



ELECTRONIC INVENTION INFO

7TH INT'L INVENTORS'S DAY (IID) VIRTUAL CELEBRATION

2014 JUNE 13, HUNGARY

EGYPT



Pyramids the most important invention in the history

The Egyptian Inventor Syndicate

The first syndicate of inventors in the world (The Egyptian Inventor Syndicate) It registered in Egypt since 2012 in the general trade union of education and scientific research under number 743/2012. we consider as member in Federation of Trade Unions Egypt and follow its laws and logistics to enhance invention and innovation all over the world

NGO name : The Egyptian Inventor Syndicate

Establishment date : November 2012

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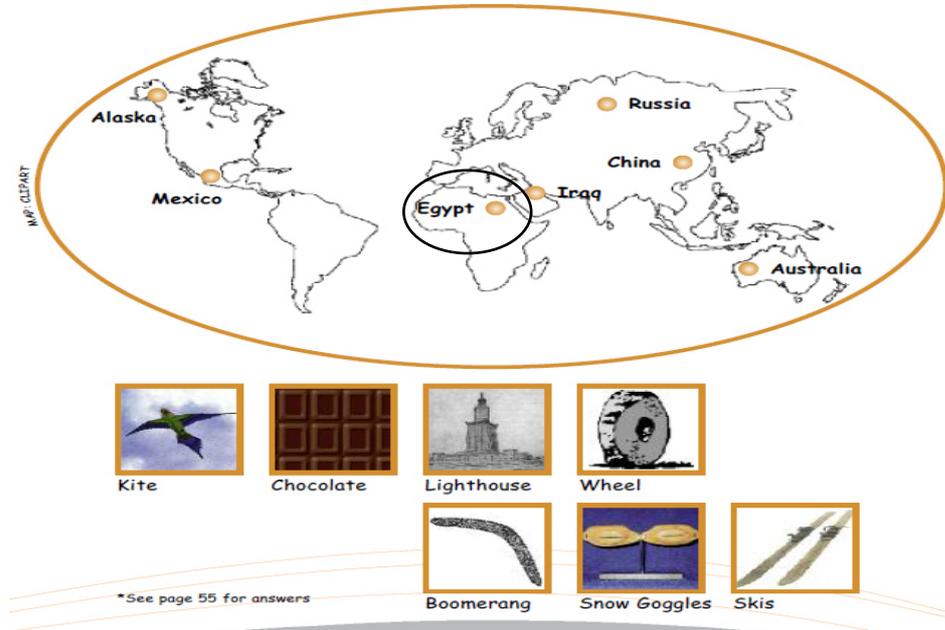
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Egyptian Inventions and Patents (Between the Past and Present)

LEARN FROM THE PAST, CREATE THE FUTURE



The History of **Egyptian Inventions and Patents began** from 7000 BC old Egyptian invent agriculture, clothes, shoes, irrigation systems, music, chariots , temples and build Pyramid which consider as the most old and famous invention in the world. The old Egyptian build civilization in all fields.

Early as 2400 years ago. This is how we know, for example, about the Greco-Egyptian engineer Heron of Alexandria who created countless machines in the late first century AD. Also known as mekanikos (machine man), Heron was famous in his time for his numerous inventions, especially his automatic machines that included a steam engine, a coin-operated slot machine and automatic doors.

Sometimes, different ancient civilizations independently invented very similar items. For example, almost every ancient civilization invented mirrors. Ancient mirrors made of polished volcanic glass (obsidian) have been found in Turkey and Mesoamerica, while polished bronze or copper mirrors were made by the inhabitants of ancient Egypt.



Lighthouse – The first known lighthouse was built around 280 BC on the Pharos island in the harbor of Alexandria, **Egypt**. Known as the Pharos of Alexandria, this lighthouse was not only a useful invention but was also considered as one of

TOP THREE Egyptian PATENTED INVENTIONS IN THE 20TH CENTURY

TITLE: A new system for charcoal making from plant residues briquettes and wood in a short time and with low impact on the environment.

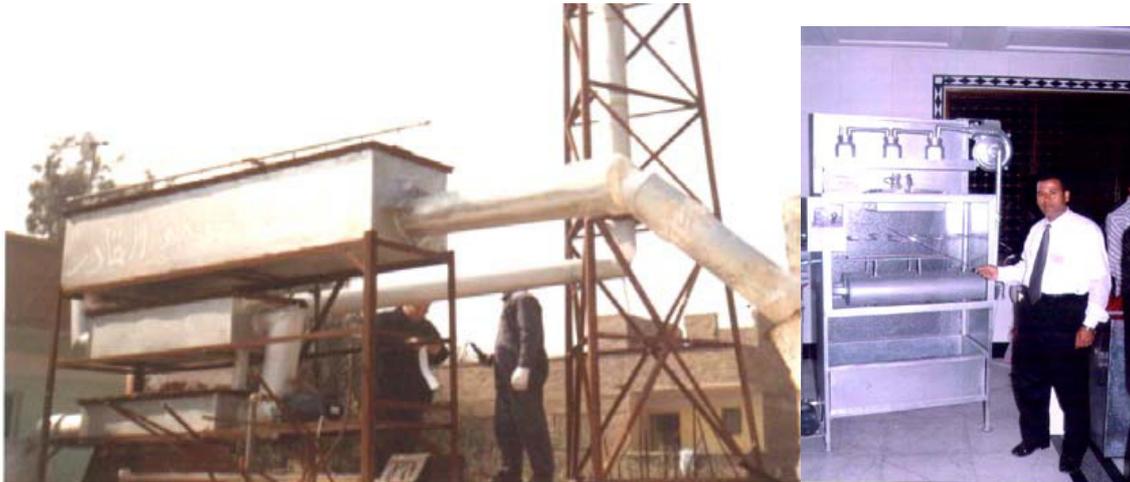
INVENTORS: Hassan A. Hassanein Gomaa



The new Clean Kiln for Wood Carbonization works through incomplete combustion as starting (to save fuel) after that it works through pyrolysis. As the wood pieces are arranged to filled up an inner container and tightly closed after starting wood ignition. An insufficient air is permitted for incomplete combustion until the burnable evolved gases which burning in a fire box directly under the wood container. When incomplete combustion evolved gases become enough to start pyrolysis the incomplete combustion air stopped. The evolved wood gases burned too in the fire box. When the pyrolysis is completed the gases stop and burning off. If the pyrolysis evolved wood gases is more than needed for heating some of them is directed to burned out in an additional external fire box, this keeps the temperature inside the wood container not more than 550 0C and ensure the complete combustion of all evolved gases. Through this new kiln a good quality of charcoal is produced and all harmful emissions are completely combusted and converted mainly into not polluting CO₂ and H₂O instead of the harmful hydrocarbons gases and vapors emissions released to the environment since it is difficult to maturely utilize the small quantities of liquid tars.

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**TITLE: New innovation for the protection of the environment
from pollution and toxic gases
INVENTORS: Osama Abd Elkader Ahmed**



A new device to protect the environment from pollution and toxic emissions which composed from industrial processes of the first carbon dioxide and sulfur dioxide, nitrogen oxides, particulate carbon solid passing These gases through the device processes of cooling and condensation, injection air and the chemical reaction and converted into a mixture of sediment-rich compounds of calcium used as fertilizer to the soil agricultural so is the process of combustion in factories or industrial activities without pollution damage to humans and the environment and the rates were measured emissions after the implementation of this device is less than the percentages of the legal text of the Environmental Law No. 4 of 1994 on the basis of measurements carried out by the Center for a environmental impact assessment studies, Faculty of Engineering Mansoura University. Has been approved on the results achieved by this device by the EEAA after the implementation of this device one of the factories in Dakahliya. The idea of the device at the development of the theory of the liquefaction of gases for the Faraday Andrews, and benefit from the alleviation of global warming and the conversion of agricultural wastes (rice husk to the silica material) that are used in the manufacture of iron and steel, and also to the disposal of hospital wastes in a secure manner.

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TITLE: Preparation of Barium Titanate used as electro ceramics in the microwave devices

INVENTORS : Doaa Abd elaziz



Because of people's demands, dielectric characteristics of ceramic materials are rapidly increasing. At the same time people are attempting to reduce the size of all communication devices as small and as light as possible. Due to this trend, high dielectric constant materials such as *barium strontium titanate* and $Ba_2Ti_9O_{20}$, nowadays become more and more important in ceramic materials. Novel complex barium strontium titanate and $Ba_2Ti_9O_{20}$ materials have been recently particularly introduced. The excellent dielectric properties (dielectric constant (ϵ)= ~21 and Quality factors= 116.300GHz at 11GHz) of the ceramic bodies were obtained as compared with dielectric properties detected in the literature. These bodies can be used in microwave devices such as, long range military search radar, cellular phones, microwave ovens, airport search radar, satellite downlink, studio transmitter link materials can be used in microwave devices such as long range military search radar, cellular phones, microwave ovens, airport search radar, satellite downlink, studio transmitter link.

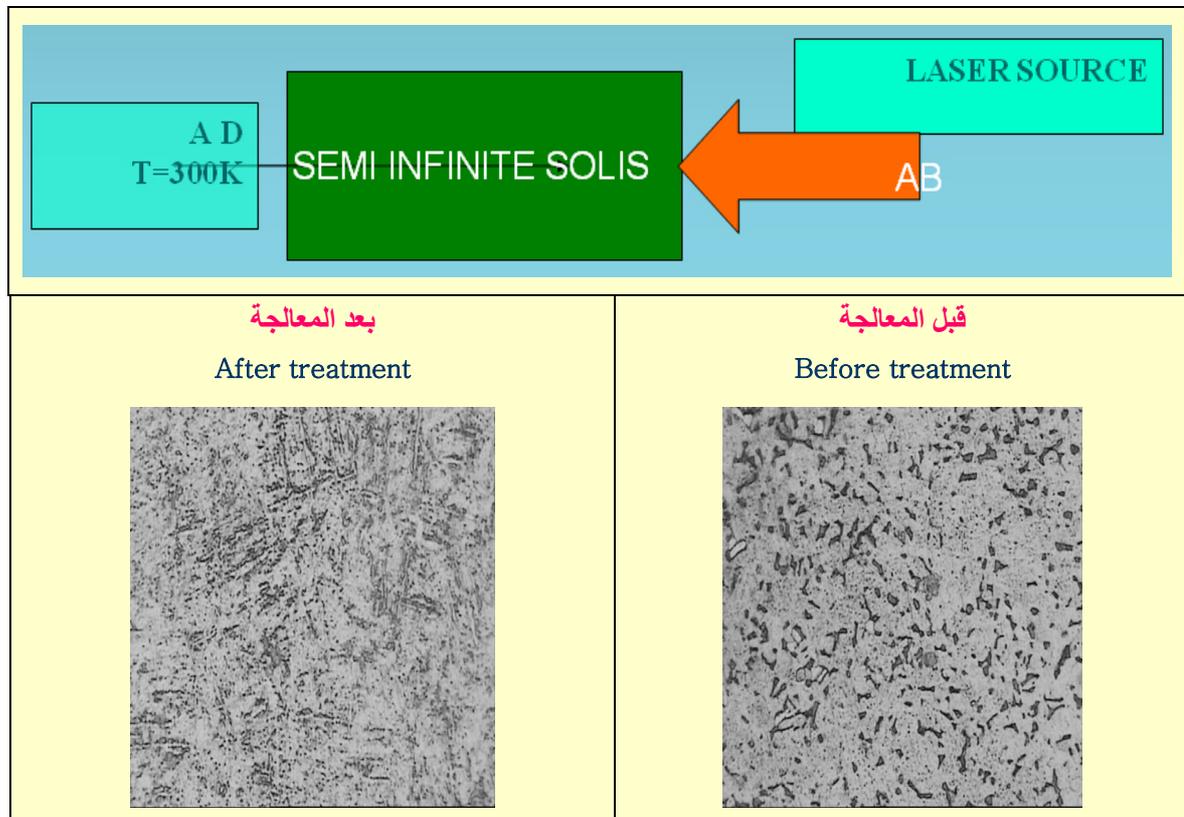
TOP THREE EGYPTIAN PATENTED INVENTIONS IN THE 21ST CENTURY

TITLE: **Laser irradiation technique**

INVENTORS: **Hebatalrahman A**



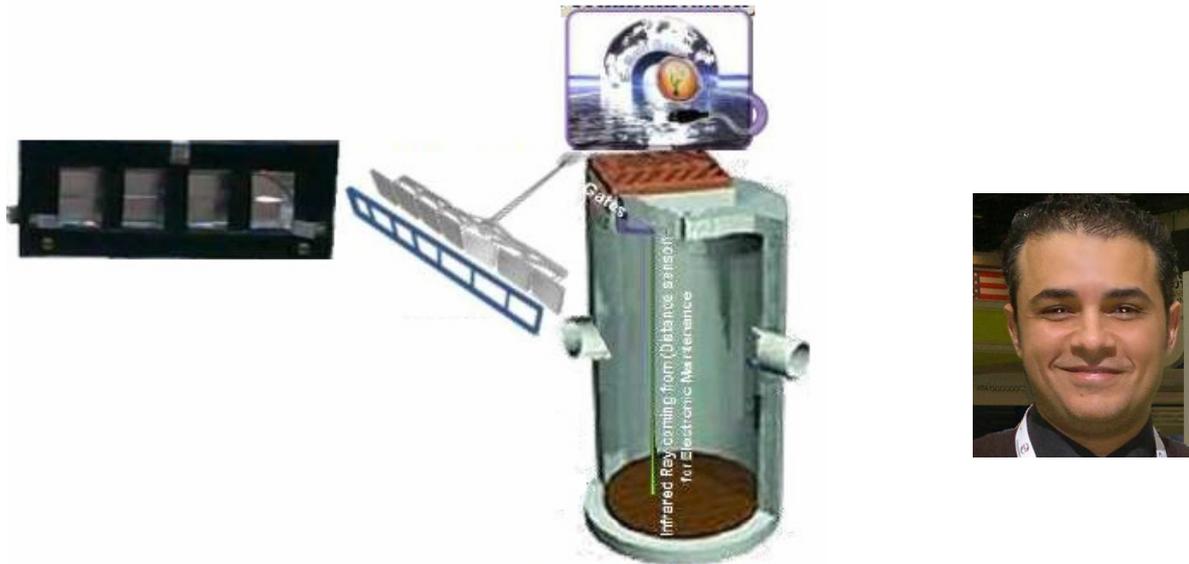
Titanium alloys are the workhorse alloys in different applications. To overcome high cost of these alloys the efficiency and life time of the alloys must be increased. Laser irradiation of Ti6Al4VELI at room temperature and in the normal atmosphere without any external media improve surface hardness and wear. Laser treatment is suitable for both field works and industry. The **improvement in** mechanical properties occurs due to microstructure changes without significant change in chemical composition, so laser irradiation is suitable for medical applications. The main idea of the new method depends on the the laser photon energy which is absorbed by the samples and cause microstructure changes which improve the mechanical properties without any significant changes in chemical composition. Importance of the subject Ti6Al4V is the black horse alloy in various engineering applications due to its light weight and high durability, therefore, **increasing** the efficiency of operation and lifetime is very important to improve economical feasibility Addressing of the alloys and overcome the problems





TITLE: E- Rain Gate – Automatic smart gates for storm water inlets with electronic maintenance

INVENTORS: Kaled A Elnems



New Innovation to prove the roles of Computer Program in our live and how it will control a lot of engineering fields to improvement the Infrastructure Maintenance and Operation (Storm water O&M) and increase protectively, accurate result and quality of life, being environmentally friendly (Green Management).

- (Automatically Smart Gates for Storm water Inlets (Open & Close) on rain time by (Water sensor) to Prevent the entry of sand in the drainage of rain or filled in it, leading to the accumulation of rainwater in the street outside the storm water Inlet
- With Electronic Maintenance by (Distance sensor) to clarify the proportion of the amount of sand inside the inlets without (removing the inlet cover or check it) the invention is particularly useful in tropical countries (torrential rains are common), or desert countries (wind distributed sand before rains), it reduces the risk of environmental damage by floods



TITLE: A Novel Approach to Inhibit HIV-1 Infection by Actively

Neutralizing the Antibodies of Reverse Transcriptase System

INVENTORS: **Sherif Salah**



This study introduces a new approach for HIV eradication based on a new enzyme combination (reverse transcriptase and DNA polymerase) formula for inhibiting and/or preventing this disease. The pilot study was done on ten patients who were all positive for HIV antibodies, and were never treated with antiretroviral medications. Those patients were registered under surveillance by HIV/AIDS Control Department at the Egyptian Ministry of Health (MOH). All of these patients have the same clinical symptoms of HIV/AIDS and consented to take this combination therapy in the form of subcutaneous injection of 0.1 cc twice daily for 24 weeks. At the end of therapeutic protocol, all of the patients' viral loads were undetectable (less than 16 copies/ml); also there was a significant increase in their CD4 cells counts to over 500 cells/ μ L. According to these findings, this treatment protocol may be promising therapeutic modality for treating HIV-1 infection causing Acquired Immunodeficiency Syndrome (AIDS).

Reference:

- 1) ((WIPO) World Intellectual Property Organization) Report for Inventions and Patents Under Subject: LEARN FROM THE PAST, CREATE THE FUTURE 2007 (pages 8 & 55) http://www.wipo.int/freepublications/en/patents/925/wipo_pub_925.pdf
- 2) Egyptian patent office, Egyptian Academy of Science & technology
- 3) Invention & Innovation development agency, Egyptian Academy of Science & technology



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