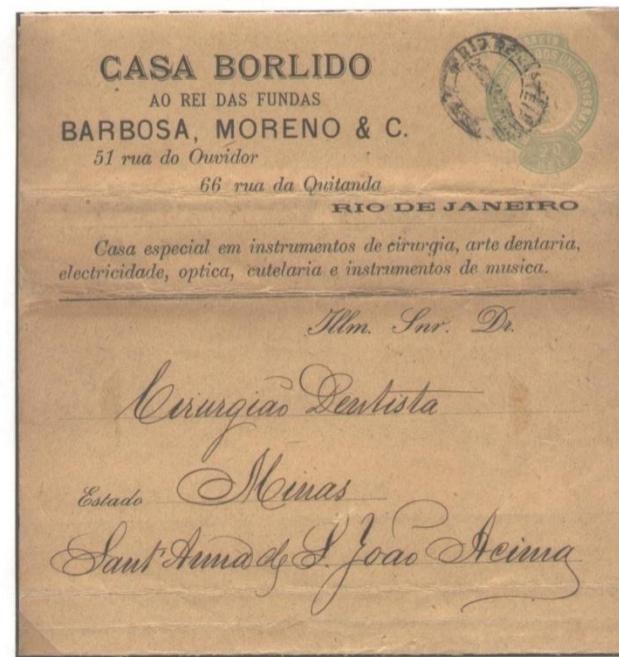


To the OPTIC SHOP is reserved the execution of
glasses prescription given by the ophthalmologists.



OCULAR THERAPEUTIC

Optic Therapeutic

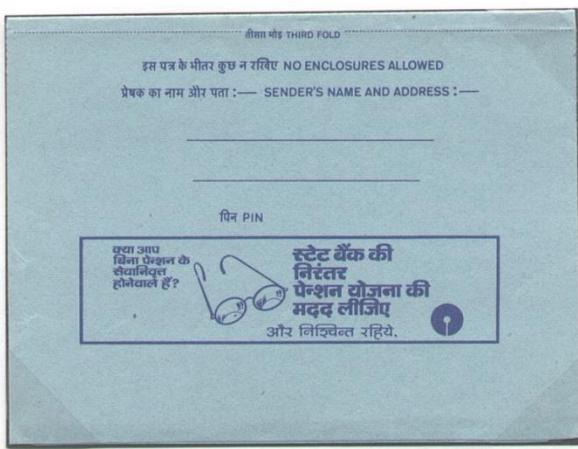


Not always glasses are commercialized in shops exclusively specialized in ophthalmic optic.

OCULAR THERAPEUTIC

Optic Therapeutic

In 1775 BENJAMIN FRANKLIN recommended the person with presbyopia the use of glasses with two focuses - the BIFOCAL LENS.



Postal stationery - India



PROGRESSIVE LENS represent another technological advancement.

OCULAR THERAPEUTIC

Optic Therapeutic

Zachte kontaktlens
Permalens
Lentille de contact souple



Wöhlk-contactlenzen
met afstand-de beste



CONTACT LENS are an alternative for correction of refraction defects.



OCULAR THERAPEUTIC

Surgery Therapeutic

Optical and surgical instruments used by ophthalmic surgeons for their precision, must be manufactured by high technology industry.



PHOTOCOAGULATION with LASER is used for treatment of retinopathies and other ophthalmopathies.



OCULAR THERAPEUTIC

Surgery Therapeutic



J. A. EISENBART (1661 - 1727) was a famous itinerant barber-surgeon who operated hernias, stones of vesicle and cataracts.



Finished surgery, recovering patient.



JACQUES DAIVEL (1696 - 1762) in 1748, demonstrated his technique for extirpation of cataract with corneal incision.



Philanthropical institutions promote campaign for arre-cadation of funds for cataract surgery in poor countries.

OCULAR THERAPEUTIC



proof



The modern surgery of cataract had your origin in the research of Daviel and other ophthalmic surgeons. It is of great importance for prevention of blindness.



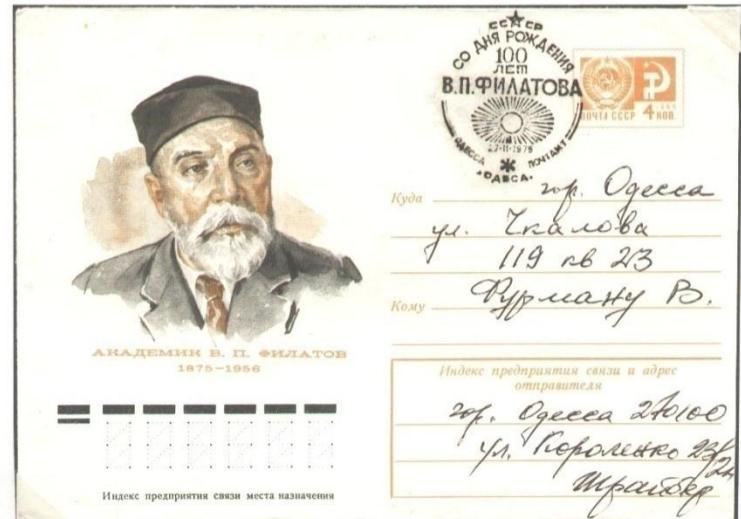
OCULAR THERAPEUTIC

Surgery Therapeutic

Keratoplasty



FILATOV made known the keratoplasty in the thirties and recommend the use of corpses for transplantation.



OCULAR THERAPEUTIC

Surgery Therapeutic

Technical advancement allowed the vitreous surgery, intraocular implant of lens and refractive surgery.



Vitreous cutter



First International Symposium of Intraocular Lens and refractive Surgery - Moscow - 1986.

OPTHALMOLOGISTS



FRANS CORNELIUS DONders (1818-89) one of the greatest figures of modern ophthalmology. He is considered the father of netherlander ophthalmology.



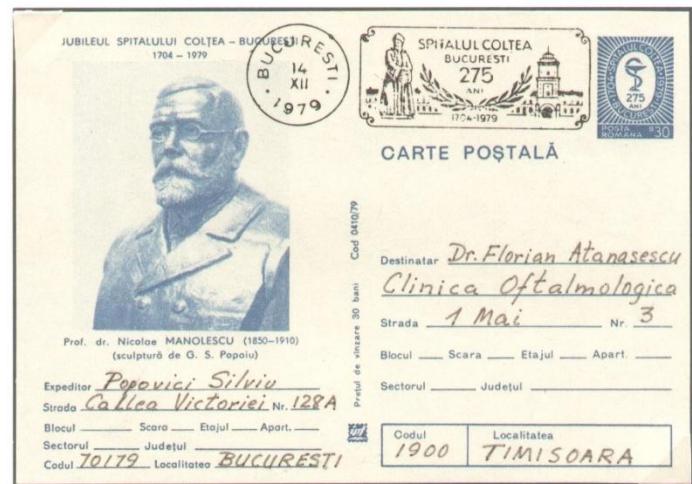
CARLOS J. FINLAY (1833-1915) cuban ophthalmologist. Renowned by his studies about Yellow fever.



LOUIS EMILE JAVAL (1835 - 1907) was a great studious of refraction and squint. He died blind by glaucoma.



CLAUDIO GAMA PINTO (1853 - 1945) was the first teacher of ophthalmology in Lisbon, Portugal.



NICOLAE MANOLESCU (1850-1910) teacher of ophthalmology in Bucharest , Romania.

OPHTHALMOLOGISTS



Postal stationery - Russia - 1977

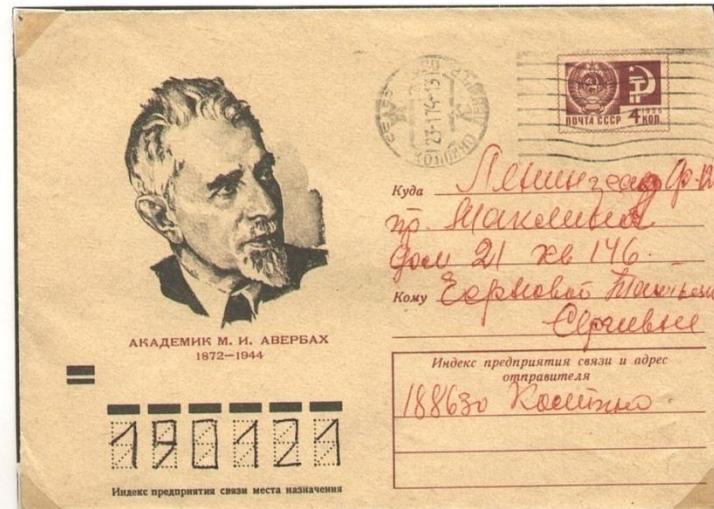
OPHTHALMOLOGISTS



CARL FERDINAND von GRAEFE (1787 - 1840) was member of the Ophthalmologic Clinic of the University of Berlin and editor of the "Journal for Surgery and Ophthalmology". He was father of Albrecht von Graefe.



JULES GONIN (1870 - 1935) revolutionized the knowledge about retina detachment when determined the significance of tear of retina in his etiology.



MICHAIL I. AVERBACH (1872-1944) was the chief of the INSTITUTE of OPHTHALMOLOGY of the Academy of Medical Science in Russia (1935-44). He published various works about ocular surgery.

OPHTHALMOLOGISTS



DAVID LIVINGSTONE (1813-1873) missionary and physician. Frequented the Moorfield Eyes Hospital, (London) Found filarias in the eyes of africans.



ARTHUR CONAN DOYLE (1859-1930) created SHERLOCK HOLMES. He was specialized in ophthalmology in Wien (1890) before becoming a writer.



OPHTHALMOLOGISTS



↓ coil amendment



LUDWIK L. ZAMENHOF (1859 - 1917) ophthalmologist who created the international language - THE ESPERANTO.



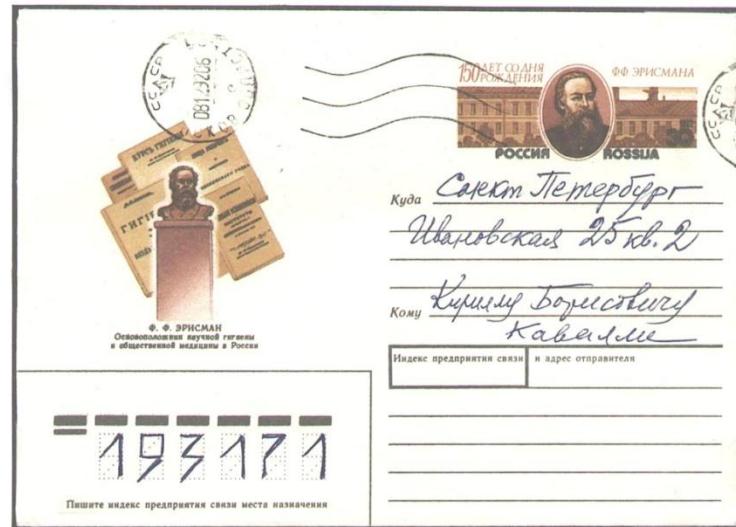
BELISARIO DOMINGUES (1863-1913) was ophthalmologist in Mexico. He was killed for his political activities.



FRITZ PREGL (1869-1930) Nobel Prize of Chemistry in 1923. He was ophthalmologist in Austria, in beginning of his medical career.



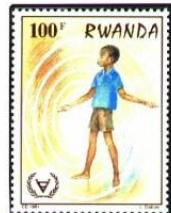
JOSÉ RIZAL Y ALONSO (1861-96) martyr and national hero of Philippines. Made his specialization in ophthalmology in Paris, Leipzig, Heidelberg and Berlin. He was fusillade for revolutionary activities against Spain.



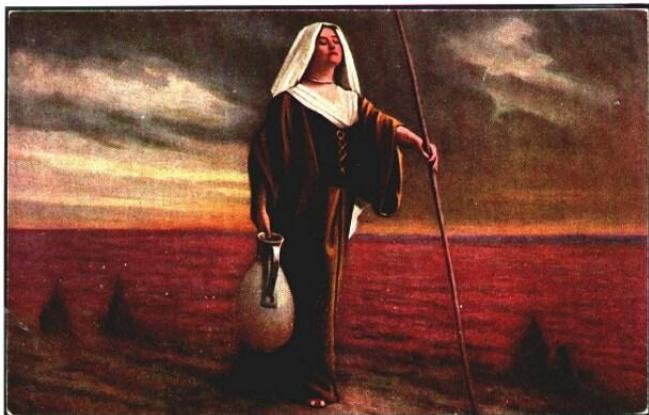
FEODOR FEODOROVICH ERISMAN (1842 - 1915) Made his medical studies in Zurich. He was ophthalmologist in Switzerland and Russia where to dedicate at Public Health

CHAPTER II - THE DARKNESS

BLINDNESS



Blindness occurs in one or both eyes and in any age.

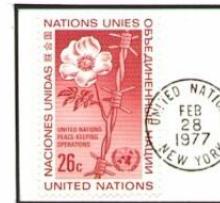


Postal stationery - Germany - 1929

BLINDNESS PREVENTION

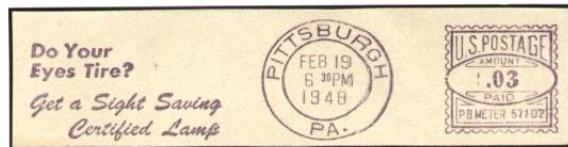


Prophylaxis of ophthalmopathies and the prevention of accidents of the eyes are fundamental to avoid blindness.



Protect the vision, avoid blindness

BLINDNESS PREVENTION

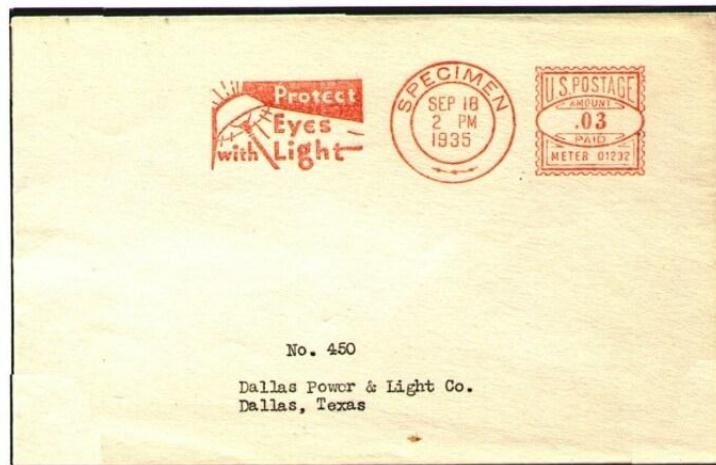
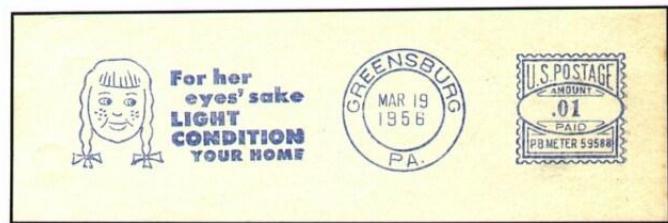


The use of sight organ must be bone always with good light conditions in order to preserve it.



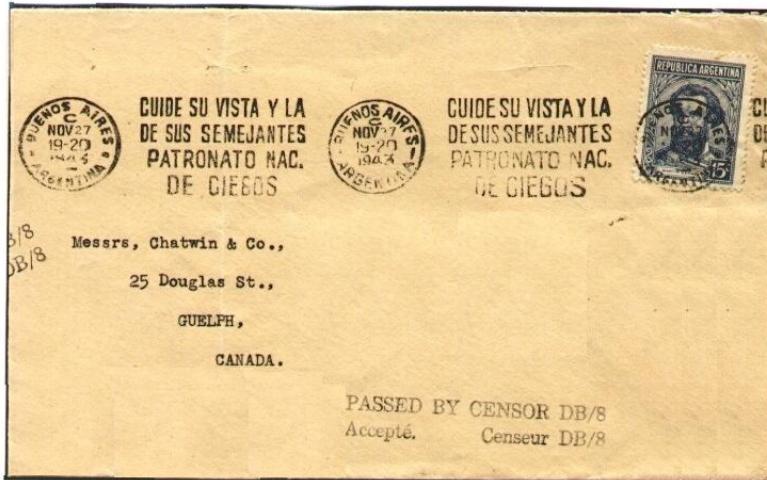
BLINDNESS PREVENTION

The good light is the life of your eyes.



BLINDNESS PREVENTION

Distichous divulging the prevention of the blindness are frequently seen in postmarks and meter stamps.



THE BLIND REHABILITATION



The blind properly supported and orientated turns into as helpful and efficient worker.



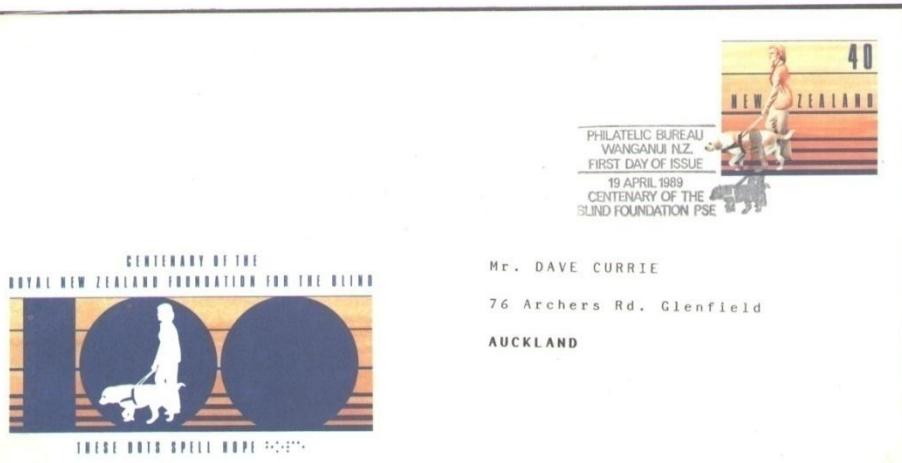
Shop which sells products made by blind people.



THE BLIND GUIDES

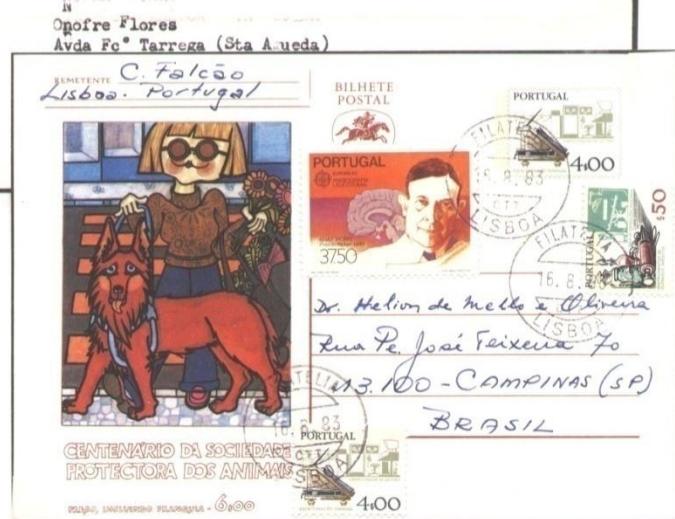
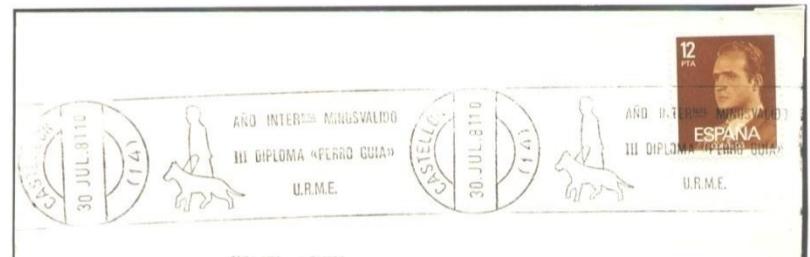


The GUIDE DOG for the blind is trained in special schools to be used in this most important function.

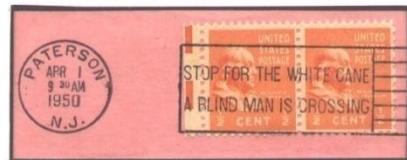


THE BLIND GUIDES

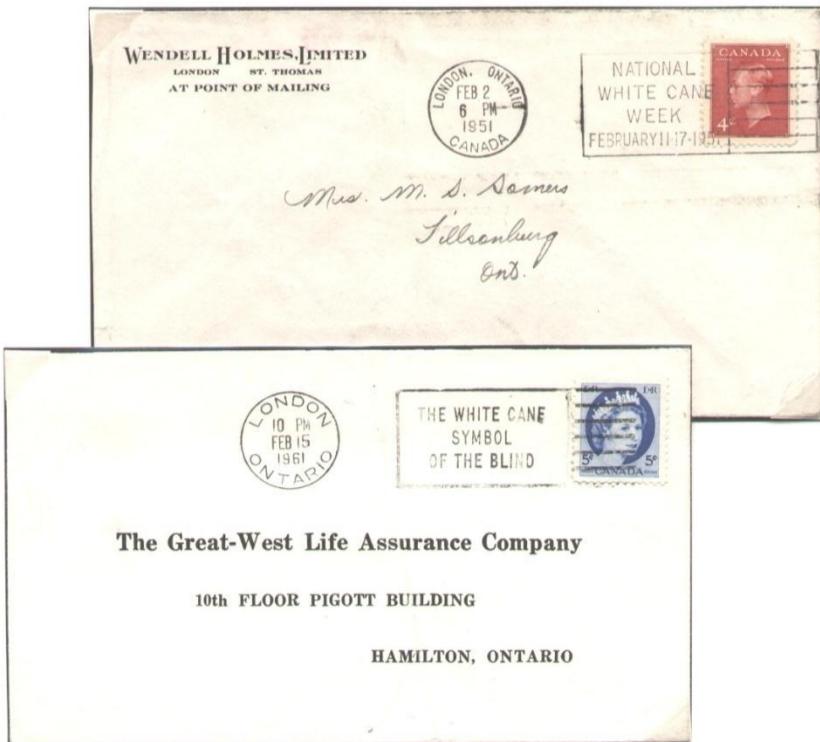
The GUIDE DOG is a great aid for the locomotion of blind persons.



THE BLIND GUIDES



The WHITE CANE is world wide symbol of blindness.



BLINDESS SYMBOLS



A new international symbol with a stylized figure of a person walking with an outstretched cane may become as familiar a symbol for blindness. This symbol was developed by the World Blind Union.



BLINDESS & ARTS

Blindness has been motive of inspiration by numerous artists.



"The blind balladeer"
J.Gutierrez Solana
(1886-1947)



"Theis, the blind "
unknow author



" The blind consoling the seeing "
Georges Rouault (1871-1958)

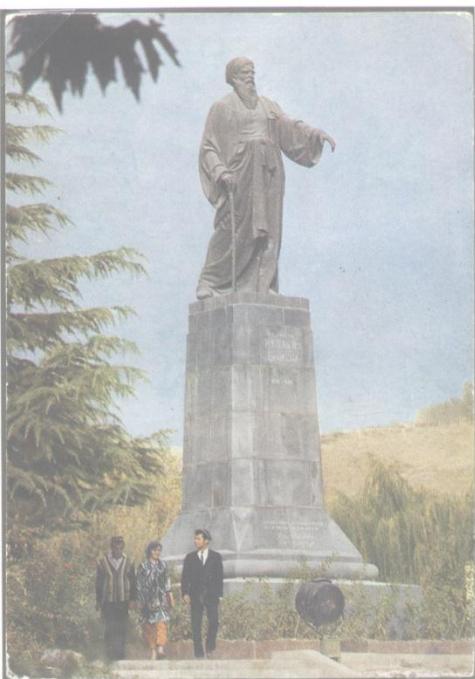
Pablo Picasso (1881-1973)



"The blind guitarist"



Leucoma of the left eye



Postal stationery - Russia - 1972

EYE , BLINDESS and TOPOONYMY



OCCHIOBELLO (BEAUTIFUL EYES) - Italy - 1848



ARCO DO CEGO - (BLIND'S ARCH) - Portugal

MAIL FOR THE BLIND



Besides the cecogram other correspondences destined for blind Institutions have protectionists custom treatment too



MAIL FOR THE BLIND



MAIL FOR THE BLIND



Embossed in Braille the word "ten"

Braille embossed in stamps



Centenary of Japanese Braille



The stamps show the word "ARLA" and the number "100" embossed in Braille, celebrating the centenary of this organization. ARLA Institute is a school for blinds in Finland.



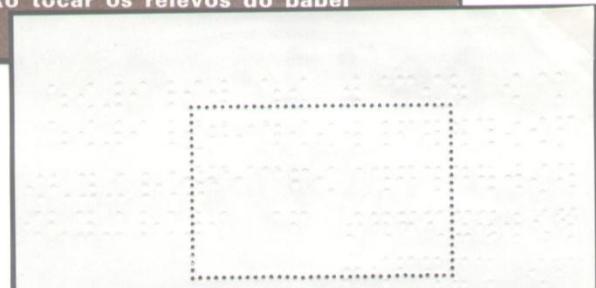
Stamp with "FELIZ NATIVIDAD" (Merry Christmas) in Braille characters.

MAIL FOR THE BLIND

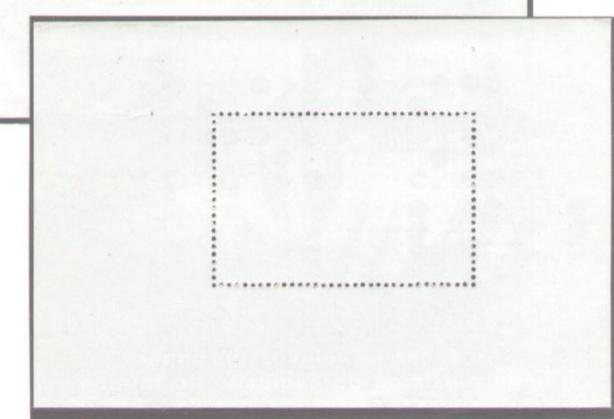
Some philatelic pieces were embossed in braille characters. Brasil was the first country that used this type of script in a stamp.



Ao tocar os relevos do papel
o cego



Double braille



without braille
inscription

OPHTHALMOPATHIES & CELEBRITIES



JOHN OF LUXEMBOURG (1296 - 1346) king of Bohemia, known as John, the Blind. Lost the sight in 1337.



BLAS DE LEZO (1687 - 1741) one of those who conquer the Spanish America was blind of left eye



GEORGE III (1738-1820) king of England. His last eleven years was of blindness and insanity



CHRISTOPHER COLOMBUS (1451 - 1506) named Saint Lucia the island discovered in December 13th, as he was healed of an ophthalmopathy by her intercession. It should be a chronic uveitis coexisting with a rheumatism he suffered in his adult life.

OPHTHALMOPATHIES & CELEBRITIES



lacking of red



ST. FRANCIS (1182 - 1226) suffered of the eyes during all his life, probably from serious trachoma.



MATER THERESA (1910-) Nobel prize of peace was operated of cataract in both eyes with intraocular lenses implants.



JORGE LUIZ BORGES (1899-1986), Argentinean writer, wrote a great part of his literary work when blind.

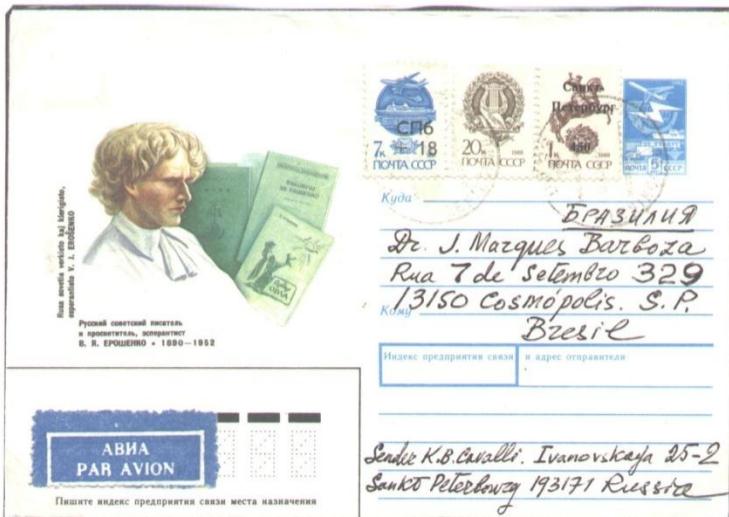
OPHTHALMOPATHIES & CELEBRITIES



GUGLIELMO MARCONI (1874-1927) know Italian physical lost the right eye's vision in a car accident in 1912.



JEAN PAUL SARTRE (1905 - 80) died blind by hemorrhages that began in his left eye and made him blind.



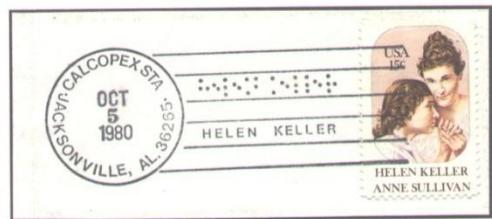
VASILLI J. EROSENKO (1890-1952) Russian literate, blind since childhood. Blindness did not impe-
de him from learning and teaching several languages and from traveling through many countries.

OPHTHALMOPATHIES & CELEBRITIES



LOUIS BRAILLE (1808-52) was born in Coupvray where he became blind in child, by wound in one eye and sym-
pathical ophthalmia in the other.

OPHTHALMOPATHIES & CELEBRITIES



color shift



HELEN KELLER (1880-1968) because of a severe attack of measles she lost at the age of 19 months her vision and her hearing.



CURRICULO - A LUZ E AS TREVAS

Ano	Exposição	local	med	
1980	BRAPEX IV	Fortaleza,CE	S+PE .	nacional
1981	Mostra Penido Burnier	Campinas, SP	-	local
1981	EXPOFISO XIII	Sorocaba, SP	LS	local
1981	SANPEX XIII	Santos, SP	V	local
1982	LUBRAPEX	Curitiba, PR	S	nacional
1983	BRASILIANA	Rio de Janeiro	S	FIP
1984	VI Congr.Bras.Cegueira	Campinas,SP	-	local
1985	BRAPEX VI	BHorizonte, MG	V	nacional
1985	Congr.Bras. Oftalmologia	S.Paulo, SP	-	local
1985	FARROUPILHA	P. Alegre, RS	L V	local
1985	ARGENTINA 85	B. Aires	L S	FIP
1986	LUBRAPEX 86	Rio de Janeiro	V	nacional
1987	ESPAMER 87	La Coruña, Spain	S	nacional
1987	HAFNIA	Copenhagem, Dinamarca	L S	FIP
1988	LUBRAPEX 88	Porto, Portugal	L V	nacional
1988	BRAPEX 88	S.Paulo, SP	G	nacional

CURRICULO - A LUZ E AS TREVAS

1989	PHILEXFRANCE	Paris , France	V	FIP
1989	BRASILIANA 89	Rio de Janeiro,RJ	LV	
1990	SÃO PAULO 89	Santos, SP		
1990	NEW ZELAND	N .Zelandia	V	FIP
1991	Mostra 20 anos ABRAFITE	S. Paulo, SP	-	mostra
1991	BRAPEX 91	Vitória, ES	G	nacional
1991	ESPAMER 91	B. Aires, Argentina	LV	
1991	PHILANIPPON	Toquio, Japão	LV	FIP
1992	GRANADA	Granada, Espanha	LS	FIP
1992	LUBRAPEX 92	Portugal	G	
1992	GENOVA 92	Genova, Italia	V	FIP
1993	POZNAN 93	Polonia	S	FIP
1993	BRASILIANA 93	Rio de Janeiro, RJ	V	
1993	BANGKOK 93	Tailandia	LV	FIP
1995	SINGAPORE 95	Singapore	LS	FIP
1996	ISTAMBUL 96	Turquia	V	FIP
1997	PACIFIC 97	S.Francisco - USA	V	FIP
1997	MOSCOU 97	Moscou - Russia	V	FIP
1999	CHINA 99	China	LS	FIP
2000	LUBRAPEX 2000	Salvador, BA	G	Nacional
2000	Exp.Nacional Portuguesa	Lisboa, Portugal	G	Nacional
2002	PHILAKOREA	Seul, Corea	V	FIP
2002	Mostra Fil."Dia do Médico"	Curitiba, PR	-	mostra