

CHAPTER IX

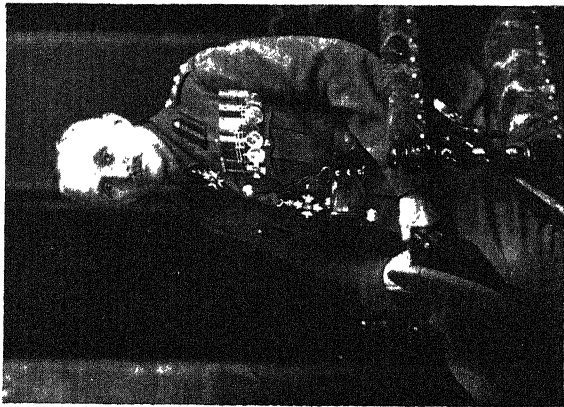
THE HOME BASE

IT lies beyond the scope of this book to describe the elaborate machinery set up in England during the progress of the war to furnish munitions, equipment and clothing for the armies of the Empire ; a machinery which had in the first place to procure from world-wide sources the raw materials wherewith to manufacture what was wanted not only by our military forces, but also by the Navy, the Air Force, and, to a considerable extent, our civil population and allies. All that need be attempted here is some description of that part of the machine which was controlled by the Army Ordnance Department and Corps under the Director of Equipment and Ordnance Stores at the War Office.

Except at its very beginning and end, the post of D.E.O.S. was held throughout the war by Major General Sir John Steevens, who was brought back from the retired list to fill that position. Sir John was by now past the grand climacteric and, though possessed of great ability and a very ripe experience, his brain was no longer so nimble as when, during the South African campaign, he had kept in his own hands not only every string, but each fibre of every string connected with the supply of stores and ammunition to the seat of war. Now, with advancing age and with business on such a much grander scale, he was perforce content with a general supervision, devoting most of his time to one only of the three main branches of his office—Q.M.G.7—and leaving the conduct of affairs in the others—Q.M.G.8 and Q.M.G.9—to two Deputies.¹

One of these, Brigadier General Wrigley (Q.M.G.8), dealt with all questions of personnel, being responsible for finding and training the men necessary to raise the A.O.C. from a normal footing of 248 officers and 2273 other ranks to an eventual strength of 2434 officers and

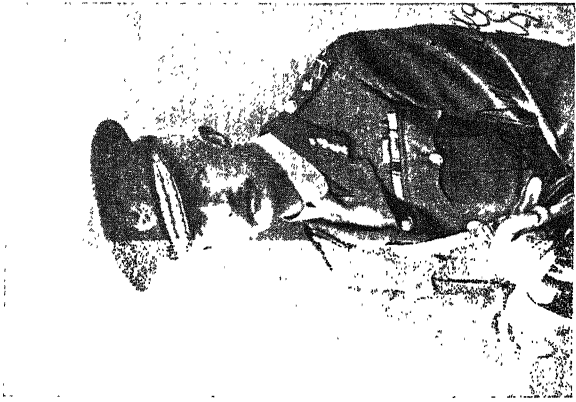
¹ A statement of the quantities, provided by D.E.O.S., of a few outstanding commodities will be found in Appendix VIII.



BRIGADIER GENERAL W. H. USHER SMITH,
C.B., C.B.E., D.S.O., D.O.S. SALONIKA



MAJOR GENERAL SIR J. STEEVENS, K.C.B.,
K.C.M.G., D.E.O.S. WAR OFFICE



BRIGADIER GENERAL P. A. BAINBRIDGE,
C.B., C.M.G., D.O.S. PALESTINE

39,190 others. The new officers were selected from those who, by reason of age or some debility, were unfitted for commissions in the battalions of Kitchener's New Armies, and were mainly, though by no means exclusively, drawn from the business world. The work gave scope for a great variety of talent and men from the stock exchange and mercantile houses, barristers, solicitors, chartered accountants, auctioneers, shipping agents, together with engineers, chemists, physicists and experts in other lines, were all welcomed as their specialized knowledge and training could be turned to good account. It was those connected with the engineering professions that had to be most eagerly sought for, to fill the post of Ordnance mechanical engineer. These, together with the armament artificer and armourer, were the hardest to come by, such was the demand for skilled munition workers at home. Commissions in the A.O.C. were also given to a number of master-gunners R.A., whose knowledge of ammunition and habitude in handling men proved extremely valuable. Q.M.G.8 also had to arrange for an immense expansion in the civil staff of home Ordnance depots, with very intricate questions of establishments and wages, rendered the more difficult by the ever-rising cost of living.

Many senior officers of the Corps have recorded their appreciation of the keenness, knowledge and adaptability displayed by temporary officers who served under them, many of whom, before the end of the war, held positions of high responsibility; and the same may be said of all grades. The material was excellent, the standard of intelligence and education high, and under the intensive culture of war conditions there arose a very fine body of officers, warrant officers, non-commissioned officers and men. Further, although labour troubles were rife in England, there was a striking absence of any such trouble among the civilians working in Ordnance establishments; men and women serving most loyally despite strikes in other branches of the labour market.

The next main branch of the D.E.O.S.'s office (Q.M.G.9) was in charge of Brigadier General Seymour,

now Duke of Somerset. Except that it had no concern with the actual procurement or design of technical warlike stores, a service for which the Master General of Ordnance was responsible, the duties of this branch ranged in peace over every question that concerned the equipment of the army. It had to provide, through the Director of Army Contracts, all non-technical stores whose purchase fell within the province of the Quartermaster General, to deal with questions of their pattern and inspection, and to supervise arrangements for the storage and supply to the army of every species of equipment, whether technical or non-technical.

With the progress of the war however, and the phenomenal expansion of business that brought into being a Ministry of Munitions to manufacture warlike stores and a Surveyor General of Supply to procure other kinds of material, the functions of Q.M.G. became more specialized ; in particular, it ceased to be concerned with ammunition.

The procedure evolved was as follows. All demands from overseas came in the first instance to this branch, where those for 'Q.M.G. Stores,' after scrutiny, were passed direct to the head of the main Ordnance depot at Woolwich, Major General Sir George Butcher. Demands for 'M.G.O. stores' were passed to one or other of the M.G.O.'s subordinates, the Director of Artillery or Director of Fortifications and Works, according to their nature ; finding their way also, subject to approval, to Woolwich. At Woolwich was to be found all the elaborate machinery of 'Provision,' and there were prepared the actual documents by means of which what was needed to meet these demands (or, to be more accurate, what was needed to replace the stock depleted in meeting them) was manufactured or purchased by the Ministry of Munitions or Surveyor General of Supply, and, after inspection, delivered either to Woolwich or some other stated depot. Such in general was the procedure, subject to modification in special cases ; the main exceptions being small arms, where the work was carried out by the Chief Ordnance Officer at Weedon, and ammunition,

to deal with which a new branch, to be described hereafter, was formed.

The next stage was to arrange for distribution to the best advantage among the different theatres of what was ready from day to day for shipment; a matter that required very careful control—not only to eke out the stock to the best advantage but also to economize shipping and rolling stock. This work, one that only came into existence owing to the war, was in the hands of Lieutenant Colonel Findlay, working under Seymour.

At the outbreak of war, some of the wharves at Newhaven and Southampton were allotted for Ordnance supplies, all the earlier shipments to France being carried out there. But it soon became evident that these ports would not suffice; and in 1915 Littlehampton was impressed and a part of the docks at Avonmouth allotted for shipments to other theatres; while boats for French ports also sailed direct from Woolwich and the Albert docks in London. Still later, stores for the East were despatched from Southampton to Cherbourg, whence they went to Taranto by rail and onwards by sea. As the war progressed it became necessary to increase transport facilities even further and provide means of taking heavy guns on railway mountings across the channel; and by February 1918 ferries, on which loaded trains were carried, were in operation between Richborough and Calais, and between Southampton and Dieppe, Richborough being also used for barge traffic, stores and ammunition in barges being towed across the channel.

The difficulty experienced by the Ordnance at the outbreak of war, owing to its having no hand in the despatch of its own goods in England, has been referred to already. This was rectified by attaching an Ordnance staff to the Embarkation Commandant at each of these home ports, who supervised and checked the loading of vessels, prepared bills of lading and ensured that vouchers were sent with each consignment. The whole of this staff served directly under the War Office, and the shipment of Ordnance stores became a very important part of the work of Q.M.G.9, the daily outwards consignment

averaging 360 truck-loads, a figure that excludes ammunition.

Our normal organization provided that stores of every nature should be delivered in the first instance to Woolwich for inspection and distribution, and in our past campaigns this plan had worked satisfactorily. But now the central depot at Woolwich was quickly overwhelmed, and the site was so constricted as to be incapable of expansion except to a very slight degree. This was perhaps fortunate, for the depot, cheek by jowl with the factories and laboratories and on the Thames close by London, was a constant source of anxiety when air-raids became frequent, though actually it never suffered any material damage. Warehouses were either hired or built in the docks on the river to which certain special categories of goods were delivered direct, and extensive premises taken over at main railway and manufacturing centres. By far the greatest relief to Woolwich, however, was afforded by the acquisition, early in 1915, of some 600 acres of land at Didcot, upon which a depot of corrugated iron sheds was built and opened in the following June.

Over all these establishments Sir George Butcher, as chief executive officer under the D.E.O.S., reigned supreme; and Didcot, under his general direction, became the main centre for delivery and distribution of 'Q.M.G. stores'—barrack, hospital and camp furniture and such-like bulky articles for which enormously increased accommodation was needed, while 'M.G.O. stores' for which, apart from ammunition, no such immense space was required, remained at Woolwich.

The depot at Didcot, one of the most important railway junctions in the south of England, with 1,500,000 square feet of covered accommodation, served by more than 30 miles of railway track and siding, was far better situated and infinitely better planned for work on such a gigantic scale than Woolwich, the growth of centuries, with its scattered storehouses, some in the Arsenal and some in the Dockyard, intermingled with factory buildings, cramped and badly served by rail. It could without

difficulty despatch complete trainloads of stores to the various ports and dealt on the average with 2000 truckloads a month.

The great difficulty at first was to find enough labour. The district, one of small scattered villages, was thinly populated and little living accommodation was to be had except in camp quarters erected in the depot. Several new Army Ordnance Corps Companies were formed at Didcot, but they were constantly depleted by calls from overseas. For some time it had to rely for labour on the inhabitants of the surrounding district and was helped by volunteers from the neighbourhood. Parties of ladies arrived daily and boys from Kingham industrial school. On one occasion masters and boys from Eton College worked at the depot, H.R.H. Prince Henry among them; and a number of Dons and Professors from Oxford with some of the Eton masters spent their Easter vacation there in 1916.

Gradually the labour situation improved and, in addition to the Army Ordnance Corps staff, two Labour companies, each 500 strong, together with 1560 civilian men and 756 women were eventually employed. By that time the depot had been enlarged and held every class of commodity; additional areas having been acquired to store ammunition and clothing.

Q.M.G.9 also had under its wing the inspection branch which, under Colonel Wortham, was responsible for the pattern and inspection of all 'Q.M.G. stores'; one that likewise underwent immense expansion, its staff increasing from 347 to 5700.

The normal procedure was for all deliveries by contractors to take place at Woolwich Dockyard, where the goods were examined before being finally approved and passed to the storehouses. But the available space soon made this impossible, and branches were opened at Didcot and many large commercial centres of which the most important was Birmingham.

Later on the work was still further decentralized by posting Viewers to contractors' works to examine goods during and after manufacture, a process that saved much

delay and congestion by enabling what had been passed as satisfactory to be railed straight into the depot told off for its reception. This was a plan, however, that required very close supervision, especially owing to the springing up of so many mushroom firms during the war, with only an ephemeral existence and no reputation to maintain; so that the possibility of collusion and bribery had to be guarded against. The permanent staff, experts in some special line of manufacture, served as a supervisory nucleus, training and leavening the new hands; while, to guard against misdoing, they toured round the works of manufacturers, where no junior was left for long with the same firm. With these precautions the plan worked satisfactorily as a war emergency measure; and there was certainly nothing to complain of as to the quality of what was supplied to our troops, even if the high standard usually insisted on had to be lowered.

Owing to the shortage in types of material usually employed for the army and so as to enlist all the manufacturing resources of the country, very wide latitude was allowed in departing from sealed patterns, and it was practically within the discretion of the Chief Inspector, with his expert advisers, to accept any substitute he might deem would answer the purpose. For instance, an immense sum was saved through the adoption of tentage made of a special weave of cotton (devised by Mr. Heylin, the Inspector of textiles, who was granted the O.B.E. for his services) owing to the scarcity and expense of linen duck; and it was the inspection branch that designed and superintended the manufacture in America of the leather accoutrements without which Kitchener's new armies could not have taken the field, such was the shortage of webbing, made in peace time by two firms only whose output normally was amply sufficient.

Many novelties demanded from overseas—such as new types of machine gun pack-saddlery—were also made up in the workshops by this branch which trained all army saddlers and employed over a thousand women textile workers.

During the first year of the war there was such a dearth of ammunition that no special arrangements for its storage in England were necessary, every available round manufactured being sent straight overseas. But towards the end of 1915, when the first of the National Filling Factories established by the Ministry of Munitions was about to begin output, it was decided that its products should pass into the hands of the War Office for storage and distribution.

Under the original agreement the Ministry engaged to hand over ammunition in complete rounds; but it failed to do so, with the result that the Army had to take over components and arrange for their assembly. Ordnance officers were posted to each factory to take charge of what was manufactured and the administrative charge of these new Ordnance depots was at first vested in the D.D.O.S. Woolwich.

With the removal of the supervising staff to London in October 1917, the office of A.D.O.S. Ammunition became a direct branch of the War Office in charge of Colonel Meares. Its duties embraced the receipt, storage and issue of all ammunition produced at the national factories or elsewhere, and it worked under the D.E.O.S. though also in close touch with the Director of Artillery, who dealt with demands from overseas and gave instructions as to what quantities were to be issued. Eventually there were twenty-six factories where stocks of ammunition were thus held, besides the peace magazines at Portsmouth, Plymouth, etc.; but even so the accommodation proved insufficient. Large central depots were created at Bramley, Altrincham, Credenhill and Didcot, with smaller ones elsewhere, the total accommodation on Ordnance charge eventually having a capacity of a million tons. All these establishments, with their staff and laboratories, were administered by the A.D.O.S. Ammunition. Shell were called forward from one factory, cartridges from another, tubes and fuzes from elsewhere and the complete rounds linked up by the Ordnance staff at the port of embarkation, where a stock of components was kept to make good any shortage.

It must be added that, although far closer compliance with customary regulations for the storage and conveyance of ammunition was possible in the United Kingdom than overseas, yet many of the rules had to be modified, such as that directing that special powder vans be invariably used to carry by rail explosives in bulk or in the form of cartridges. Nor was the construction of special compartments on board ship as magazines, customary in peace, attempted.

The last branch of the D.E.O.S.'s office (Q.M.G.7), that which Sir John Steevens himself closely supervised, dealt with clothing on the same lines as 'Q.M.G. stores' were dealt with in Q.M.G.9. Here the actual work of provision, storage and supply was in the hands of the Chief Ordnance Officer Royal Army Clothing Department, whose central depot at Pimlico was very soon snowed under, for clothing occupies enormous space, and the war resulted in many new requirements such as gas-masks, gum-boots and garments suitable for climates ranging from tropical to arctic.

Additional accommodation was taken up in London at the Great Central railway station, in Battersea Park, the White City and Olympia, besides premises in Manchester, Leeds, Edinburgh, Glasgow, Dublin and other centres of textile industries. If to these be added the clothing depots formed directly to serve the troops in Home Commands, the number of special establishments formed during the war amounted to eighty-five.

Hitherto, except for areas in the United Kingdom where offshoots of the central depot had been created, Pimlico supplied each unit direct with its clothing and necessaries. This now became impossible with such a press of work on a gigantic scale, and during the war clothing, for the first time, was held in every Command, whether at home or abroad, for supply to the troops stationed therein. The process of decentralization was simple because full dress uniform was not worn but only service dress or khaki drill.

Another measure adopted with extremely satisfactory results was the handing over to Mr. (now Sir Edward)

Penton, head of a well-known firm of leather manufacturers, of all work connected with boots. By degrees Penton enlisted the entire bootmaking industry of the country and turned it on to making Army boots, not only for ourselves but also for several of our allies, the resources of the world having to be ransacked to get suitable substitutes to supplement the types of leather usually employed. A point overlooked by Germany in her war preparation was that she normally absorbed the whole of the kip leather exported by India. This now came to the English market; Germany had great difficulty in booting her armies, and to us it proved invaluable, the army being shod with a boot produced within the Empire.

A boot made of chrome-tanned leather, with machine riveted seams, was being tested just before the war broke out; but, before full use could be made of it, quantities of boot-making machinery had first to be manufactured. Out of the experience of existing types was finally born, in 1916, a boot that combined the best points of the British, French, Italian and Russian, and which could not only be made, but re-soled and heeled by machinery. Seeing the paramount importance to the soldier of good boots, it would be difficult to overrate the services of Sir Edward Penton.

The clothing inspection branch had never been independent of the depot as at Woolwich, where the Chief Inspector was directly responsible to the D.E.O.S.; and though the upper hierarchy of the technical inspection staff was skilled, it frequently happened that the junior grades would be filled by men transferred from the storehouses, with no qualification for such a special line of work.

Whether due to this cause or not, the only stain on the integrity of the Ordnance that came to light throughout the war was the discovery that two Viewers at Pimlico had been guilty of taking a bribe from a contractor and improperly passing some of his goods as fit for the service.

The case itself was trivial—a question of braces—though the importance of *quality* in every class of material for an army on active service, when replacement is likely

to be a matter of difficulty, cannot be over-stressed ; but the upshot was that Mr. Lloyd George, who was striving to enlist great Captains of Industry into the service of the State, placed Lord Rothermere, the newspaper magnate, at the head of the whole business of providing clothing with the title of Director General of Army Clothing. The post was next occupied by Sir Benjamin Johnson, a leading light in the trade, who, from his knowledge of manufacture and markets, was able to effect valuable economies in production. But neither of the two made any change in the general structure of the organization, and the military side of the work, storage and the fulfilment of demands, remained in the hands of the Chief Ordnance Officer, Pimlico.¹

With the progress of the war, as salvage became of such importance, a sub-branch of Q.M.G.7 was formed to deal with this aspect of clothing, under Lieutenant Colonel (now Sir V.) Willey, a temporary officer who specialized in this line of work and who also supervised all laundries established for the troops at home. A depot was formed at Dewsbury to receive the rags shipped home from overseas and condemned or repairable clothing from Home Commands. Inspectors were appointed who toured round the United Kingdom, examined the stocks held by units, ensured that nothing was cast that could be profitably repaired, and advised how equipment should be kept in order and used up to the best advantage.

The foregoing sketch has been devoted to the central organization to provide for our forces overseas ; but besides this the Ordnance at home had to furnish

¹ At the same time as Lord Rothermere was made Director General, Sir Thomas Polson, another man of business, was appointed Chief Inspector. Materials were perforce largely examined at the mills where they were woven and his report at the end of the war is worth recording. "The experiment," he writes, "has been successful in a measure, but should never be resorted to so long as inspection at a clothing depot is possible. Inspection must be entirely independent and the Chief Inspector's decision never questioned."

all the initial equipment of the citizen armies raised at home, a service which was unending; for there was never a day when some new unit was not being raised or re-equipped from top to toe, right down to the last phase of the war when immense quantities of equipment and clothing were required by our American allies assembled in England before they could take the field.

The war work of Ordnance depots in the United Kingdom falls into four periods.

First came the mobilization of the Expeditionary Force, the issue of stores to place our ports, cable landings, etc., in a state of defence, and the shipment of the war reserves overseas. These operations, though they involved heavy work, proceeded with wonderful smoothness and celerity, so well had every detail been thought out in advance.

But, during this time, the vast majority of the serving officers and men of the A.O.C. marched off to the war, leaving nothing behind but the usual small peace maintenance stocks with the staff of permanent civilians; and the next period, which lasted roughly till the end of 1915, was unquestionably that of the greatest stress and strain. No sooner did the Regulars leave than the Territorials were mobilized and recruiting began for Kitchener's new armies; and the assembly, during the next few months, of 19 new Army and Territorial divisions, with individual units equivalent to a further five divisions, taxed every resource to the utmost.

The key-note of this period was improvisation. Not only had an extemporized form of accoutrements to be employed, but the same held good as regards every other want. To take one item alone, the number of sets of harness in use increased, before the end of 1915, from 40,000 to over half a million; and large orders for harness and saddlery, water-bottles, tools, mess-tins and so forth, of any suitable pattern that could be quickly got, were placed in the United States, Canada and India to supplement output at home. No less than half a million suits of blue serge uniform, the only colour to be readily

bought, were ordered and a similar number of civilian overcoats from ready-made stocks.

In response to Lord Kitchener's appeal for men, his new levies descended like avalanches on every command. Winter was coming on, the men were usually devoid of sufficient raiment to withstand cold weather, and the first imperative step was to provide them with furnished lodging and suitable clothes. Every inch of barrack accommodation was soon double-banked, and hutted or tented camps sprang up all over the country.

No Ordnance officer, of whatever degree, and whether at Aldershot or Alderney, but was faced at this time in some measure with the problem of having to make bricks without straw; and his difficulties were accentuated by the fact that he had to rely on newly joined men, that he had no sooner trained them than they were likely to be sent to France, and that commanding officers and quartermasters of new regiments were ignorant of military methods. Even when they knew what they wanted, they would not know how to set about getting it or whom to apply to, and required far more nursing than regulars.

At this time not only were Woolwich and Pimlico given practically *carte blanche* to make any bargains they liked, but also the A.D.O.S. of every Command; and units were further encouraged to help themselves by direct purchase of needful articles. This unquestionably led to extravagance. Different areas in the kingdom made purchases in competition, and zeal was apt to outrun discretion; but in such a state of emergency it was essential to throw to the winds considerations of cost. Properly drawn up contracts based on tenders would have taken weeks to fructify, and every hour was precious. For example, the C.O.O. Dover in six weeks expended over £100,000 on shirts and other necessaries for the first batch of recruits. Articles were got in every conceivable way from every possible source; and even the most petty tradesman's stocks were impressed for, it might be, a few tables or chairs or pairs of boots. Welcome relief was afforded by the offer from the War Office of a sum of

money to each recruit who joined up with an overcoat, and an appeal in the Press from Lord Kitchener for gifts of blankets was generously responded to.

But to house and clothe the recruit was only the first step in the formation of an army which, before it could be trained to fight, had to be supplied with military equipment. And here also, until equipment serviceable for war was forthcoming, improvisation was the order of the day. Unserviceable rifles were unearthed and dummies made, which passed from man to man for the earlier stages of drill. Obsolete guns or wooden substitutes were mounted on ancient carriages, drawn by harness composed of bits of old leather pieced together, farm wagons were hired; and, as one division was supplied with service equipment, these oddments were passed on to the next and so the work continued. That the departure of no unit was actually delayed owing to deficiency of equipment or uniform was only due to very strenuous exertion; many got their last quota at the eleventh hour, but all were actually complete to scheduled time.

Towards the close of 1915 these initial difficulties were being tided over, ushering in the third period, when organization re-asserted itself. By now the whole industry of the country was harnessed to war work, supplies of all sorts were beginning to flow in regularly, and the staff was trained to deal with them. Each event was no longer a novel problem bristling with unexpected difficulties, there were precedents to go by; and though there was no letting up in the volume of work, yet it was of a more routine character. Existing depots and workshops had been enormously expanded, numerous new ones were functioning with regularity, command boot-repair shops and laundries were at work and command clothing depots to supply new or deal with old clothes, while the newly created ammunition depots were busily engaged.

Yet there were always unanticipated difficulties to be grappled with. During the Fenian rebellion, for instance, all depots in Ireland were a source of serious anxiety and had to be very carefully safeguarded, especially those holding arms and ammunition; and large

quantities of captured or voluntarily surrendered small arms—rifles, shot-guns and pistols—with their cartridges had to be taken care of. At Dublin, a barrack store was fired and gutted by the rebels and all its contents lost, attempts were made to fire the Ordnance magazine at Phoenix Park and a convoy of rifles and grenades was attacked at North Wall and repulsed by a convoy of the A.O.C.¹

London, again, developed enormously as an Ordnance centre. Ordinarily the troops in the metropolis drew their equipment from Woolwich, but now the public parks were converted into camps and hospitals with large store depots to serve them. Here also there was work of a very special character to be done when air raids became almost daily occurrences. There were eventually 160 anti-aircraft guns of various types in and around London to be maintained, repaired and supplied with ammunition, and unexploded enemy bombs to be collected and rendered innocuous, central and travelling Ordnance workshops and laboratories being established for the purpose.

Though this chapter deals with the United Kingdom, it may be convenient to refer at this point briefly to foreign Ordnance stations. These all had extra burdens to bear at a time when they had been stripped of most of their trained military personnel. Every fortress abroad was placed in a state of defence at the outbreak of war. Levies, white and coloured, were raised and equipped, guns and ammunition for men-of-war and armed merchant vessels supplied and examined, the survivors of torpedoed vessels succoured, and in many cases some special article of equipment, only procurable locally, had to be manufactured for some fighting front. When the German

¹ At a parade of those of the Corps who took part in these events, the Commander-in-Chief in Ireland conveyed his appreciation of their services. The officers were Lieutenants Jarmain and Phillips, and Major Farquaharson and Lieutenant Hadoke, the two latter attached from infantry regiments. Lance Corporal Jarvis, in charge of the escort, and Mr. McClusky, foreman of the magazine, were specially commended.

fortress of Tsingtao was captured by Japan, quantities of war material were taken over at Hong Kong; and the Ordnance at Bermuda were able to furnish valuable aid to the United States by carrying out repairs to its flotillas of small craft.

During the fourth and last epoch of demobilization (when Sir Harold Parsons had relieved Steevens at the War Office), an entirely fresh set of problems had to be faced, though the Ordnance officer at home was spared one anxiety that intensified the difficulty of this period overseas. In France and other arenas, the aftermath of war had to be gleaned with a constantly dwindling and discontented staff, but in the United Kingdom there was no difficulty in getting labour of a sort—the labour market was glutted with demobilized soldiers.

While however this eased matters for the time being, the evil day was not to be avoided for long. In the following year army expenditure was once more budgeted for in parliamentary estimates; and, thence onwards, ruthless pressure was brought to bear to diminish the cost of every Ordnance establishment. To reduce staff is always a delicate and invidious process, and was never more so than at this time, when work was still far in excess of the normal, when there was great labour unrest, and when weeding out could not be accomplished without involving hardship on men who had served their country faithfully and perhaps been invalided from the army.

Except for those who were to form part of the post-war army, every man who had joined the colours handed in his arms, accoutrements and any special equipment or clothing before returning to civil life. In each command premises were set apart where these were checked over in detail and briefly examined; after which they were collected and stored in depots allotted for the purpose.

One by-product of this conversion of swords into ploughshares well illustrates the extent of the work. Any man who so elected was entitled, by forfeiting a special bonus of 5s. 6d., to a suit of plain clothes—blue,

brown or grey according to his choice—with a cap, collar and tie, on sending his measurements and address on a printed form to the R.A.C.D. Most took the bonus, but some preferred the plain clothes. To meet their wants a Discharged Soldier's Suit Section was formed at Battersea Park in December 1918, remaining open till August 1920; and during this time it sent out one and a half million suits by parcel post and dealt with two and a half million letters.

But to cope with personal equipment and clothing was a trifle compared with the task of collecting, classifying, renovating and housing the enormous mass of guns, ammunition, wagons, harness and indeed every variety of goods that at once began to pour in from all directions.

Every military establishment in the United Kingdom formed for the purpose of war began to close down and disgorge its contents. There were large outstanding contracts at home, in America, etc., that had to run their course, and stocks in the hands of manufacturers had to be cleared. Premises, temporarily acquired, had to be released to enable the ordinary work of the country to be got going. Although immense stocks were sold in France and other theatres, it took long to ascertain what would be surplus to the needs of a post-war army whose responsibilities could not be gauged while the world was in a melting pot, and meanwhile war depots on foreign soil had to be cleared. All this gigantic residue had to be accommodated somehow in the United Kingdom.

To meet the situation, long foreseen, the War Office had entered into an agreement with the Ministry of Munitions to take over three of its largest munition factories—at Georgetown near Glasgow, at Aintree on the outskirts of Liverpool, and at Chilwell in Nottinghamshire. All three were soon filled to repletion, while every other depot overflowed.

The return to anything like normal conditions occupied years. The Disposals Board, an offshoot of the Ministry of Munitions to which was entrusted the disposal of all surplus war materiel, had to spread its sales over lengthy periods. Markets were inundated with commodities of

a civil or semi-military character and to have sold everything at once would have resulted in ruinous loss—even as it was the prices fetched were often ridiculously low.

Moreover, the military commitments of the Empire remained for long abnormal. There were riots in Egypt, insurrections in Mesopotamia, unrest in India and next, graver trouble in Turkey; and it was not until these subsided and Mandates were sanctioned for the government of territories ceded by our late enemies, that the world situation gradually crystallized and it became possible to forecast with any degree of accuracy the duties, and consequently the strength, of the British Forces of the future, the armament of its artillery, etc., and decide definitely what stocks were clearly redundant.

The figures, as they were arrived at in general terms at the War Office, were communicated to Woolwich and Pimlico, which called periodically for stock lists from every Ordnance centre. Then would follow intricate transfers of stock to clear, one after another, the temporary depots whose release was being pressed for, with the resultant throwing up to the Disposals Board of some particular block of stores—for choice those not of strictly service pattern or up to the usual standard; and so the process would continue.

The policy was to release premises temporarily acquired as and when they were no longer required, reduce to manageable proportions the stocks held at the permanent peace depots, concentrate the balance at the three great munition factories taken over, and finally to clear these in turn, first Georgetown and Aintree, and lastly Chilwell.

It was for some time hoped that Chilwell might be kept permanently as a main Ordnance Depot to supplement Woolwich and Pimlico, as it was well adapted for the purpose, and centrally situated in the heart of the Midlands manufacturing district. But the proposal was vetoed by the Treasury on the urgent plea of economy; and the net result of the War was the acquisition of Didcot for 'Q.M.G. stores' in exchange for Woolwich Dockyard; while for nearly ten years the army continued to live on its slowly diminishing war stocks.

As for other services so for ammunition. It was impossible to shut down with the stroke of the pen which signed the Armistice all the great organizations engaged on the production of munitions, and for awhile their output had still to be taken into Ordnance charge. The result was that depots became congested and the state of things became even worse when the movement of ammunition back to England from abroad began, the overcrowding at some places reaching a point which gave rise to considerable anxiety.

The disposal of these great accumulations presented many difficulties. Gradually however decisions were arrived at that certain types and makes, which were not considered to be up to the highest standard as to quality, should be disposed of ; and the process of breaking down was undertaken at certain Ministry of Munitions factories, notably at Hereford. At the same time contracts for breaking down on a large scale by private firms were being considered, and eventually an agreement was made with one firm, which was to take over nearly the whole of the ammunition then surplus or later to be declared surplus at agreed prices, and break it down. This entailed the movement of hundreds of thousands of tons to Farlington near Portsmouth and to other places where the plants for breaking down were established. It was decided to retain Bramley permanently as an ammunition depot, and there the firm were also permitted to establish a breaking down plant which resulted in a great saving in transport. Large quantities of propellant were also destroyed by the R.A.O.C. at Bramley.

From the technical point of view the processes presented many features of great interest, but these cannot be dealt with here, beyond saying that the work was carried out with great rapidity, once it was well started, and with almost complete immunity from accident. Most of the explosive was destroyed by burning, and the ammonium and potassium nitrate and metals were sold in the public market.