

**ANGOL NYELVŰ
ÖSSZEFOGLALÓK**

**ENGLISH ABSTRACTS
OF THE PAPERS**

ARGENTINEAN
DIPLOMACY

ENGLISH ABSTRACTS
OF THE PAPERS

Judit HAJDU
Vice-President of the Hungarian Patent Office

OPENING ADDRESS

In her opening address, the author enlists a number of successful Hungarian inventions of the 19th century, only part of which had, however, been patented. She draws the attention to the necessity of protecting intellectual property by patents.

Norbert KROÓ
physicist, vice-president of the Hungarian Academy of Sciences

NANOTECHNOLOGY AND MEDICINE

The paper presents a successful biomedical utilization of nanotechnology. Throughout his work, the author used a special scanning tunnel microscope. So-called plasmon light can be generated with small “nanoglobules” of gold. This can be made visible, if the electromagnetic wave spreading over the metal surface is disturbed by some scattering particle. The properties of plasmon light linked to metal surfaces are different from those of light spreading in free space. Among others, the diffraction limit restricting resolution is not valid for it. Thus it can be used for investigations in nanotechnology. This light is able to create a very strong electrical field on the surface of metals, and may bring about even further local field strength at its uneven places. The molecules located in this space can be detected by Raman scattering. This phenomenon may be used to detect cancer cells at a very early stage. Moreover, when the gold globules are injected into the cancerous tissue and lit by an outer light source, the ensuing huge electromagnetic field destroys the cancerous cells. The sensitivity of the globules to the wave length of light depends on their size. Light in the infrared domain passes easily through body tissues. The therapy based on this phenomenon is in the phase of human trials in America.

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CHANGES IN THE INTERPRETATION OF PROGRESS

The study departs from an analysis of a social science paradigm that was dominant until the turn of the 1960s and 1970s: history is not a cyclical but a teleological process moving towards the dissemination of the values of the enlightenment (liberty, equality, solidarity, education, knowledge).

It looks at the causes of the transformation of this paradigm, tries to explain why mainstream historians today doubt that our knowledge of history keeps increasing and deepening: instead historians just keep reinterpreting past events. The study disagrees with this view. While accepting that the concept of progress is hard to define globally and in general terms, it is still an indispensable analytical tool in the hands of public intellectuals when they have to make decisions that include interpretations of the past.

Gábor NÁRAY-SZABÓ

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THE UNSUSTAINABLE DEVELOPMENT

The author tries to answer the question: „Where to, development?” In order to precisely deduce his conclusions, he starts from the postulates as follows: 1. The world's development is permanent. In relation to this the question arises what we want to sustain. 2. In the course of evolution co-operation and competition are in equilibrium. 3. Evolution is conservative, long-standing solving survives, i.e. the future rests upon the past. 4. The token of development, i.e. of the increase in complexity is diversity. After illustrating the postulates one by one, by examples easy to understand, the author starts to analyse the state of today's society in this context. He equally illustrates, by examples, the excess of competition, and the polarization of society stronger than known ever before. He speaks about the constraint of innovation that has its origin in the market of supply. He contrasts diversity and monoculture. In this context he warns of growing genetically modified industrial plants. He illustrates the distortion of consumption by examples. He draws the attention to the decrease in raw material supplies, in the first place in fresh water reserves. Finally he gives directives of what can be done against these threats. Again he illustrates on examples that, in order to find a reassuring solving in the long run, material consumption has to be reduced, and non-material consumption must come into the limelight.

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NEW WAYS IN MUSEOLOGY

In her article the author speaks about the changes that came about in the field of museology, particularly of technical museology, in the past few decades. Within these changes she deals with four themes: 1. Relation of technical museums to science centers. 2. Development of museum techniques. 3. Changes in visitors' expectations and roles. 4. Relationships between society and science, between museums and the social environment. She deals with her themes as based on much personal experience. Finally she touches, with a few words, on the topic of the Hungarian technical museums, particularly on the situation of the Hungarian Museum of Science, Technology and Transport, which has been recently brought into being by integration, as well as on the institution's future expectations.

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SCIENTIFIC SOCIETIES IN 19-CENTURY HUNGARY SOCIETIES OF SCIENCES, MEDICINE AND TECHNOLOGY

The author gives an overview on the societies of sciences, medicine and technology founded and working in Hungary between the last decades of the 18th and 19th centuries, respectively.

Marginally, he also touches upon the societies of humanities brought into being in the given epoch. Out of the 18 societies dealt with in the chronological order of their foundation some exist till today. The description deals, in brief, with the programs organized by the societies, and the books, periodicals and jubilee publications presenting the history of the societies as published by them. The founding members and the famous scholars active in the societies are mentioned together with the society they adhered to.

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THE „GREAT EXHIBITIONS” IN HUNGARY DURING THE SECOND HALF OF THE 19th CENTURY (1842-1885), AND THE CHANGES IN THE AIMS OF THEIR ORGANIZATION TILL OUR DAYS

The author deals with the first Hungarian industrial exhibition organized at mid-19th century (Budapest, 1842) and four „National Exhibitions” from the second half of the century. These were as follows: 1872 Kecskemét, 1876 Szeged, 1879 Székesfehérvár, and 1885 Budapest. The paper presents the ever more complex organizational work and structure of the exhibitions as well as their topics and scopes getting ever broader. It shows the changes in the aims and roles the exhibitions underwent during the 50 years dealt with. At the beginning the aim of the exhibitions was to present domestic products to the domestic public. From a review appraising the existing industry, the exhibitions developed into an overall show presenting the industry, the agriculture, the administration and the culture of the country or of a given region.

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WE REMEMBER COUNT ISTVÁN SZÉCHENYI

The author remembers Count István Széchenyi on the occasion of the 150th anniversary of his death. As descendent of one of the richest and most distinguished families he was born in Vienna but was brought up as a Hungarian. From the age of 17 he was a soldier, and – after a number of distinctions obtained – was discharged as a captain. After travelling through many countries of Europe he saw the backwardness of his homeland and devoted his further life to put an end to this state. England and the English society became his ideal. In order to promote the foundation of the Hungarian Academy of Sciences he offered one year's entire income of his estates (1825). He established a National Casino (1827) to strengthen national thinking in the high nobility. He introduced horse races (1825-1827) to promote domestic horse breeding. Three books of his dealing with economics („Credit”, „World” and „Stage”) urged profound reforms in Hungary. His name is linked to making navigable the Lower reaches of the Danube, and to having the Chain Bridge constructed, the first permanent bridge connecting Pest and Buda (1842-1849). He played a great part in the development of Hungarian industry, trade and agriculture (milling industry, wine production, silkworm breeding, and banking life). In the Hungarian parliament he spoke up several times for the Hungarian language, for liberty and for tolerance in matters of religion. He was 50 (1841), when in his work „People of the East” he warned his nation from revolution. In 1848

he was, for a short time, minister of transport of the first Responsible Hungarian Government. However, his brain started to be deranged, and he was brought to the Döbling psychiatric clinic near Vienna. In 1860 he put an end to his life with his own hands.

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INVENTIONS AND INNOVATION IN THE GOLDEN AGE OF ELECTRICAL ENGINEERING

The author is one of the two outstanding historians of technology who were offered congratulations, in the present volume, on their achievements. He describes, in brief, the respective definitions of discovery, invention, patent and innovation. Thereafter he gives a survey of the great personages of electrical engineering in the 19th century, in Hungary and abroad – from the discoveries of galvanic electricity (Volta) and electromagnetism (Jedlik) to electric lighting with incandescent lamps. He deals in some detail with Edison's role, then touches upon Just and Hanaman's invention, the incandescent lamp with tungsten filament. He describes the data related to Just's life – who, from a German became a Hungarian – which data came to the limelight as a result of the author's research.

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MOSAICS FROM THE LIFE OF A HISTORIAN OF TECHNOLOGY

The author is one of the two outstanding historians of technology who were offered congratulations, in the present volume, on their achievements. In his article the author gives a brief survey on how it came about that he had started dealing with the history of technology, whose examples he followed, and how he was engaged in making great Hungarian scientists known and acknowledged abroad. He draws the attention to errors and even carelessness in this respect. Finally he remembers the very successful millenary exhibition under the title: "Dreamers of dreams – Hungarians of worldwide importance", in the organization of which he had taken part.

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ORGANIZATIONAL FORM OF THE ITINERARY CONFERENCES OF PHYSICIANS AND NATURALISTS

Among the initial objectives of the Hungarian Academy of Sciences development of (natural) sciences does not appear. As the development and teaching of these branches were of great domestic importance, it was first the most outstanding physicians, who wanted to give an organized form to their co-operation. In 1841 physician Ferenc Bene sent round a sheet to be signed in the interest of cultivating and spreading (natural) sciences. As an outcome of this, in that very year two itinerary

congresses were organized, and two years later again two similar events. In the years to come itinerary conferences were organized yearly, from the 1880s on preferentially every second year, at various towns of the then Hungary, from Brassó to Sopron. Participation was rather variable. The relatively low participation might have been related to the difficult transport conditions of the epoch. A woman was first allowed to speak in 1892. The great scholars of the 19th century presented a number of their important achievements at this forum. Apart from the Proceedings many valuable publications and books were published by the Itinerary Congresses. The last Itinerary Congress was organized in Budapest in 1933.

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CHOOSING (NATURAL) SCIENCES AT KOLOZSVÁR UNIVERSITY (1972-1918)

The probability of getting admitted to university or college is tightly related to the place occupied by the parents in the social hierarchy. This place is, in general, automatically determined by profession, fortune, education and the urban character of the domicile. The composition of Hungarian university students allows to study further special inequalities, namely the influence of the ethnic background and the confession on the probability of a person becoming a university student. Between 1872 and 1918 separate faculties were dealing with humanities (arts) and sciences at the Kolozsvár University of Sciences, thus the analysis was extended to studying how the above factors were related to the direction of studies. Research of the past decades confirmed that – in the conditions of free university admission – as e. g. in the epoch investigated – the probability of people entering university was particularly high among those of Jewish confession and of German origin, respectively.

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SÁMUEL BRASSAI'S WORK OF POPULARIZING SCIENCE IN THE „VASÁRNAPI ÚJSÁG” (SUNDAY NEWSPAPER)

The Sunday Newspaper was started as a supplement to the Kolozsvár publication “Erdélyi Híradó” (Transylvanian News). The objective of both journals was spreading education and cultivating patriotic feelings. The Sunday Newspaper appeared, for the first time, on April 6, 1834, and was edited by the renowned polyhistor Sámuel Brassai. From 1844 on Brassai's paper appeared as an independent publication. For 15 years he was its editor and, so-to-say, general factotum. The paper appeared for the last time on November 9, 1848. At this date, namely, Brassai had to leave Kolozsvár. The editor did much to inform the readers on every topic of education. He published particularly much in all the fields of science and technology, from geography and natural history through astronomy to physics and chemistry. He devoted great attention to inventions, not only from scientific but from economic aspects.

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KÁROLY NAGY, AN AUTHOR OF MATHEMATICAL TEXTBOOKS IN THE REFORM ERA

Károly Nagy was an outstanding mathematician and astronomer of the reform era. As member of the Hungarian Academy of Sciences he recognized the importance of the mother tongue in teaching mathematics.

He wrote some textbooks for schoolchildren: Arithmetics (1835); Elementary algebra (1837), Little Counter (1837; Little Geometry (1838). He translated, into Hungarian, Babbage's Table of Logarithms (1841).

In 1836 he was awarded the Great Golden Prize of the Hungarian Academy of Sciences for his Arithmetics.

His aim was to give schoolbooks in the hands of poor but studious children. His mathematical books are, even nowadays, easy to understand and enjoyable.

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THE LANGUAGE OF PRACTISING AND TEACHING MATHEMATICS
IN HUNGARY IN THE 19TH CENTURY

Data based on documents from the Archives of the University of Sciences Eötvös Loránd

In the early 19th century the language of mathematical erudition in Hungary was Latin and German. Publishing in Hungarian counted as an achievement to be recognized. By the end of the century mathematics was taught in Hungarian language at every level of education, textbooks and trade books appeared in Hungarian. Outstanding Hungarian mathematicians also published in renowned journals in French, German and English. Thus the achievements of mathematical culture in Hungarian language became part of universal mathematics. The author presents some elements of this process.

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GEOLOGIST TAMÁS SZONTAGH'S PROPOSAL, FROM THE YEAR 1879,
TO ESTABLISH A „GEOPARK” IN HUNGARY

The author shows that the idea of geological nature protection existed in Hungary as soon as in the 19th century. Geologist and later vice-director of the Geological Institute Tamás Szontagh came forward – at the 20th general meeting of the Hungarian Physicians and Naturalists in Budapest, 1879 – with the proposal „To protect, care of, and preserve our natural beauties, with special regard to the Somoskő columnar cone basalt”. The proposal was made in the year of the first Hungarian law on forests, just seven years after the coming into being of Yellowstone Park. This idea is among the first in its kind as a proposal formulated before a great public, and related to the protection of a domestic geological object.

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INTERDISCIPLINARY PROBLEMS OF HISTORY OF SCIENCE: ASTRONOMY AND
MYTHOLOGY, LINGUISTICS AND PALEOASTRONOMY

The „der-die-das” phenomenon

In his paper the author gives an abstract of his book published under the title „Mystery of the der-die-das.” He summarizes his ideas under 10 headings. According to them, the genders allotted to nouns in the majority of Indo-European languages cannot be understood if we depart from linguistics, the problem belongs much more to the sphere of paleoastronomy. When providing nouns with genders started, the geocentric cosmos model was prevailing, with Father Sky and Mother Earth. This ideology – as it is generally known – has long been proven as false, and in our days, when new notions, new terms are permanently created, and – correspondingly – new words in the languages to designate them, the impossibility of this ancient ideology is more and more obvious.

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CHARLES BABBAGE AND AUGUSTA ADA BYRON (LADY LOVELACE), PIONEERS OF
MODERN COMPUTER SCIENCE

In the 19th century fundamental changes occurred in mechanising calculations. This is linked, in the first place to the names of Charles Babbage and Lady Lovelace. Babbage was born in the last decade of the 18th century. He was an astronomer and a mathematician. He dealt with theoretical problems of mathematics and utilized, in astronomy, everything, he had theoretically laid the foundations of. One of the most important tasks of the astronomers of the 19th century was the mechanisation of astronomical charts. Such charts were necessary for the British sailors to find their destinations and to return afterwards to their harbours. Steam engines had been invented by that time, thus Babbage's aim was to construct a “modern” steam driven calculator, which was able to carry out operations automatically, and was suitable for preparing charts. He called his second machine an analytical machine. In his work he found an excellent partner in the person of mathematician Lady Lovelace, who – as she knew Babbage's invention – found out how it could be efficiently used with the aid of programming. Hence, their life-works cannot be separated, and their achievements have to be mentioned together. Lady Lovelace was the one to exactly describe the mode of operation of Babbage's machine, thus science also owes this knowledge to her.

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MECHANICAL ENGINEER ALADÁR EDVI ILLÉS –
 PROFESSOR OF THE POLYTECHNICAL SCHOOL. INDUSTRIAL POLITICIAN
 AND POLITICAL WRITER

The 19th century gave a great number of experts of excellent qualities to domestic economy but even among these mechanical engineer Aladár Edvi Illés was standing out as a creative mind of exceptional talent and intelligence. The professor of Óbuda University's legal predecessor, the Royal Hungarian Upper State Industrial School had excellent theoretical capabilities and a wide intellectual horizon. Apart from his work as professor of the Upper Industrial School (1882-1920) he inscribed his name upon the pages of history as industry developer, too. During his years of civil service his career was a brilliant one: he had started his activities as industry organizer at the Department of Factory and Craftsmen's Affairs of the Ministry of Commerce, then headed the recently founded Department of Industrial Technology, and lastly was deputy state secretary. During his career he published 78 papers and 27 books in the field of metallurgy, mechanical technologies, and economy.

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THE ARCHITECTURAL HERITAGE OF ÓBUDA UNIVERSITY

The buildings of Óbuda University can be found in several districts of Budapest, both on the Buda and the Pest side. There are some that had been built at the end of the 19th century, and others that were built at the beginning of the 21st century. The paper deals with the buildings erected during the boom that followed the Compromise and were meant, in general, for institutions of secondary education. They were designed by the most successful Hungarian architects of the epoch. The buildings presented can be found in the VIIIth district of Budapest.

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TEACHING OF PROFESSIONAL DRAWING AND EDUCATION OF APPRENTICES
 IN THE 18TH AND 19TH CENTURIES

The author outlines the history of the apprentices' education in Hungary in the Middle Ages, with special regard to the training in drawing. He mentions some outstanding teachers of drawing of the 18th century. By the years following the Compromise theoretical vocational training became compulsory in general. This meant mainly training in drawing. A precondition of enrolment was the successful completion of the elementary school or its substitution. As a result of the development of the manufacturing industry and of public administration, there

arose a demand for higher education of professionals trained in sciences. Thus secondary schools for sciences, and vocational schools appeared. Drawing schools that were stepwise turned into vocational schools became – with regard to their curricula – ever more complex, besides drawing other subjects appeared like machine parts and technology. By the turn of the century domestic training of apprentices took shape and became countrywide established upon the influence of the Law of Industry. The quality of training came ever more to the forefront (system of technical supervision, further education, and training courses).

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TRAINING IN TECHNICAL DRAWING IN EUROPE IN THE 19TH CENTURY

Gaspard Monge's descriptive geometry appeared in 1795. The book played an important part in shaping today's knowledge of technical drawing. With the descriptive geometry and the urging of the Ecole Polytechnique Monge paved the way for the introduction of training in technical sciences. The subject, and the idea of technical secondary schools spread fast throughout Europe.

William Farish, professor of Cambridge University brought into being isometric depicting. His books dealing with the design of machines and hydromechanical equipment are considered as the first textbooks of engineering training.

The judging of the values of projective and axonometric depicting that differ from each other changed, in the 19th century, according to the intentions of the communication by drawing. The paper presents the process of changing in training and in technical practice.

Attila VENEKEI

KÁLMÁN KANDÓ'S WORK OF DEVELOPMENT AT THE GANZ FACTORY IN THE LATE 19TH AND THE EARLY 20TH CENTURIES

KálmánKandó was born as the first child of an old Hungarian noble family on July 8, 1869.

He started his secondary school education at the Lutheran School in Budapest, where he achieved but moderate results. He did much better at the Royal Hungarian Secondary School for the Training of Teachers. Seven years later he finished his studies of mechanical engineering at József Technical University with distinction to become, by his life-work, the pride of his homeland, and one of the most outstanding creative minds of the history of technology.

During his study trip to Paris he got acquainted with the theory of induction engines, their calculations, and the principles of their construction.

Professor András Mechwart from Technical University discovered, by virtue of his good knowledge of human character, Kandó's huge creative talent, and invited him in summer 1894 to work for the Department of Electricity of the Ganz factory.

In May 1895 the first specimen of the domestic series of induction motors type F was ready. With the production of the series of the motors F, the manufacture of three-phase electric machines and of the apparatuses connected with it started in Hungary as well as the introduction of the three-phase current system.

The first phase of Kálmán Kandó's life is a good example of diligent learning and working, and of the application of wide-ranging theoretical and practical thinking in the course of engineering activities.

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SOCIAL IMPACT OF THE RAILWAY CONSTRUCTIONS IN HUNGARY DURING THE "LONG" 19TH CENTURY

Contributions to the changes in life-style of the surroundings of Dombóvár

After the Compromise (between Austria and Hungary) Dombóvár was turned into a point of junction of the railways. The article analyses the advantages the appearance of the railways had on the settlement that has become since a small town: big constructions started, in the first place for the railways (station building, engine house, dwelling houses); the population also enlarged their houses in order to receive the railway workers coming from all the parts of the country; the workers coming from outside contributed to making the ethnic picture of the community more colourful; the industry went developing, electric lighting was introduced, the higher demand for education of the immigrated and the local professionals went along with the development of the school system; and last but not least: advantageous changes came into being in the local social life.

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SELECTED PASSAGES FROM THE 19TH-CENTURY HISTORY OF TECHNOLOGY OF THE WOODWORKING INDUSTRY

Carpenter and cabinet-maker Endre Thék

One of the technical novelties in the 19th-century woodworking industry were the steam engine as a transportable energy source instead of hydroenergy fixed to a place and, as an outcome of this, the use of rotary and bandsaw machines. It was at this time that the serial production of replaceable steam-bent parts started in chair manufacture in Hungary. A novelty of the early years of the century was the use of the wood of domestic fruit trees for furniture production. Outstanding personages of the woodworking industry of the century were Guilbrand Gregersen timber contractor as well as carpenter and cabinet-maker Endre Thék: streets have been recently named after them in Budapest, in the millennium centre under construction. The company of Endre Thék, who had travelled abroad and visited even Paris cabinet-makers became, by the 1880, the biggest and best equipped furniture factory of the country. It was there that the representative wooden equipment and furniture of the most important public buildings were manufactured.

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FROM AN UNMARKED GRAVE TO THE MEMORY OF THE WORLD REGISTER

To the 180th anniversary of the APPENDIX appearing in print

János Bolyai, who had brought into being non-Euclidean, so-called „absolute” geometry, published his mathematical work of utmost importance as a supplement, an Appendix to his father's work. The work of altogether 26 pages written in Latin language and completed by 23

figures drawn by the author did not attract any attention at its time. 150 years had to elapse from Bolyai's death to have it included – upon a Hungarian initiative – in the Memory of the World Register beside the three Hungarian intellectual achievements to be found there until then. The author describes the processes of candidature and judgement, the history of the booklet that got onto the List, and even the essence of its contents for non-mathematicians.

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RESTORING 19TH-CENTURY MACHINES

Restoration of technical objects requires particular attention as these are manufactured, in general, of several materials. 19th-century machines had been in use for a long time, therefore – and perhaps owing to inadequate storage – they get to the museums, in general, in a poor state. Restoration has always to be carried out after consulting the curator. Materials or technologies non-existing at the given epoch should not be used in the restoration process. It requires thinking over if it is worth while or allowed – if possible at all – to bring the machines to a working state. The adequate storage of already restored objects is very important in order to avoid new damages.

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FREEMASON DR. GYULA KENÉZY

Dr. Gyula Kenézy (1860-1931) graduated from Budapest University of Sciences as physician. After working at the Budapest Clinic of Obstetrics for 4 years he became a GP in Debrecen, and, in 1895, the town's chief medical official. He organized an Institute for Midwife Education, and a State Children's Asylum. He directed both institutions from 1896 on. It was upon his proposal that the establishing of Debrecen University – an institution of four faculties – had started, of which he was the first professor of medicine. He became the first director of the Institute of Gynaecology, Dean of the Faculty of Medicine, and later Rector of the University. In 1934 he obtained the title of Doctor honoris causa. Apart from all this he joined the movement of freemasons. He had been adopted by the lodge "Haladás" (Progress) on February 6, 1891, and was elected leader of the lodge soon afterwards. Owing to the great number of members, many of them left the lodge and founded a new one. This was named after a former Debrecen student, Sándor Körösi Csoma. This lodge also elected Gyula Kenézy chief master. The new lodge opened a dining room for several thousands of children, and supported those in need with textbooks. They urged free primary school education. They distributed free bread and milk to those suffering scarcity. They had contributed to re-building a village destroyed (during the war) by the Russian which was then named "Masons' Village". During WW 1 they extended help to Hungarian soldiers, and supported the invalids. In spite of all that the movement was prohibited in 1920.

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THE CAPITAL'S GASWORKS COMPANY IS 100 YEARS OLD

The author describes in brief, how the Capital Budapest took over the Gas Works from the General Austrian Gas Works. This was a private company, which had the first gas factories built in Pest and Buda. However, later it did not spend enough money on, nor care for, the maintenance and modernisation of these plants. The author gives a likewise short description of the career of the first director general of the Capital's Gasworks, dr. Ferenc Heltai, and his role in establishing the Óbuda Gas Factory. Unfortunately, he could not live to see the inauguration of the factory.

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JÓZSEF ZARZETZKY AND HIS MATCH FACTORIES

At the World exhibition in Paris, 1867, domestic match manufacture was represented by the industrial József Zarzetzky, then at the top of his career. The one-time craftsman of Polish origin, who had learnt to make music instruments, rose – by assiduous work and an excellent business spirit – as a self-made man among the upper ten thousand of the Monarchy's society of industrials. In the 1830s Zarzetzky was working as a small craftsman but as a result of diligent work he was able to put into reality his dream, i. e. building a factory of his own in Váci street. Owing to his work, much acknowledgment and many distinctions from Hungary and from abroad were bestowed on him. Apart from his role in industry, he held posts as official of trade and municipium, and – due to his family relations – supported Slovak cultural organizations. His factory that had been producing for about 40 years, stopped production owing to the general commercial crisis. His elder son kept on dealing, for years – in a smaller plant with, however, up-to-date equipment – with the manufacture of matches and ignition devices.

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A SYSTEM BUILDER IN THE 19TH CENTURY.

Some Remarks On Edison's Work

Edison was an entrepreneur and an inventor, who based innovation on science, and integrated scientific, economic and social aspects in the systems invented and achieved by himself. His conception of systems also contained their non-technical components as shown by the bringing into being of the first electrical lighting system.

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THE ANTICIPATED 20TH CENTURY
 On the chronology of some elements of technical development

The author analyses how the „creative attitude” could be strengthened in today’s youth. He deals with what could be done for this by historians of technology and by writers of history of technology, by technical museums and by those engaged in the popularization of knowledge.

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THE TRANSPORT MUSEUM

The foundation of the Transport Museum was an outcome of the 1896 Millennium Exhibition. The Museum was essentially based on the material collected in the Transport Hall of the exhibition, which presented the most up-to-date vehicles (railway, river and sea shipping, post and telegraph offices, road vehicles) of the then Hungary on models, pictures and in their original forms. This collection was organized into a permanent museum. As until 1966 the Museum obtained considerable financial support from the Hungarian State Railways (MÁV), no wonder that railways played an outstanding part in the collection. According to the catalogue of the year 1910 the “backbone” of the Museum was made up by 1390 railway objects, 326 shipping objects, 484 postal and 66 highway objects. Right from the beginning on a very fine and important collection of horse-drawn vehicles has been brought into being as well as – in a separate building – a collection of aviation. The Transport Museum was established as one of the oldest such institutions of Europe, and takes charge – with great success – of both training and public education.

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IRON WORKS AND COMPANIES IN HUNGARY
 AT THE 1900 PARIS WORLD EXHIBITION

The author describes the development of iron production in Hungary in the second half of the 19th century. She enlists the companies that presented themselves at the 1900 World Exhibition and were dealing, in the then Hungary, mainly with the mining of iron ore and the production of crude iron, and – to a lesser extent – with the manufacture of rolled articles or cast iron products.

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SHORT HISTORY OF THE FIRST COMPETITION IN THE FIELD OF HISTORY OF MEDICINE

Work of history writing of Imre Kovács, a little known historian of medicine

Disclosing the relics of the past of medicine in Hungary was, in the second half of the 19th century, encouraged by two scientific societies established during the reform period: the Royal Hungarian Society of Physicians and the Hungarian Physicians and Naturalists. The proposal in the matter induced Lajos Fekete, a young physician from the province to write, in 1867, the history of medicine in Hungary. His work, however, survived in manuscript form only. It was at the 1874 itinerary congress of the Physicians and Naturalist that the idea of inviting a competition in the matter was first raised. The invitation was about writing a retrospective bibliography. Lajos Fekete could take possession of the prize at the following itinerary congress. At this congress it was proposed to invite a competition on the history of Hungarian medicine, with a deadline of 1879. Later research revealed that the author of the only prize work sent in under a code name was legal physician and district chief physician Imre Kovács. The prize was not awarded. Instead, a new deadline was set to allow the author to revise his work. In the end Imre Kovács was not awarded a prize at the competition. The first prize ever awarded was adjudged to the work of the secondary school teacher Kálmán Demkó from Lőcse.

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FAMILIES IN WW I

Four members of the author's family had served in WW I, from which they returned home – after being wounded several times – in a miraculous way. The written documents they had sent to their parents, were published by the author in the form of a book, in order to show an example to today's youth, as a war meaning destruction is much worse than difficult circumstances. In his very short paper the author gives – on the basis of his book – a sketch-like description of his antecedents.

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THE ASSOCIATION FOR THE REGULATION OF THE MOOR HANSÁG AND THE RIVER RÁBA

The moor Hanság is today still a characteristic region of the western part of Hungary. Its natural image changed much during the last decades. Owing to human interference a great part of the once swampy region disappeared. The author gives a brief account on the region and the events that have taken place prior to its drying up.

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QUESTIONS ON THE JUSTIFICATION OF THE EXISTENCE OF SURGEONS' TRAINING IN THE REFORM PERIOD AND DURING THE 1848/49 REVOLUTION AND WAR OF INDEPENDENCE

In the first half of the 19th century medical practice was divided between two big groups. One was formed by the physicians of doctor's qualification (doctor *medicinae*), who – in principle – were dealing with internal medicine only, the other by the surgeons, who had a university qualification inferior to that of the doctors. The surgeons were providing – in principle – for the so-called “external diseases”. From 1816 on practising surgeons were split to several camps. Starting from this basic position a discussion on the training of surgeons emerged on the columns of the journal “*Orvosi Tár*”, in the first place between the Vienna professor of surgery Szaniszló Töltényi and the hospital surgeon of county Arad, István Szathmáry. The sometimes personal tone was partly due to the fact that medical doctors feared for their living. Later others joined the discussion, moreover the greatest ones (Pál Bugát, Frigyes Korányi and Ignác Stáhly) gave their names to their opinions. However, owing to the outbreak of the war of independence everything remained as it had been earlier, and it was as late as in 1872 that uniform training of surgeons was introduced on the whole territory of the Monarchy, abolishing the training of surgeons of inferior qualification.

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PEOPLES' MIGRATION OF THE MODERN AGES – PROSTITUTES' MIGRATION IN THE PAST 100 YEARS

After outlining the reasons of prostitution and touching upon its history, the author deals in detail with 19th-century white-slave traffic and 20th-century „slavery” and trafficking in people. She treats today's migration of prostitutes and demonstrates the relationship between the sex industry and travelling as well as globalization. She outlines the most frequent routes of prostitutes' migration. She backs up what she has to say by statistical data. She enters upon the related health problems. In the end she mentions, in a heartening way, the organizations and measures that have come into being for the protection of the victims.

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MEDICAMENTS AGAINST SYPHILIS IN HUNGARY

The infectious character of syphilis (*lues*) was recognized as early as at its appearance in the Middle Ages and, accordingly, attempts were made at its therapy. Until the coming into being of chemotherapy empirical therapies were applied to cure the particularly frightening symptoms. These were mainly preparations of toxic inorganic substances, such as mercury, bismuth and

arsenic. Microscope techniques, so-called “vital staining”, and the methods of synthesis of metal-organic compounds made the discovery of Salvarsan possible. It is not chance but systematic investigations into effect and structure that led to the recognition 100 years ago. The effect of compound No. 606 discovered by Paul Ehrlich also induced Hungarian pharmaceutical chemists to carry out research into new and efficient structures. The heroic age of chemotherapy lasted until the appearance of penicillin and other antibiotics (i. e. the end of the 1940s).

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ON THE HISTORY OF SUPPOSITORIA

The author tells the story of suppositoria used for administering medicaments from the Middle Ages (second half of the 12th century) till today. She quotes from 17th-century literature, and speaks in detail about the carrier substances used in the 19th century, the mode of preparing suppositoria and the tools and machines used for the purpose. She mentions the changes in carrier substances that have occurred lately.

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DEVELOPMENT OF THE HOSPITAL “DR. ISTVÁN BUGYI” IN SZENTES, AT THE END OF THE 19TH CENTURY AND DURING THE INTERWAR PERIOD

The author gives an overview on the difficulties the town of Szentes had to face, when it decided to bring into being a hospital. This was finally made possible after the cholera epidemic of the year 1873. An account is given on the development and growth of the hospital in the given period, and on its outstanding physician-directors, particularly on physician-director Dr. István Bugyi, whose name the hospital bears today. Professor Bugyi was appointed Head of the Surgery Ward in 1931. From 1933 he was physician-director of the Hospital. He was excellent not only as a physician but also left his mark on the cultural life of Szentes as writer and humanist. At the end of his description the author approaches the personality of the hospital's eponym to the reader, reviving his memory by stories and anecdotes.

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HISTORY OF THE STORE OF MEDICINAL HERBS „BLACK DOG”

The sign-board representing two sitting dogs was incorporated into the collection of commercial objects of the Museum for Trade and Tourism in 1978. At that time it was identified as the sign-board of the drugstore „Black Dog” in Váci street. Research has shown since that the sign-board originates from the early 19th century. The author presents the changes in owner, site and profile of the store of medicinal herbs „Black Dog” as well as the history of the related sign-boards.

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SPECIAL EQUIPMENT OF THE AMBULANCE BRIGADES AT THE TURN
OF THE 19TH AND 20TH CENTURIES

The short retrospection describes the tools of the contemporary ambulance brigades (the equipment for fixing limbs, the bags for different purposes according to ever more specialized life-saving, and the most important medicaments and instruments) from the early years to the turn of the past century.

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A 19th -CENTURY HIPPOCRATE EDITION

The paper describes the complete bilingual (Greek-French) Hippocrate edition edited and translated by Emile Littré that appeared between 1839 and 1861.

“The father of medicine” was considered a mythical personage as soon as in the later centuries of antiquity. The “corpus” historically linked to his name obviously is not the work of a single person but is the entirety of the collected medical works that came into being within a relatively short period. Littré endeavours to select the authentic Hippocratic works. He tries to separate what he attributes to the famous physician himself from earlier medical works, from the works of pupils and successors as well as from compilations from earlier times. In the 10-volume edition Littré exactly indicates the doubts related to the origin of the works, and why he decided in favour of one or the other solution. His editing and translation have been accepted ever since, although later scholars – and sometimes even his contemporaries – do not agree with some of his conclusions.