The history of the alarm system

Find out more about the history of the alarm system - from the very start with the first patent in 1853 up to the latest developments of these days.

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Over 160 years of security

Hard to believe: The first electro-magnetic alarm system in the world was already patented on 21 June 1853 in the name of a man called Augustus Russell Pope, an inventor from Sommerville in Boston. Up until then, people had mainly relied on the loud chatter of their startled geese, the integrity of their guard dogs or mechanical ringing to catch any intruders on their property.

Pope's prototype – such a simple and effective principle

Pope's battery-operated gadget may seem very simple from today's point of view but it proved extremely effective against intruders. It reacted to the closing of an electric circuit: doors and windows were connected as independent units by a parallel circuit. If the door or a window was opened and the electric circuit closed, the sudden flow of current caused one of the attached magnets in the system to vibrate. The electro-magnetic vibrations were transmitted to a hammer which then struck a brass bell. The special feature of Pope's invention was that the alarm could not be switched off by merely closing the windows or doors. A switch spring mounted in the wall above the door kept the current interrupted in this case as well, so that the bell could keep ringing.

Despite the pioneering work of Pope, most people usually assume that someone else was the father of the modern alarm system. Namely Edwin Holmes, however he was a businessman and founder of the first company for electrical alarm systems, who had in fact bought the rights to Pope's invention in 1857. It was he that led the way in the business of electro-magnetic alarm technology with his “Holmes Electric Protection Company”.

Edwin Holmes – the shrewd strategist

Holmes was not blessed with Pope's ingenuity but proved to be a shrewd strategist. He was way ahead of his time when it came to advertising. To counter the widespread fear and scepticism of electricity in the 19th century, he published the names of prominent customers in the New Yorker magazine who were willing to put their trust in his alarm system. Whenever he printed an advertisement, it was always together with a picture of his “burglar alarm telegraph” and always the same signature. Holmes pursued the principles of modern marketing instinctively so that Pope's invention gradually became Holmes' brand.

The trust and fascination of people in the novelty of the telegraph at the time was also exploited by Holmes for business purposes in two ways: firstly in the product name of his alarm system and also in the technical use of the numerous patent rights for insulating telegraph wires.

A smart move – the New York City telephone network as an alarm control system

It didn't take much imagination for Holmes to use the patent for constructing a central station where the weatherproof telegraph cables of his alarm systems could converge. To enable his customers' alarm system cables to run straight through the city to his office, Holmes moved to the top floor of a building in downtown New York. It wasn't long before famous jewellery stores, such as Tiffany or Lord & Taylor, belonged to some of his customers.

But the greatest coup for the company was achieved by his son Edwin T. Holmes. He came up with the idea of using the unused telephone lines of businesses in Boston at night for their own alarm systems. After the huge success of this system in Boston, Holmes established close contacts with the phone company and soon acquired the exclusive right to also use the New York telephone network for his alarm systems with its well established and connected lines.

Edward A. Calahan and the idea of the central monitoring station

Another milestone in the history of modern alarm systems was made after Holmes, by a young man named Edward A. Calahan. In 1867 the qualified telegrapher invented the first gold and stock ticker which meant that price changes on Wall Street could be rapidly transferred to the investors. The messenger boys who delivered the notes to all the stockbrokers then had even more to do, as there was much more information available within a very short time from that point on. But what has all this to do with the development of electric alarm systems? The connection came about by the president of the company soon founded for the production of the stock ticker, Elisha Andrews, who was now Calahan's boss. The poor man was taken by surprise in his home one night by a burglar and seriously robbed. Shocked by the incident, Calahan felt obliged to protect his boss from such dangers in future.

His plan was to fit each of the fifty neighbours in the proximity of Andrew's house with one emergency call box and one bell and then to connect the houses to one another. For each household call box, a certain number of bell rings was determined that could distinguish the houses in the event of a burglary. If an alarm rang in house A, houses B and C would know that house A was probably being burgled.

While he was working on the first emergency call apparatus, Calahan had another decisive idea: burglaries occurred particularly frequently in cities – if his system were to not only trigger an alarm but also provide a service then an emergency central station was necessary which could react to incoming calls for help. He began by dividing New York City into districts which were all to be connected up to a central monitoring station. In the event of an incoming emergency call, a messenger boy would be sent out to promptly arrange help for that particular district. The advantage of the call boxes was that they required very little maintenance. They were run on the mains supply from the local central station. In 1871, Calahan helped form the American District Telegraph (ADT) company. The company was highly successful and held offices in Brooklyn, New York, Baltimore, Philadelphia and Chicago from 1875.

Calahan's emergency call boxes became standard use for police and fire services, as well as for messenger services. By the end of the 1870s, two thirds of all stock sold was made via messenger boys from ADT.

The 20th century – new high-tech alarm systems

The twentieth century also saw major developments in alarm technology. Once Calahan's emergency call box design had become more affordable after the second world war, more control points could be used for medical services, police and fire departments, thus improving the security of the population nationwide. In the 1970s, engineers integrated the first motion detectors in their alarm systems. The 80s and 90s were particularly marked by growing democratization, in which alarm systems become a standard feature of building security. Finally, the first wireless alarm systems came on the market and revolutionized alarm technology as well as on a practical level – until the unavoidable tangle of cables eventually passed away.

ABUS Security-Center and the fusion of mechanics and electronics

Today, even complex premises can be almost completely secured by the interaction of state-of-the-art motion detectors, high-resolution video surveillance technology and electronic detectors. Yet more major technological innovations still keep surprising people. A few years ago, in 2008, product developers in modern wireless alarm technology at ABUS Security-Center managed to integrate a combination of mechanical and electronic protection in just one single alarm system. Any attempts at intrusion are averted with high mechanical resistance force and detected electronically at the same time. For example, any burglar who wants to pry open a window will find it virtually impossible to break into the house due to the claw-like steel bars. In addition, any attempt to force entry that is detected is forwarded to an alarm control panel, which then reliably sets off a loud alarm and the offender is forced to escape.

The story of the modern alarm system is certain to have many more exciting chapters for us – let's wait and see what other technical innovations have in store for us over the next few years. ABUS Security-Center wishes all technology professionals and hobby inventors plenty of room for inspiration and new ideas so that the history of security can continue to advance!

Sources:

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