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***Oil Revolution Started with the Poles***

The kerosene lamp owes its existence to two Poles—Ignacy Łukasiewicz and Jan Zeh. Another Pole, Witold Zglenicki, found vast deposits of crude oil in the area of the Caspian Sea. Ignacy Mościcki was not only the President of Poland before WW2, but also a chemist with a specialty in nitrogen fertilizers. The achievements of these Poles had a great impact on our civilization, spurring the development of the oil industry.

People have been familiar with petroleum for thousands of years. At first, they encountered it in the regions where it seeped to the surface, calling it "rock" or "earth" oil. However, its potential as a highly efficient source of energy had not been discovered until 1852 when a young Polish graduate of pharmaceutical studies, Ignacy Łukasiewicz, bought a few bottles of "rock oil" from Abraham Schreiner, a Jewish merchant. He persuaded his colleague Jan Zeh to carry out joint experiments in "Under a Golden Star", a Lvov pharmacy where they both worked. Once they constructed a distiller strong enough to withstand the pressure of hot crude oil, Łukasiewicz started treating the viscous liquid with different substances to eventually discover that it was the addition of sulphuric acid and a sodium solution that separated it into fractions with different properties: flammable gasoline at the top followed by kerosene, oils and lubricants and bitumen at the very bottom.

Before the new chemical compounds changed the world, the two pharmacists had parted ways. Zeh had a talent for seeing the glass half empty, whilst Łukasiewicz was a natural businessman. The fraction he was most interested in was kerosene, but the lamps that existed at that time were utterly unsuited to the temperature and speed at which it burned. Convinced that you need to create a market for a new product, Łukasiewicz asked his friend Andrzej Bratkowski, a tinsmith, to build a lamp that would be ideal for kerosene. The lamp was made in March 1853 and enjoyed several decades of success until it was ousted by electric bulbs. The technology of crude oil refining proved immortal, though.

Oil brought Łukasiewicz great wealth as he built more and more refineries in Galicia. Even before John D. Rockefeller, the pharmacist understood that money was made not by extracting oil, but by processing and distribution. He dominated the European market, his refineries treating over 21,000 tonnes of petroleum annually by 1874. At the same time, Nicolaus August Otto and Karl Benz, inventors of the internal combustion engine, realised that the most efficient fuel they could use was gasoline refined by means of Łukasiewicz’s method. The demand for the product shot up.

The opportunity was seized by another Pole, Witold Zglenicki, who settled in Baku in 1891. The local oil fields were being developed by the Nobel brothers' company who saw in the Polish geologist a valuable business partner. Not only was he excellent at finding new deposits, but he also designed a device for measuring shaft curves which reduced the number of uncontrolled explosions and fires of new wells.

The problem that Zglenicki set his sights on was how to extract crude oil from under the Caspian Sea. From 1896 he kept perfecting his design of a rig that could be used for offshore drilling. Its implementation was interrupted in 1904 as Zglenicki's health deteriorated due to acute diabetes. After his death, his ideas caught the eye of American oil prospectors. Today, offshore oil platforms account for about one third of crude oil supply globally.

Another technology that is extensively used by the oil sector was developed by Ignacy Mościcki. Already renowned as a great scientist and inventor (he had 40 patents to his name), Mościcki was approached by the "Metan" Scientific and Technical Research Institute after he had moved from Switzerland to Lvov. The oil industry in Galicia grappled with saltwater contamination of deposits. Every year, thousands of tonnes of contaminated oil that could not be refined were dumped into rivers. Mościcki was told about the difficulty and, on his way back home, came up with a solution. His idea was to evaporate pressurized oil by a stream of hot exhaust gases or hot air and then liquefy the different fractions. The first technological line based on Mościcki’s concept was built in 1921 in the Jedlicze refinery. It immediately attracted the attention of American investors and his patent soon made its way to the USA. Not many people remember that. Just like not everyone remembers about the inventor of drilling platforms or the fact that the greatest achievement of the pharmacists from the "Under the Golden Star" store was hardly the kerosene lamp.

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