# **KYNOCHTOWN**

Before we get to the history of Kynoch with also a link to Alfred Nobel, a background to earlier manufacturers and suppliers of ammunition should be mentioned. Eley Limited is a British manufacturer of firearms cartridges. Founded as Eley Brothers by Charles and William Eley in London in the 1820s, the company purchased the patent rights to the "wire cartridge" in the spring or early summer of 1828.

The patent for "wire cartridge" was issued by the English Patent Office on 28 November 1827 to Joshua Jenour under Patent No. 5570. Jenour had been born in Fleet Street, London in 1755 and had previously been the owner and manager of the Daily Advertiser, a London newspaper. He succeeded his father as the paper's printer and joined the Worshipful Company of Stationers in 1776. The Daily Advertiser ceased publication in the 1790's and after inheriting a large fortune from his uncle, Matthew, he retired from business entirely to become a writer.

His publications included poetry, translations, and short stories; one with the intriguing title "Horrible Revenge; a Tale". He was known for his progressive views, publishing "Observations on the Taxation of Property" in 1798 and serving as Overseer of the Poor at Chigwell, where he tried unsuccessfully to build a pest house. He appears to have lived quite extravagantly on his inheritance, spending £10,000 p.a. and leaving his family penniless by 1810. In 1827 he patented "Eley's wire gun cartridge", intended to prevent the shot from scattering too widely. In later life he lived in Darnley Road, Gravesend, where he died aged 102.

In 1828, Charles and William Eley established a factory in Charlotte Street (London), later moving to Bond Street (London). Initially, Charles Eley had been the primary owner of the concern and the original wire cartridges had only the name of Charles Eley on them. The initial attempts to sell the Eley Wire Cartridge went poorly and Charles Eley withdrew from the business. During the mid-1830s, William Eley reinvigorated the company and began selling the "Improved Patent Wire Cartridges".



50

PIN-FIRE

CARTRIDGES FOR REVOLVERS In 1837, the company added percussion caps to their range and though William was killed in an explosion in 1841, his three sons helped carry on the business. His eldest son William Thomas forged an alliance with Samuel Colt, the two patenting a skin cartridge for use in the latter's revolvers.

The Eley family name can originally be traced back to their agricultural roots in Derbyshire. However, the Eley family is much better known for their dealings during the mid-18th century as London silversmiths.

Unfortunately, at the age of 47, William Eley inadvertently blew himself up while trying to experiment with a new percussion cap.

Despite this terrible tragedy, the Eley Cartridge Company was eventually led by William Thomas Eley (son of William), and his two brothers Charles and Henry. But it was William who became the driving force of the business, growing it into one of the largest ammunition-producing factories in the world. William was an inventive genius in terms of cartridge improvements, but he also masterminded a revolutionary new way of producing percussion caps.

> By 1860, they were making pinfire shotshells and first listed them for sale in The Ironmonger & Metal Trades Advertiser.

> On 13 April 1861 William Thomas

Eley took out a patent for an improvement to the pinfire shotshell. The key aspect to this patent was to better fix the cap into the case and prevent the pin from flying out of the case on detonation.



The firm of Pursall and Phillips operated a 'percussion cap manufactory' at Whittall Street, in Birmingham, in the mid-19th century. In 1856, Scottish entrepreneur George Kynoch joined the company. 1858 Patent by William Pursall, of No. 22, Whittall street, Birmingham, in the county of Warwick, Percussion Cap Manufacturer, who has given notice in respect of the invention of "improvements in the manufacture of percussion caps."

An explosion in 1859 destroyed the works, killing 19 of the 70 employees. As a result, the firm moved to Witton in 1862, on a site adjacent to the London and Northwestern Railway's Grand Junction line. 1863 Pursall retired from his business.



George Kynoch was born in Peterhead Aberdeenshire on 22nd August 1834, the youngest son of John Kynoch, a journeyman tailor, and his wife Margaret Ballentine. The family lived in humble circumstances and after education at the local national school, and then obtained employment first in an insurance office in Glasgow, and then as a bank clerk in Worcester. After a short while he moved to a larger bank in Birmingham as ledger clerk. By about 1856 his financial ability and ambitious nature were already apparent and very soon he exchanged his safe employment for the dangerous manufacture of copper cap igniters and ammunition, by going to work for Pursall and Phillips of Whittall Street, Birmingham.



In 1863, George Kynoch took over the business, which was subsequently renamed G. Kynoch and Co. A further series of explosions in the 1860s and in 1870 led to dozens of deaths and hundreds of injuries.

1863 February 3rd. Married at Edgbaston to Helen, the daughter of Samuel Birley, a well-to-do jeweller at Edgbaston, from whom he later separated. Aided perhaps by capital from his father-in-law as well as his own ability, his company prospered.

The growth of business accompanied by moves to the Grays Inn Road in 1864, and by the development of the Boxer cartridge designed by Colonel Boxer - Chief Superintendent of the Royal Arsenal, Woolwich - and adopted by the government in 1866. In 1874, they went public to fuel expansion, but lost momentum after 1881 when William Thomas Eley died. His brothers remained in control until 1901, but shareholders accused them of running it as a private company. Nevertheless, innovations included smokeless powder, and in the 1890s, 400 types of cartridges were produced. They had established a factory at Tile Kiln Lane, Edmonton, London by 1865.

By 1883 he was living the life of a gentleman at Hamstead Hall in Handsworth and enjoying the shooting on the 300-acre estate, while his company had depots and agencies in many parts of the world.

In 1894, the company transferred production to enlarged premises at Angel Road which included a tramway to its wharf on the nearby River Lee. Twice the War Office removed the company from their Approved List of suppliers due to poor quality .303 British ammunition, much of it returned from abroad as unusable. Moreover, poor facilities meant the company had to buy in components, unlike their competitors.

On the 6th of July, 1884, the ammunition business was formed into a limited company; Mr. Kynoch, who was the vendor, receiving  $\pounds 260,000$  in cash,  $\pounds 10,000$  in fully-paid preference shares, and the whole of the  $\pounds 40,000$  of ordinary shares.

Another explosion occurred in 1900 killing two workmen and the works manager. The directors squabbled amongst themselves, and in 1906 the mostly female workforce went on strike when their wages were cut, with the Board of Trade appointing an arbitrator. A leading ballistics expert F.W. Jones, was brought in to improve matters and built a 107ft (32.6m) shot tower in 1907. The factory was ill-adapted to mass production - it produced 209 million .303 cartridges in World War I compared with 2,373 million at Kynoch's, Birmingham factory - but its specialised skills made it ideal for innovation, such as the preparations of munitions for aircraft.

After the war, Eley, along with other firms, became part of Explosive Trades Ltd, soon part of Nobel Industries. Many Belgians had been billeted in Edmonton as refugees and many, as elsewhere, worked in the armaments industry. This led to natural links between the two countries, and in the 1920s Eley went into partnership with Fabrique Nationale (FN), buying out the Belgian firm of Cartoucherie Russo - Belge. However, the need for ammunition had slumped, and the Angel Road factory closed in 1921, all production being transferred to Nobel's factory in Waltham Abbey. In 1926 the Eley business was bought from Nobel by IMI industries.

In his Sherlock Holmes story The Adventure of the Speckled Band, Arthur Conan Doyle has Holmes tell Dr. John H. Watson that an "Eley's No. 2" is "an excellent argument with gentlemen who can twist steel pokers into knots.



The Aston Conservative Association elected him its president in 1885, and this constituted his introduction to the political life of the Manor. A good deal of local polarity came to him through these means, and when the dissolution of Parliament took place upon the defeat of Mr. Gladstone's Home Rule project in 1886, Mr. Kynoch was brought out as a Conservative against Mr. H. G. Reid, the retiring Home Rule member, and defeated him by 782 votes, the polling being Kynoch 3,495, and Reid 2,713. Mr. Kynoch's speeches in the election were of a very violent character, and it will be remembered that in one of them he declared that if the Ulstermen should rebel against Home Rule he would give them 10,000 rifles and 2,000,000 cartridges.

1886 Elected MP for Aston, as a Tory, and the following year became president of the Aston Villa Football Club. These activities did not go happily with his commitments to the company and, with pursuit of his personal business interests, frequently resulted in his absence from Witton. He was well known in the Russian, Turkish, and Romanian royal courts, where he travelled to make sales. Differences with the London-based directors led to non-co-operation

and friction resulted.

In 1888 Kynoch by himself, by then a very sick man, left England for South Africa. On 28<sup>th</sup> February 1891, George Kynoch died in comparative poverty at Johannesburg, and was buried in the Braamfontein Cemetery.

In 1875, since explosives were wisely no longer allowed to be shipped up the Thames beyond Mucking Point, the Thames Conservators licensed storage hulks to moor in Hole Haven Creek, where the explosives were transferred to barges.

The first license was given to the British Dynamite Company in April 1875 against the wishes of the Commissioners of Canvey and those of Fobbing Levels.

More than a dozen hulks were moored between Hole Haven Point and Pitsea, gunpowder being transferred from them to caves along Benfleet Creek. Those vessels on the Canvey side of the Creek were named Swift, Amy, Mineroa, Pilgrim, Diamond, Gem, and Woodpark. Three others lay on the Corringham side.

**1891** - Meticulous attention to quality within the factory is bringing its own reward in the form of additional Government contracts. The Company is complimented by H.M. Chief Inspector of Explosives on its safety arrangements. In addition to its military ammunition work the Company is producing half a million sporting cartridges a week. Annie Oakley, on tour with Buffalo Bill, pays tribute to them.

The Water Street mill is closed and production concentrated at the developing Lodge Road factory; a cupro-nickel casting shop is built at Witton; and a part-time consulting metallurgist is appointed. Map of the West end of Canvey showing Hole Haven Creek and part of Brickhouse Farm and The Coast Guard Station which was in the moored Hulk the 'Emulous' before the Coastguard Cottages were built near the Lobster Smack Inn. The Map also shows Kynochtown on the left.

#### 1893-1896

The Kynoch's Company enter the field of high explosive production by purchasing a Yorkshire company, Shortridge & Wright. A new factory is built (1895) on a 170-acre site at Arklow on the east coast of Ireland to produce cordite. Very quickly gelignite, dynamite and Kynite will be introduced to the range. And such is the success of this venture that a second factory is soon planned, this time on a 750-acre site in Essex, christened "Kynochtown". Glycerine will also be produced at the Lion Works, together with soap and candles (7- 8 tons of them per week) made from the by-products of glycerine manufacture.



A Siemens-Martin steel melting plant is installed at Witton to supply Birmingham manufacturers with a variety of steel castings and to permit the manufacture of shells of various types including armour-piercing.

A new Bullet Shop is created. Witton's first rolling mill is laid down together with a casting shop. Its purpose is to satisfy Lion Works's need for the brass required for ammunition production, leaving the Lodge Road factory to concentrate on trade with third parties. The Company is rolling 100 tons of brass a week.

In 1895 the Kynoch company built an explosives factory east of Shell Haven Creek, Essex (now known as Coryton). This opened in 1897, with an estate for employees called Kynochtown. Products included cordite, guncotton, gunpowder, and cartridges. After World War I many of the UK ammunition and explosives manufacturers were brought together under Nobel Explosives to become Nobel Industries, which was a founding element of Imperial Chemical Industries Ltd (ICI) in 1926. Once Nobel Industries, including Kynoch Ltd, had merged to form ICI, the original Kynoch



factory in Witton became the head office and principal manufacturing base of the "ICI Metals Division". Kynoch, along with names such as Eley, became brands of subsidiaries.

#### Kynoch Limited – Thames Explosives Works – Kynochtown

In 1895 the Birmingham based company of Kynoch & Company (Kynoch Limited after 1897) purchased Borley Farm which comprised 750 acres of land along Shell Haven Creek on the north banks of the River Thames to the south-east of Corringham.

With the advent of the Boer War demand for Kynoch's traditional cartridge products had significantly risen allowing them to expand their operations. Production at the new site, known as the Thames Explosive Works, commenced in 1897. In addition to cartridges the works also initially produced cordite, gun cotton and gunpowder. By 1899 the works employed 600 people.

In 1898, Kynoch's decided that it was necessary to build a rail link with the Thames Haven Branch of the London, Tilbury and Southend railway (LT and SR) and also to bring in workers who lived in Corringham. A light railway order was application was made in November 1898, under the name of "The Corringham Light Railway". The Corringham Light Railway was separate from Kynoch's by law but was in actual fact owned and run by them. Construction work started in 1900. The first section, between the factory and Thames Haven Station, was opened for goods traffic in January 1901. The final section was opened for passengers in June 1901. It was a privately operated explosives works belonging to Kynoch Limited. Initially engaged in the manufacture of cordite, gun cotton, gunpowder, cartridges and later, in the Great War, additionally produced shell cases, acetone and detonators also.

Covering a distance of just over 23/4 miles, the line was built to standard gauge and steam operated for its entire life. Two stations were provided; Corringham and Kynoch Town (later renamed Kynochtown and from the 1920s Coryton), and access to the main network via a triangular junction and short spur which linked the line to the Thames Haven branch.



#### block is opened at Witton

1904 A new office

**1906** - A second Irish paper mill is purchased. Negotiations start on the purchase of a South African explosives factory. A project is launched to establish "a pleasure resort" on Canvey Island complete with pier and promenade.

New plant to make soap is installed at Witton and at Eyre Street to make tintacks. The metric system is introduced into the nine Company factories, not wholly successful as the Chairman is 70 years ahead of his time.

A more successful initiative is the establishment of the

Research Laboratories comprising two large rooms and two small ones launched with confident expectation of success: "....it is certain that the Kynoch Metallurgical Laboratory, with its motto of 'Thoroughness', has a brilliant future".



## 1907-1910

The trading results for the 1906 financial year show a big deterioration and those for 1907 reveal an 80% fall in profits from their normal level. No dividend is declared. A debenture stock issue is undersubscribed, and the Company is forced into drastic cost cutting measures, including the dismissal of staff. This decline in the Company's affairs is due to the rise in material costs and a reduction in Government orders, due partly to the "cordite scandal" whereby a rejection by the Government of a large consignment of cordite leads the Company to take legal action against its customer. Relationships are soured. The Government refuses to do business with the Arklow plant, now disposed of and renamed Irish Manufacturers Ltd. in an attempt to blur the link with Kynoch, and the new company quickly fails. Cost cutting continues up until 1910: there are protracted shutdowns at Witton and elsewhere. The Endurance Works at Stirchley is sold off and the Company's convalescent home at Llandudno is disposed of.

Despite its large size the new explosives plant in South Africa, built to provide all the Transvaal goldmining groups, cannot cope with the demand and needs extension.



A 1910s postcard image of the outside gates of the Thames Explosive Works. The lions on each side of the gate columns being a direct reference to Kynoch Limited's lion trademark and a copy of that above their main works site at in Witton, Birmingham.



1914-1918 - With the outbreak of the Great War demand and production of

cartridges on the site rose from 3.0 million to 7.5 million a week and additional munitions related products were manufactured. These included acetone, shell cases and detonators. Staffing level at the site rose to the order of 5 to 6,000, most of whom were women. At the end of the war demand for the work's products collapsed resulting in its closure in January 1919. with much of the site's machinery, wooden buildings and other facilities being publicly sold in a 4-day sale held in November of the same year.

Like other munitions works of the Great War period the site's workforce comprised a high proportion of women from the local area. While some of the local employees travelled to work via company owned lorries many of others travelled in and out of the site, along with raw materials and products, via works passenger trains on the Corringham Light Railway. This purpose-built line served the sites needs and connect it to the national rail network.

Like other such explosives works the site was extremely well equipped and many of the working areas were protected behind blast proof earth bunds. In addition to specialist production areas the works was served by its own internal and external road network, security gate house, power station, offices, warehouses, jetty, male and female worker's canteens, laboratory, ambulance station and locomotive sheds.

As time goes on huge contracts follow for shell cases, detonators, cordite, acetone and other products . At the peak of the war effort 18,000 people are working at Witton. Their typical weekly output will be:

- 25 million rounds of rifle ammunition
- 700,000 rounds of revolver ammunition
- 5 million cartridge clips

- 110,000 cartridge cases for field guns.

Many of these 18,000 are women, known locally as "Kynoch's Angels".

By the war's end 3.5 billion small arms cartridges will have been produced and there will be a weekly cordite output of 200 tons, a ten-fold increase over the previous level. The Company has to look forward to a post-war period when demand for these products will fall drastically and national capacity will far exceed the business available. The future is one of unavoidable rationalisation, an "explosives merger".



# Women workers at the Thames Explosives Works, c.1910s

As the war progressed and demand for the work's products increased, as did its labour requirements. In response to this Kynoch built a dedicated workers colony to the southwest of the site. This became known as Kynoch Town or Kynochtown. Although largely constructed of wooden huts and sheds in addition to the segregated men's and women's accommodation blocks Kynochtown also comprised its own railway station, post office, general stores, Worker's Institute, school, hospital, Y.M.C.A., cinema, managers houses, sporting facilities (which served the work's own ladies football team) and a large recreation hall were social events were regularly held.



The Thames Explosives Works' Gate House and Y.M.C.A. hut, c.1910s.



On nearby Canvey Island the company also built its own works hotel for the use of visiting salesmen and company officials.

The Kynoch Hotel on Canvey Island, c.1910s.



## The women's site canteen at the Thames Explosive Works, c.1910s

Like other munitions works of the time the shift hours were long, and the work could be dangerous, although reasonably paid. In keeping with other similar industrially sensitive sites the works were also permanently guard by the army. The additional threat from Zeppelin raids was also a real one and during air raids the workers often evacuated onto the nearby marshes for safety.

#### Associated Token, Check & Pass Issues:

Check types 2, 3, and possibly 5 could equally belong to Kynoch Limited's initial factory, the Lion Works located at Witton in Birmingham. Check type 5 is arguably more likely to be from the Thames Works as the time checks used at the Lion Works were identified as such on their reverse sides.



# Pay Collection Identification Check (Date: 1897 to 1919)



#### Time Registration Check

Obverse: Legend around upper half reads \* KYNOCH LIMITED \* and around lower half TIME CHECK with a stamped number 381 above a raised line in the centre field plus above the stamped letters Y and L (inverted).



#### **Canteen/Refreshment Tokens**

Obverse: Raised legend around outer edge and within an outer beaded border and inner circle reads – KYNOCK LIMITED – THAMES DINING HALL In small, raised letters around bottom of inner circle is

the maker's signature SALE . BIRM (Maker: H.B. Sale Limited of Birmingham)





Notes:

The exact location of the Thames Dining Hall referred to in this token is unknown, but it is possible that it may be identified with either the men's or women's site canteens which are highlighted in the site map below in blue and red, respectively.



The site of the Works was later sold to Cory Brothers Limited of Cardiff who later built an oil refinery on the site which became known as Corytown or Coryton as it is still known today despite the closure of the refinery in 2012.

In November 1918, a new company is born, initially named Explosive Trades Ltd. but quickly changed to Nobel Industries. This is a merger of Britain's explosives interests centred on the biggest manufacturer, Nobel Explosives. Kynoch Ltd. is a part of this and finds itself sharing an uncomfortable bed with its former competitors in the fields of explosives (Nobel and Curtis & Harvey), ammunition (Eley) and metal processing (locally, Kings Norton Metal Co. which possesses facilities for brass and copper strip rolling and rod extrusion as well as interests in coin minting and ammunition; and Birmingham Metals and Munitions Co. manufacturing rolled copper and brass and solid-drawn brass cartridge cases). These two companies and Kynoch Ltd. represent "the Birmingham end" of Nobel's interests and are managed by "The Birmingham Committee" chaired by Arthur Chamberlain and his deputy Sir Harry McGowan.

#### 1919-1920

Rationalisation is drastic and painful. Kynochtown and Kynoch-Arklow disappear. The facilities for rolling at Lodge Road and Eyre Street are sold off. Birmingham Metals and Munitions is put into liquidation, with Kynoch taking over part of its Adderly Road site. Extra investment is put into the Witton and Kings Norton mills. Facilities are installed to produce zinc strip as are five electric furnaces for melting brass - a significant pioneering step. Two chain machines are installed and five staff transferred from other duties to start making an interesting novelty invented in the U.S.A., the zip fastener. There is also investment in creating reliable outlets for existing products especially in the promising aircraft and motor sectors: holdings are acquired in John Marston Ltd., Wolverhampton (motorcycles, radiators, and radiator tubes), Amac Ltd. of Aston (motorcycle carburettors) and Excelsior Motor Radiator Co. Ltd. of Leeds (aircraft radiators). With the disappearance of its huge explosives and military ammunition business as well as its carefully cultivated image of an influential and distinctive concern, Kynoch Ltd. has changed almost beyond recognition.

**1920-1923** Many new products are tried: motor lamps, oil heaters, lanterns, padlocks, mincers, textile bobbins and cycle pumps from compressed paper, two-speed gears, petrol pumps, and home safes, none of which will be successful. Glycerine production is transferred elsewhere in the Nobel Industries

organisation and the cycle, soap, candle, gas engine and engineering departments are at a standstill due to the general depression. But the company perseveres despite apathy and suspicion with one new product, the zip fastener.

**1929** The name of Kynoch Ltd. disappears and is replaced by ICI Metals Ltd. And the Lion Works becomes Kynoch Works. Allen Everitt & Sons of Smethwick (non-ferrous tubes, especially copper-nickel condenser tubes produced in a state-of-the-art factory) also joins the Metals Group. For the second year in succession the Company wins the Senior TT race on the Isle of Man with a little help from Marston's Charlie Dodson and his works "Sunbeam" motorcycle. A Sunbeam is also second and Marston wins the team prize for the third year in succession.

Even more secret is the Metal Group's involvement in the "Tube Alloys Project", Britain's atomic energy effort, especially in connection with development of methods of separating the isotope U235 from uranium and of new uranium fabrication techniques.

## 1939-1944

Thousands of extra personnel are absorbed, and by 1943 20,000 people are working at Witton. Many perform duties additional to their normal work, such as fire watching, Home Guard, manning of first aid post or ambulance depot and membership of the rescue team or the Red Cross detachment. Young and old serve, women, and men. For years, they devote one or two whole nights a week, entirely voluntarily and without pay, over and above their daytime duties. The level of effort, especially after Dunkirk in June 1940, is exhausting.

From its eleven factories in 1939, the Company will by 1943 be running 27 factories on 20 separate sites employing 50,000 people. This increase occurs because of the Company's need for extra capacity and also its responsibility for managing Government agency factories with their 15,000 people.

The range of different ammunition types produced at Witton is vast, from small arms ammunition to large Q.F. cases, from detonators to anti-tank devices. Throughout the group 67 different types of cartridge are produced. The war work extends of course to all the metal activities and Witton's copper and brass output peaks at 3000 tons per week.

Demand for aluminium is insatiable. Outside Witton, Marston, Excelsior, and several other factories are wholly devoted to aircraft components. Marston's development of non-metallic, self-sealing aircraft fuel tanks is especially significant. Much of all this work is secret.

Even more secret is the Metal Group's involvement in the "Tube Alloys Project", Britain's atomic energy effort, especially in connection with development of methods of separating the isotope U235 from uranium and of new uranium fabrication techniques.

Luftwaffe bombing raids on Kynoch Works occur since it is of course a large and prime target. Between 1940 and 1943, 47 high explosive bombs fall on the site and more than four thousand incendiaries. Surprisingly, these result in only two fatalities. A memory of at least one attack will survive: the night of 18/19th November 1940 when the Rod Mill is damaged, and the test house and the mill office are wrecked. There are anti-aircraft defences in the neighbourhood which guard the factory, including a battery in Perry Barr Park.

By late 1944 ammunition production is running down, the Hayes factory is scheduled to close, the carpet manufacturers will shortly get their factories back and the countrywide payroll falls to 33,000. Working hours have already reduced to more acceptable levels from the earlier peaks, the previous intensity of working and the lack of leisure time having given Management from 1942 onwards increasing concern over the risk to health and sanity. Redundancy and resettlement schemes are in hand. In August 1945, a flag flies over Kynoch Works in tribute to the hundreds of employees still in the Services, the sixty-four who will never return, the seventeen civilians nationally honoured for their services to industry and the 15,000 employees still working on the site.

Shortly afterwards the Metal Group is given a new title: ICI Metals Division. The company named ICI Metals Ltd. ceases to exist.



Basildon Borough Heritage Society December 2024