

## Hungarian Achievements and Inventions

Carburetor, helicopter, stereo radio, television, electric transformer, dynamo, holography, ball point pen, telephone exchange, krypton light bulb, automatic exposure, binary code, vitamin C, neutron bomb, Rubik's cube, jet propulsion, torpedo, contact lens, water turbine: they all have one thing in common. All of them are Hungarian inventions. Quite impressive for a nation that numbers less than 15 million, about the population of Florida.

Some of them were most successful, some of them were used by others, some of them were incorporated into a more advanced design. Others were not appreciated by their own inventors. The best example of the latter is the **electric motor**. The basic theory and the machinery was invented by Anyos Jedlik, a Hungarian university professor. Unfortunately he never envisioned a practical use for it. The German **Siemens** did. On homepage of the **Deutsches Museum** in Munich you can read the following:

*Ányos Jedlik's best known invention is the principle of dynamo selfexcitation. In 1827, Jedlik started experimenting with electromagnetic rotating devices which he called "electromagnetic self-rotors".*

In the prototype of the single-pole electric starter, both the stationary and the revolving parts were electromagnetic. In essence, the concept is that instead of permanent magnets, two electromagnets opposite to each other induce the magnetic field around the rotor. He formulated the concept of the self-excited dynamo about 1861, six years prior to Siemens and Wheatstone

Others were more successful:

**Rubik Cube:** Invented in 1974 by the Hungarian professor Ernő Rubik is a three dimensional mechanical puzzle, considered the world's best selling „toy”. To date, more than 350 millions were sold worldwide.

In 2009 the Rubik Sphere were introduced that will also „conquer” the World. The **Rubik's Sphere** is much more difficult to solve than the Cube..

**The Volkswagen** was invented by Porsche? Wrong! The concept was invented by a Hungarian engineer Béla Barényi

The case was finally decided in the Paten Court in Mannheim Germany in late 1954: The decision was clear - Béla Barényi invented the basic concept of the Volkswagen before Ferdinand Porsche.

If the name Béla Barényi seems familiar it is no wonder - he worked for many years at Mercedes-Benz where his main achievements were improvements in the passive safety of ordinary production cars - the safety steering column (also featured on the 1925/26 project) among them. Some even say that Barényi was the father of passive safety!

Béla Barényi retired in 1974. This car designer was probably the most productive inventor in his field, with approximately 2500 patents to his name. From 1939 to 1974 he worked for Daimler-Benz, heading the strategic planning

department for a significant period. Several of his inventions were decades ahead of their time.

**Oil fires** set by Saddam Hussein: When the Americans were too slow extinguishing the fires, the Hungarians were also called in. They have revolutionized the the trade, (up to then monopolised by “Red” Adair,) with their “Big Wind” monster, that easily put out the fires in minutes. The simple machine consisted of a stripped down tank and two surplus jet engines. (The Daily Telegraph and Miror November 4, 1991 and Daily Mail October 31, 1991).

**Desert Storm Strategy: Brigadier general—Huba Wass de Czege** behind the military's victory in Iraq: In 1982, Wass de Czege had written a major revision of the Army's war-fighting manual, FM 100-5. His rewrite outlined a strategy emphasizing agility, speed, maneuver, and deep strikes well behind enemy lines.

By the time of Desert Storm, a small group of Wass de Czege's students had been promoted to high-level posts on the staff of Gen. H. Norman Schwarzkopf's Central Command. This group of officers, who self-consciously referred to themselves as the "Jedi Knights," designed the ground-war strategy of the first Gulf War, and it was straight out of Wass de Czege's book—the feinted assault up the middle, the simultaneous sweep of armored forces up to the Iraqi army's western flank, the multiple thrusts that surrounded the Iraqis from all sides, hurling them into disarray before their final envelopment and destruction.

**The ball point pen:** was invented by a Hungarian József László **Biró**, a journalist and inventor who had emigrated to Argentina, obtained a patent on the ball point pen on 10 June 1943. Although there had been several attempts before, the first practical solution was found by Biró and Andor Goy, who participated in his experiments in Budapest. In some countries the pen is known as the “BIRO”

For hundreds of other Hungarian inventions see:

Andrew Simon: MADE IN HUNGARY

László Sipka: SOME HUNGARIAN INVENTIONS

On the attached CD