

WASC 427 ●

Ordnance Board
History 1597-1964

THE ORDNANCE BOARD

AN HISTORICAL NOTE

by Brigadier N. Skentelbery (ret'd.)

THE word 'Ordnance' is one of those words one takes for granted. To most people it means something to do with guns and ammunition, or with the activities of the Royal Army Ordnance Corps or a word which signifies an official map published by the Office of the Ordnance Survey. The Oxford Dictionary derives the two words 'Ordnance' and 'Ordinance' from the French 'Ordonnance', one of the original meanings being 'arranged in order in a line' such as guns and similar engines of war usually were. Brigadier Hogg in his history of the Royal Arsenal, suggests it may be derived from 'Thor', the Scandinavian god of thunder or from the practice of the early craftsmen in arms who styled themselves 'Masters of Th'audinances'. The word 'Ordnance' did not however appear in official documents until 22 September, 1414, when the term 'ordinationum' appears in the text of the letters patent granted by Henry V to one Nicholas Merbury to be 'Master of the works of our engines, guns and other ordnance of war . . .': in other words, to be the first Master of the King's Ordnance.

The full Latin text of the patent, issued to Nicholas Merbury and his clerk John Louth, and a translation are attached.

The Tower of London had long been established as the workshop where the King's artificers plied their skilled trades. It was also the central storehouse for weapons of war of all kinds from engines such as ballistae to arrows. By 1346, engines using gunpowder, *i.e.* guns, were in use and 'powder for engines' was being made in the Tower. It was natural therefore for the Office of Ordnance to be housed in the Tower of London, and there it remained for over four hundred years.

Up to the time of the Spanish Armada, the organisation was known as the Office of Ordnance under its head, the Master of the Ordnance. The war with Spain, culminating in a very real threat of invasion, led to a scandalous amount of profiteering and fraud at the expense of the State. Elizabeth I therefore issued a Commission which carried out a searching investigation into the whole working of the Office of Ordnance. This resulted, in 1597, in the establishment of a Board of Ordnance under a Great Master (Robert, second Earl of Essex), who became responsible for the whole business of Ordnance by land and sea. Essex held the position of Great Master until his execution for treason in 1601 when the title lapsed and the two senior officers of the Board became Master General and Lieutenant General of the Ordnance respectively.

During the Protectorate, the Board virtually lapsed from 1649 for eleven years. From 1660 to 1683 it was governed by a Commission.

In 1683 Charles II recreated the post of Master General of the Ordnance and the whole Board was thoroughly reorganised. The Royal Warrant of 1683 charged the Board with the duty of providing armament for all ships and forts and the Board was made subordinate equally to the Lord Admiral and the Lord Treasurer. The organisation which was set up was remarkable in its ability to safeguard the State against fraud. The principle was simple: under the Master General there were four co-equal heads of departments covering the purchase, quality, storage and issue of ordnance material. These officers were the Clerk of the Ordnance, the Surveyor-General, the Principal Storekeeper and the Clerk of the Deliveries.

From 1683 the Master General of the Ordnance (M.G.O.) was always a distinguished soldier who had a seat in the Cabinet until 1828. The M.G.O. and his Lieutenant General had dual roles. In their military capacity they were Commander-in-Chief and second in command of the Artillery and the Engineers. This was a logical extension of the practice of the earliest days when the Master of the Ordnance not only provided the guns and their ammunition, but went into battle with them, the art or science of artillery being too much of a mystery for the ordinary soldier of those days.

On the civil side, the Board, under the M.G.O., controlled Stores, Lands, Geographical and Geological Survey, Defensive works including barracks and military hospitals, contracts and the Ordnance factories.

By the beginning of the 19th century, the Right Honourable and Honourable Board of His Majesty's Ordnance, had become a large and powerful Department of State, second only to the Treasury, its prestige and importance being recognised by a grant of the right to bear arms. Re-organisation was, however, in the wind which, in the end, blew no good for the Board. In 1828 a Committee had reported very favourably, 'many

circumstances leading them to the opinion that the principles on which the Ordnance Department was constituted were better for securing an efficient and economical dispatch of business than those on which the other two [Admiralty and the War Office] were founded.' Possibly as a consequence of this report the Admiralty was re-modelled on the Ordnance pattern in 1831 and this successful re-organisation is in evidence today.

Despite this favourable commendation, there were powerful adversaries of the Board of Ordnance at work, notably the Secretary at War who did not take kindly to two of the arms of the Service, the Artillery and the Engineers, being under other control. The administration of the Army came under strong attack as the result of the mismanagement revealed in the conduct of the Crimean War. It was therefore only to be expected that the Secretary at War would try to divert some of the unwelcome attention his Department was receiving by attacking another Department. In January 1855, the House of Lords was debating the administration of the Army when Lord Panmure, the Secretary at War, seized the opportunity to attack the Board of Ordnance (the Master General of the Ordnance being absent in the Crimea). Despite the strongest protests from many influential people, the attack succeeded and the *London Gazette* of 25 May 1855 promulgated the Queen's decree revoking the letters patent of the Master General, the Lieutenant General and the Principal Storekeeper of the Ordnance, and vesting the administration of the Ordnance in Lord Panmure.

So ended one of the greatest and most efficient Departments of State ever to be created in this or any other country. It numbered amongst its Masters General many famous men—John Churchill, first Duke of Marlborough, the Duke of Wellington and Lord Raglan to name three.

The Board lives on, however, in the title of one office (M.G.O.) and in two establishments which owe their origin to the Board of Ordnance (Ordnance Survey and the Ordnance Board).

When the Board was abolished the title of Master General of the Ordnance lapsed. In 1904, when the Army Council was formed to take over the duties and responsibilities formerly exercised by the Commander-in-Chief, the fourth member of the Council, responsible for the supply of weapons and their ammunition, assumed the title of M.G.O. It lapsed again in 1939 with the creation of the Ministry of Supply and was revived once more on the demise of the Ministry of Supply in 1959.

The Ordnance Survey is well known to the general public who may not, however, realise that it gets its name 'Ordnance' from the Great Board of Ordnance, one of the responsibilities of which was to survey the whole country and to supply accurate maps, primarily for military purposes, but now embracing everything from town planning to motoring and hiking.

It is the purpose of this article to tell something of the history of the Ordnance Board which is the oldest inter-Service technical advisory body in existence.

The French Wars brought a spate of inventions which flooded the Board of Ordnance and overloaded the department of the Surveyor General, who was responsible for trials and experiments with new equipment. In 1765, therefore, two committees were formed: the Colonels' Committee and the Field Officers' Committee. These were part-time committees to review inventions and ideas and to advise the Surveyor General which were worthy of his attention. Later, these two committees were merged and continued to exist until about 1830. They were essentially committees of 'users' having no pretensions to advanced scientific or engineering ability.

In 1805 a Select Committee was formed at Woolwich composed of the Heads of Departments at Woolwich, with the Director-General of the Field Train as the *ex officio* President. In the long period of peace which followed the conclusion of the Napoleonic Wars, this august body pursued its way until 1852 when it was re-constituted as the Select Committee of Artillery Officers under the presidency of the Director-General of Artillery. This committee was quite inadequate, both in constitution and procedure to cope with the increasing pace of technical advance and with the volume of inventions and ideas released by the crisis of the Crimean War. Early in 1855, the Secretary of State for War, the Duke of Newcastle, replaced the Select Committee of Artillery Officers by an 'Ordnance Select Committee'. This retained the 'user' element by including six artillery officers of long service, but with the addition of skilled scientific and technical advice from outside the artillery service. Two eminent civilians, Professor Wheatstone and Mr. C. H. Gregory, were included together with the professor of mathematics from the Royal Military Academy, the Ordnance Chemist, the Inspector of Machinery, the Superintendents of the Royal Small Arms and Royal Gunpowder Factories, an officer of the Royal Engineers and two regimental officers of the Royal Artillery. The requirements of the Royal Navy were recognised by the appointment of a Naval Vice-President.

Apart from the Secretaries and the two civilian members, the members of the Committee were all part-time members *ex officio* and the need for a full-time Committee soon became evident.

In 1858 the Ordnance Select Committee was re-organised on a full-time basis and rapidly established itself as an authoritative advisory body. Not a little of its authority derived from having its own printing press which was established in 1860 and continues to serve the Board to this day.

Eleven years later, in 1869, the O.S.C. was abolished by ill-advised authority on the grounds of expense and replaced by a high level Council of Ordnance entirely composed of *ex officio* part-time members. This reversion to what had already proved impracticable was, needless to say, completely ineffective. Its work had to be done by ten *ad hoc* sub-committees who inevitably overlapped. This chaotic and extravagant interregnum lasted until 1881, when the Council and the ten sub-committees were abolished and their duties vested in a full-time Ordnance Committee.

The Ordnance Committee came into being on 1 April 1881, and apart from an oscillation between being known as a Committee or as a Board, has existed ever since. Its constitution set a pattern for the future: the President was General Sir Collingwood Dickson, V.C., K.C.B.; the Vice-President, Rear Admiral E. H. Howard, there were two Naval members (Captains), two Colonels and one Major selected for their technical ability, the Ordnance Consulting Officer for India (*ex officio*); three leading civilian consultants; a Secretary and an Assistant Secretary.

The idea that a proportion of Army officers selected by competitive examination should be given a thorough technical and scientific training had, by this time, become accepted. In 1864 the Advanced Class for Artillery officers came into existence, which gave the candidates two years intensive technical and scientific instruction at Woolwich, the establishment being known successively as the Department of Artillery Studies, Ordnance College, Artillery College and, finally, the Royal Military College of Science. Since 1946, the Royal Military College of Science has been at Shrivenham, Berks., and is now an institution of University status covering a wide and advanced field of technology.

The Assistant Secretary of the Ordnance Committee of 1881 was a graduate of the Advanced Class, and as the years went by more and more members of the Ordnance Committee were to be similarly qualified. This informed group of technical officers assisted by distinguished scientists and engineers from the outside world, soon established the Committee as an authoritative advisory body on the development and design of guns, small arms, and all warlike stores involving explosives for both Services.

In 1900, an Explosives Committee had been formed to carry out trials and research into improved propellants for guns and small arms and to find a safer but equally efficient high explosive to replace lyddite. This Committee was succeeded in 1906 by an Ordnance Research Board, under the same President as the Ordnance Committee, until the end of 1907, when the two were merged under the title of the Ordnance Board.

In 1915, with the coming of the Ministry of Munitions, the Board was dissolved and immediately re-appeared under its original title of the Ordnance Committee.

In January 1939, the Ordnance Committee absorbed the Small Arms Committee and became once more the Ordnance Board which it is today.

In May 1940, an additional Vice-President (Air) was appointed and, since then the Presidency has been held in turn by officers of the three Services—Rear Admiral (or Major-General, Royal Marines), Major-General or Air Vice-Marshal.

From its inception in 1881 until September 1939, the Ordnance Committee/Board occupied the house in the Royal Arsenal which was originally built for the Verbruggens who were Master Founders in the Arsenal (1770-1786). During World War II, the Board moved first to Kemnal Manor, Chislehurst, Kent, and later to a block of flats in De Vere Gardens, Kensington. In 1950 the Board, with its Printing Establishment, moved to its present home, Charles House, Kensington.

The Board today consist* of a President, and two Vice-Presidents, five Naval members (Captain R.N. or Colonel, Royal Marines) five Army members (Colonel), four Royal Air Force members (Group Captain) and two civilian scientists assisted by a technical, professional, and scientific staff. In addition, the heads of the various technical departments and representatives of the Commonwealth countries and the United States are associate members (*ex officio*) and the Board can also seek the advice of a number of distinguished consultant engineers and scientists who are associate members by invitation.

*'The Board' is regarded as a plural noun.

They are an inter-Service, independent, technical, trials and advisory Board under the Ministry of Defence, with the principal responsibility of ensuring that weapons, ammunition and explosives for the three Services meet the Staff requirements and are fit in all respects for service. They are empowered to initiate whatever trials and experiments are necessary to enable them to make proper assessments and can call on any appropriate trials establishment to perform the required experiments. In addition, members of the Board and their Staffs work in close touch with the technical Staffs of the Commonwealth, U.S.A. and N.A.T.O. Two other establishments in Charles House—the Applied Ballistics Department and the Chief Superintendent of Ranges work closely with the Board: the Superintendent of the former is a member of the Board and the latter controls the Proof and Experimental Establishments who do most of the trials initiated by the Board. To cover the increasing range of ballistic and statistical work the ABD has acquired an Elliott 803 computer, which is at the service of the Board.

The work of the members is recorded in printed '*Proceedings of the Ordnance Board*' after consideration by the Board as a whole at its bi-weekly meetings. The aggregate of technical qualification, experience and knowledge assembled at a Board meeting is considerable, and no *Proceeding* is published without very thorough discussion. This fact, allied to the Board's complete independence, gives their recommendations a unique authority which has been recognised for over eighty years, and, to-day, embraces a wide field of modern armaments including nuclear weapons, electrical/explosives hazards, and statistical methods of quality control and analysis.

ORDNANCE BOARD,

CHARLES HOUSE,

LONDON, W.14.

September, 1964.

Letters Patent granted to
Nicholas Merbury—Master of the Ordnance
and John Louth—Clerk
by Henry V

Patent Roll 2, part ii, m.22

dated 22nd September 1414

Rex, Dilectis sibi, **Nicholao Merbury**, Magistro Operationum, Ingeniorum, et Gunnarum nostrorum, ac aliarum Ordinationum nostrarum pro Guerra, et **Johanni Louth**, clerico earundem Operationum, Salutem.

Sciatis quod assignavimus vos, conjunctum et divisim ad tot Lathomos, Carpentarios, Sarratores, Fabros et Laboratores, quot, pro operationibus Ingeniarum, Gunnarum et Ordinationum, predictorum, necessarii fuerint, cum sufficienti Maeremio, Ferro et omnibus aliis Rebus, operationibus predictis, similiter necessariis, ac etiam cum Cariagio pro eisdem, cum rationabiliter indiguerit, quandiu in Officiis predictis stereritis, per vos, et sufficientes Deputatos vestros, capiendum et providendum.

Et ideo vobis Praecipimus quod circa Praemissa diligenter intendatis, et ea faciatis et exequamini in forma predicta.

Damus autem universis et singulis Vicecomitibus, Majoribus, Ballivis, Constabulariis, Ministris, ac aliis Fidelibus et Subditis nostris tam infra Libertates quam extra, Tenoro Praesentium firmiter in Mandatis quod vobis et alteri vestrum, ac Deputatis vestris hujus modi in Executione Praemissorum. Intendentes, sint. Consulentes et Auxiliantes, prout decet.

In cujus, etc.

Teste Rege apud Westmonasterium Vicesimo secundo die Septembris.

Per Breve de Privato Sigillo.

Based on the transcript in *Rymer's Foedera* 1792, Tom IX p.159.

TRANSLATION

Patent Roll 2, Henry V, part ii, m.22

The King to his well-beloved Nicholas Merbury, master of our works, engines and guns and other ordnance for war, and John Louth, clerk of the same works, greeting.

Know that we have appointed you, jointly and severally, to take and provide, by yourselves or by your sufficient deputies, as many stone-cutters, carpenters, sawyers, smiths and labourers as may be necessary for the works of the engines, guns and ordnance aforesaid, together with sufficient timber, iron and all other things likewise necessary for the works aforesaid, and also with carriage for the same when there is reasonable need of it, so long as you shall continue in your said offices. And we therefore direct you to busy yourselves diligently about the premises and perform and execute them in the form aforesaid.

And we firmly enjoin upon all and singular our sheriffs, mayors, bailiffs, constables, servants and others our lieges and subjects, both within liberties [i.e. areas of special franchise] and without, by the tenor of these presents, that they give to you and to either of you and to such deputies of yours in the execution of the premises, their support, counsel and aid, as is fitting.

In witness whereof [we have hereunto set our seal].

Witness the King at Westminster, 22 September [1414].

By writ of Privy Seal

Costing military tenders

SIR – To combat defence equipment inflation (Letters, December 28), both the Treasury and MoD need to return to Victorian values. One major reform to come out of the Crimean War was the creation of the Army Contracts Department in 1855. This costed all tenders for military procurement and used a variety of contractors for one order. Contractors were graded into three categories, Superior, Good and Fair, and could be downgraded if performance or delivery was not to contract.

The pre-1914 French army was even more rigorous, placing an ordnance officer with the contractor until the delivery date, who submitted a weekly report to the Ministry of Defence. Any default from the original contract could mean a fine for the contractor and his removal from the list of contractors.

I always find it a pity that British academic military historians have given little research time to ordnance production and procurement issues, because history has much to teach us in the 21st century.

John Black
Bristol

Enthusiast teachers

SIR – Many teachers, certainly the best ones, are enthusiasts who are keen to share their interests with pupils both in and out of the classroom. Nowadays, unfortunately, teachers are increasingly forced to teach to tests and have little, if any, extra-curricular contact with pupils.

No wonder then that such teachers become demoralised (report, December 28) and choose to leave the profession – or to work in independent schools.

Henry Wickham
Hemel Hempstead, Hertfordshire