MINISTRY OF HIGHER AND SECONDARY SPECIALIZED EDUCATION OF THE REPUBLIC OF UZBEISTAN

ANDIJAN MACHINE-BULDING INSTITUTE

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QO'CHQOROV BOTIRJON

ESSAY

"PRACTICAL ENGLISH"

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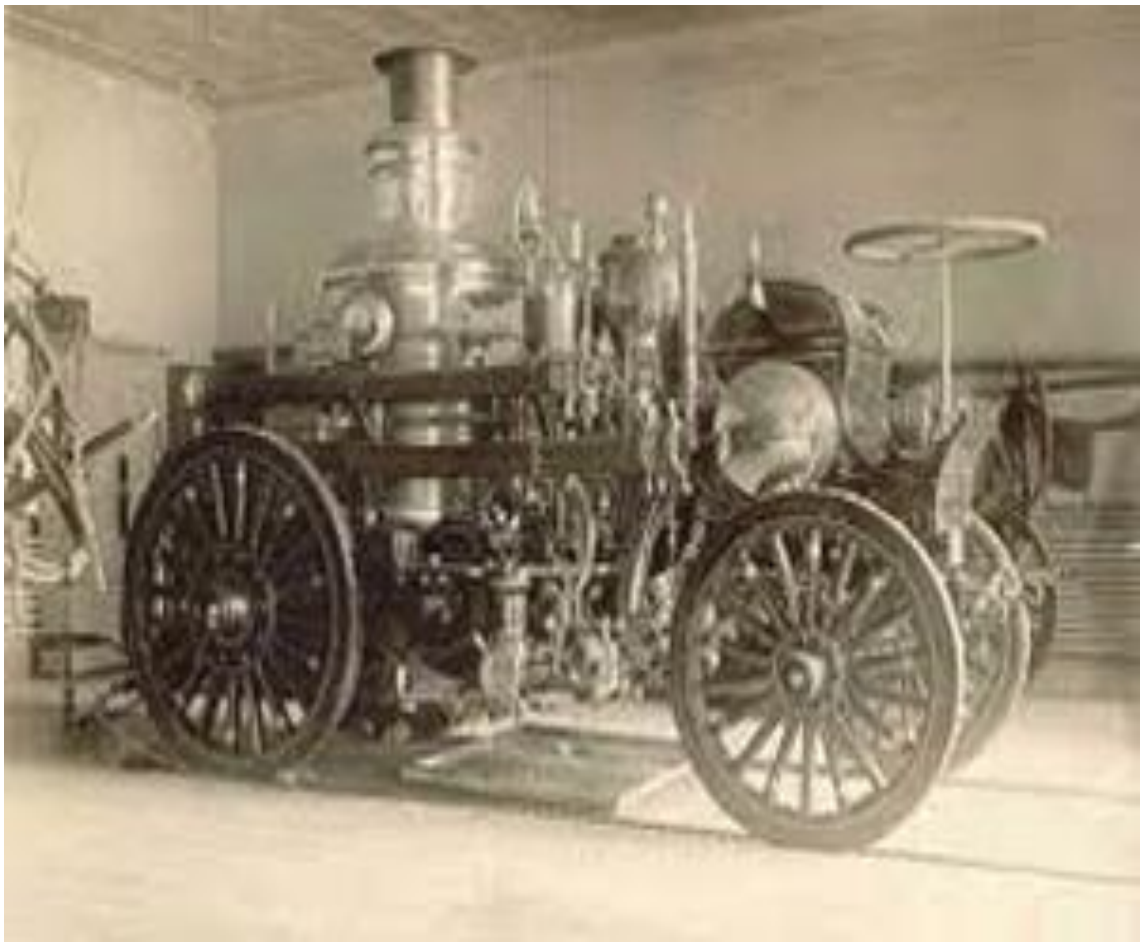
Electric motor Inventor: Michael Faraday Year: 1821

Had it not been invented, today we may not have dreamt about all the luxury cars, machines etc. None of the hot shot automobile and infrastructure companies would have come into existence and life wouldn't have been so easy. Yes, we are talking about an electric motor. An electric motor is an electric machine that converts electrical energy into mechanical energy. It was first invented by Michael Faraday, an English scientist who contributed to the fields of electromagnetism and electrochemistry. Electric motor was invented in the year 1821.

Greatest Inventions That Transformed the World Economy

Imagination is the exquisite human capacity to foresee what not there at present but can be in the future. And that's where new inventions come into existence which keeps startling the world with all new knowledge, power and zeal. There have been innumerable inventions since this world came into existence, but not all have succeeded to create history. Read on to know 10 inventions listed by rediff.com this brought a complete revolution to change the economy

Steam Engine Inventor: Richard Trevithick Year: 1801



A steam engine is high temperature engine that executes mechanical work using steam as its working fluid. Richard Trevithick, a British inventor and mining engineer from Cornwall invented engines using high-pressure steam. And that's where history was created and later became a major font of industrial revolution

ATM Inventor: John Shepherd-Barron Year: 1967

Automated Teller Machine, i.e. ATM, these three words has changed the banking experience forever. Today you will get all the facilities for which once you had to go to your bank and wait in long queues and all these is possible for only one man, i.e. John Shepherd-Barron. Barron was a Scottish inventor, who pioneered the development of the cash machine, popularly referred to as the ATM in the year 1967

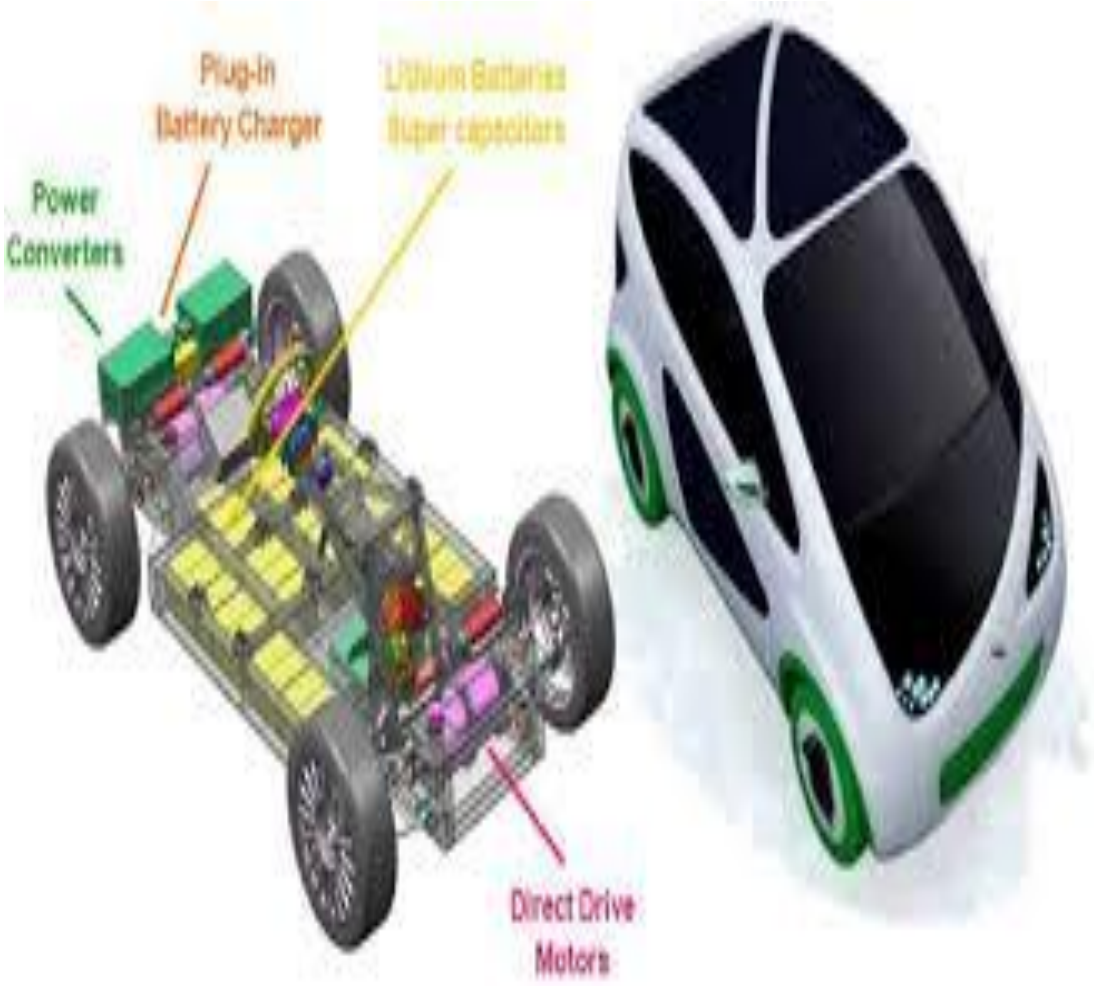
Chocolate bar Inventor: JS Fry & Sons Year: 1847

It is not only tastes awesome but is also a symbol of love, pride, joy and cheerfulness, yes we are talking about chocolates! The first chocolate bar was invented by JS Fry & Sons in the year 1847. J. S. Fry & Sons, Ltd. was a British chocolate company owned by Joseph Storrs Fry and his family. Today there are millions of varieties of chocolates with different taste, color and shape. Few of the biggest chocolate manufacturing companies comprise Cadbury, Nestle, Ferrero Rocher and many more.

ELECTRICAL ENERGY AND ELECTRICAL MACHINES

Volta made his experimental cell in 1800, producing for the first time a steady reliable electric current.

During the nineteenth century, the development of practical applications of electrical energy advanced rapidly. The first major uses of electricity were in the field of communications — first for the telegraph and the telephone. They used not only electric current but also electromagnetic effects.

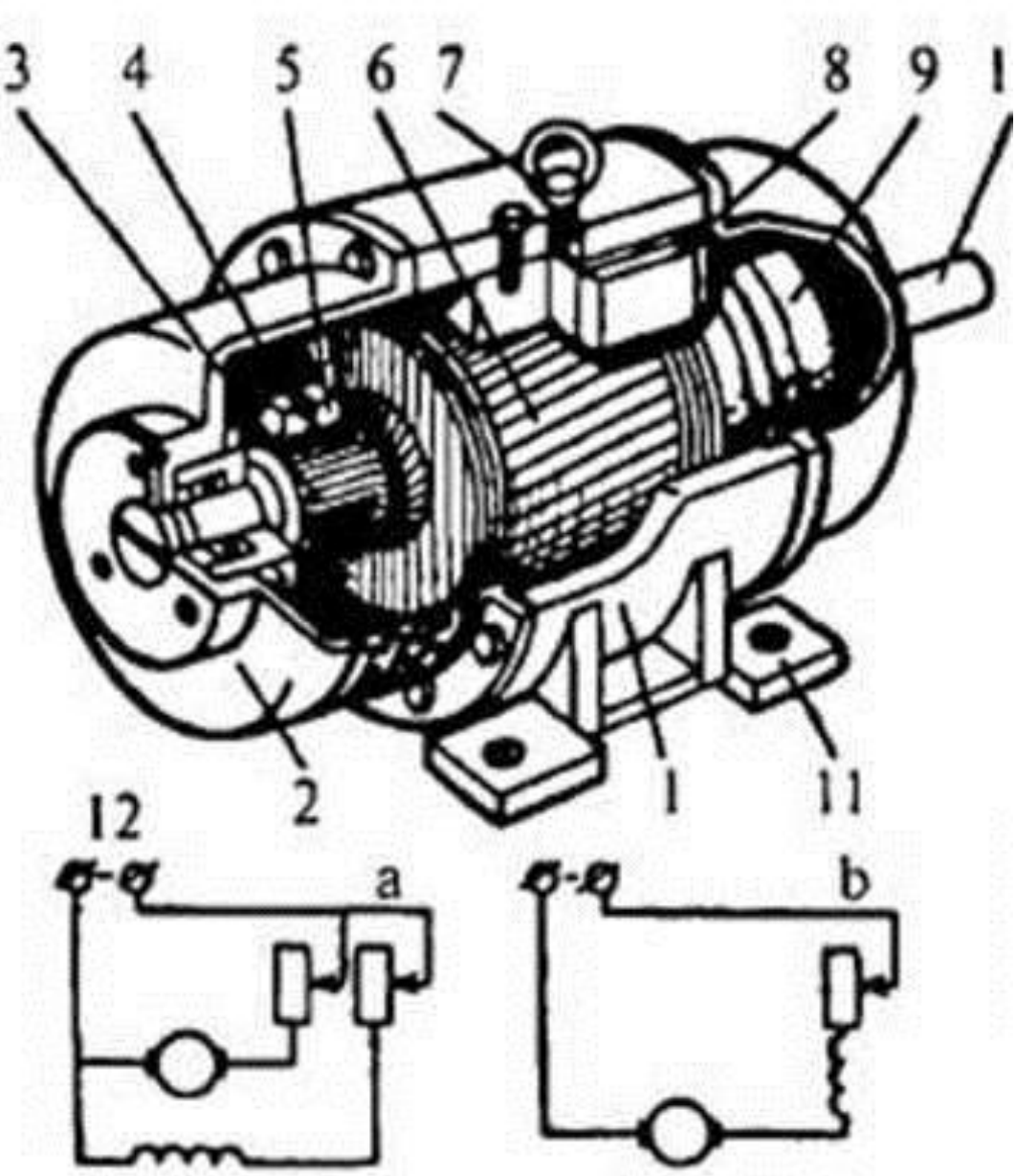


ELECTRICAL ENERGY AND ELECTRICAL MACHINES **Thomas Edison's invention of the electric light bulb was perhaps the most momentous development of all, but not because it was such a unique invention. It was momentous because it led to the creation of an electric power system which has since reached into nearly every corner of the world. Actually, other people were working simultaneously on the same problem, and Edison's claim to the invention was disputed. Perhaps Edison's most important claim to fame is his pioneering work in engineering, which helped to provide electric service for New York City in 1882**

ELECTRICAL ENERGY AND ELECTRICAL MACHINES

The application of electricity has grown to the point where most of us lead “electrified lives”, surrounded by a variety of devices that use electric energy. Less visible, but probably more important, are the thousands of ways industry has put electric energy to work. The direct-current machine is one of the most important ways

The Direct-Current Machine



Steel frame End-shield with ball bearing Commutator Brushholderwith brush yoke Carbon currcnt-collccting brushes Armature with main current-carrying winding Lifting eye-bolt Field coil, magnetic field pole Fan Power-transmitting shaft Base with holes for fixing bolts Electrical circuit diagrams for d.c. motors a)shunt connection of windings b)series connection of windings

Electrical machines are divided into alternating current (a.c.) and direct-current (d.c.) machines. The basic parts of a d.c. machine are the armature and electromagnets (or field coils). Coils wound on the pole cores form the excitation field of the machine. The armature is the rotating part of the machine. In its insulated slots is placed a winding connected to the commutator. Carbon brushes are placed in brushholders and contact the rotating commutator.

There are two electric circuits in the d.c. machine, the armature circuit and the excitation circuit. A d.c. machine is reversible: if the machine is rotated and the magnetic field is excited the machine sends a direct current into the external circuit through the commutator and brushes: the machine operates as a generator. If the armature and excitation winding are joined to a d.c. circuit the armature runs and the machine operates as a motor and converts electrical energy into mechanical energy