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The Von Löbell Reports on Military Matters in 1911: 38th Year of Publication

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THE VON LÖBELL REPORTS ON MILITARY MATTERS IN 1911.

(38th YEAR OF PUBLICATION.)

Précis from the German by LIEUT.-COLONEL E. GUNTER, *p.s.c.*,
(late) *East Lancashire Regiment.*

(Continued from November JOURNAL, page 1568).

ARTILLERY TACTICS IN 1911.

Great zeal was shown in striving to build up on foundations of true tactical principles, and as a result to issue a number of new Training Regulations. But, as regards the artillery, it was here and there thought wiser to withhold new rules for the conduct of artillery action, as frequent changes in these not only render such conduct difficult, but are actually detrimental. If Regulations are to become the flesh and blood of the troops they must not be changed from year to year. When the organization of an artillery is once settled, and its armament with guns, ammunition and accessories provided for, it is well to gather and consider well the experiences these have afforded before issuing new Regulations. For instance, Russia hesitates about issuing new Regulations, and Germany has not yet undertaken a new reprint of its "Field Artillery Training."¹

One question all are agreed on, that is the complete and continuous co-operation of the infantry and artillery in battle, though there are many conflicting views as to how this is to be ensured. Many essays and some books appeared last year voicing them. In France military literature busied itself especially with this. Yet a new "Field Artillery Training" has been taken into use. As to the co-operation of heavy and field artillery there is more general agreement. With a good mutual understanding the heavy artillery may be brought up under certain circumstances so as to cover with their projectiles the deployment of the field artillery, whereas formerly the idea was that it would be impossible for the heavy artillery to come into action until this was prepared for and covered by the fire

¹ This is not quite clear, as further on the Report on German artillery progress states that a new edition of the *Schiessvorschrift* with the *Schiesslehre*, rewritten, was issued in March, 1911, and the various changes are noted at great length. Of course there is no space even to epitomize these here (they are entirely technical); again, it says that the second part of the (provisional) *Feld Art Exerzier-Reglement*, for the service of guns, ammunition, and the use of observation wagons, etc., was issued in May, 1911.—E.G.

of concentrated field guns. Everyone is agreed as to the necessity for the intimate co-operation of infantry and artillery, but many differ as to how this is to be brought about. In the course of the year under review many books and essays were published on this subject. The difficulty of observation when the battery is firing from a concealed position, except in cases where there are natural elevations close by, which afford good observation positions, has led to the introduction of observation wagons fitted up with steps or ladders. Yet these may easily betray the position of the guns. Observation from aeroplanes becomes more important, and practical experiments must determine the value of this. As more ammunition will now be required than heretofore, means to supply this must be studied; the use of mountain artillery even for employment in flat country, the introduction of improved range-finders, greater effect against shielded guns, and considerations of concealed positions for guns, also how to get good fire effect from these, are questions which have all been more or less discussed in the Reports of the past year.

FIELD ARTILLERY IN INDIVIDUAL STATES.

Austria-Hungary.—There is little to report since 1909. New Field and Mountain Artillery Training Manuals were issued, and the organization seems to work satisfactorily, especial praise being earned in the manœuvres for their good fire, conduct, and direction, and for their co-operation.

Belgium.—New "Field Artillery Training" has been issued in two volumes to the Army, but is not obtainable by purchase from booksellers. It is discussed in Nos. 22 and 43 of the *Militär Wochenblatt*, 1911. These numbers discuss in detail of a very technical nature the different kinds of fire used. These are said to présent nothing novel, and can of course not be reproduced here. A special method of fire against cavalry attack is laid down where it is attacking their own cavalry. The chief points on which stress is laid are: Coming into action by surprise; unity of massed fire effect; co-operation with other arms; organization of the artillery under one command for battle or for any other united purpose. Fire positions may be either in the open or under cover. In the new Belgian Field Service Regulations the battle and ammunition supply are treated in Part IV., and in the provisional "Infantry Training," artillery action is dealt with at the end of the section "Infantry in Battle."

France.—According to the latest information available, the following number of rounds are in future to be provided for each field gun:—With the battery, 312 (including 36 high explosives); in the Corps Ammunition Park, 267; so a total of 589 rounds against 502 hitherto carried.

As regards heavy artillery, the *Vade-Mecum*¹ says, that in each army there are to be three brigades of three batteries each, and a staff; the battery has four heavy-155mm. (6.1-in.) guns, 8-horsed. Each batt. has ten ammunition wagons, two light ammunition carts for service during firing, one field forge, one forage, and three supply wagons. Each batt. ammunition column consists of two ammunition sections of 30 ammunition wagons each, and the necessary supply wagons in proportion.

The employment of heavy artillery depends much on the nature of the country. In well-known country, for instance, when advancing towards a fortified position it can be assigned a forward place in the column of march. In other cases it is to be kept further back until the situation is cleared up, so that it may at once proceed to positions where its effect is most required. This effect is both material and moral if employed against decisive points, where its great effect can most suitably be developed. In defence its best position is in second line, with observation stations in the first. Its curved fire effect can best be utilized to reach objects in dead ground, which field artillery could not destroy. It should not therefore be used against troops in the open, where an increase of field artillery effect would suffice.

Germany.—The new *Schiesslehre* was re-written in March, 1911, and issued to the artillery provisionally. The main points are: careful preparation by the battery commander, to ensure rapid opening of fire, and quiet continuance of steady quick-firing. The observation ladders now carried much facilitate this. The Report deals with the many instructions in the *Exerzier-Reglement* to the extent of 4½ pages of closely printed matter, in which there is a certain amount of repetition. This is more suitable for a purely artillery journal which deals with such technical details. As mentioned in the general remarks at the head of this section, the question of the earlier employment of the heavy artillery and its forward place in the column of march is discussed. If two divisions of an Army Corps are following one another on one road, the heavy artillery is, as a rule, to be attached to the leading division, and march next to the last of its infantry in column. If its early employment is anticipated it may precede the main body of the field artillery; this, the Report remarks, may lead to great delay in bringing the latter into action, and especially in the infantry deployment. In the Regulations for the foot artillery the principles of the command and conduct of the artillery in an Army Corps and in the division are laid down. In the latter the Divisional Commander is responsible for the co-operation of both infantry and artillery in united action.

¹ *Vade-Mecum*, de l'Officier d'Etat Major C. Lavauzelle, Paris, 1911. 10ème édition.—E.G.

Great Britain.—The instructions issued by the general staff for the command of artillery brigades are noticed, *vis.*, that with Q.F. guns Brigade Commanders must leave to the Battery Commander all details as to how the orders given by him are to be carried out. The new field howitzers¹ are said to have given universal satisfaction. There is a great demand in English military literature for mountain guns to be used in ordinary country as well as in mountain warfare. The experiences of the Italians in Tripoli are quoted in support of this. It is considered that in close country, where horsed batteries cannot get near enough to the fighting line to support the action of the infantry and co-operate with them, pack artillery would be handy and effective. Many English artillery books and essays are referred to, such as Col. Bethell's *Modern Artillery in the Field*, *The Journal of the R.A.I.*, *Pack Artillery*, *Horse and Field Artillery Training*, *A Study of German Artillery Tactics*, etc.

FIELD ENGINEERING IN 1911.

There is really nothing new to bring to notice in this part of the Report since that of 1909.² Following on the experiences of the Russo-Japanese war there is a demand in Germany for the increase of the field companies (*Pioniere*) with the German division, which only has one. The Japanese had three and found these insufficient. At the same time there is a strong feeling that field entrenchments ought to be executed by the troops that have to defend them. Even if the engineers have to be broken up into sections to be attached to battalions as instructors in entrenching, it is injurious to the engineers as a corps, etc. Among engineers there is a cry that the infantry should learn to be more independent of them. In Austria it is demanded of the infantry that they should not only do the earth-work, but be able to make overhead cover themselves, as well as do all the simpler part of the road-making required in the vicinity of their camps, and carry out ordinary demolitions, etc.; that the cavalry must be able to do all the light bridging required, and the erection and repair of telegraph and telephone stations, now that they have with them an engineer detachment with a light bridging train attached. The same ideas prevail in Russia. Every year a number of officers, N.C.O.'s and selected men are to go through instruction courses in the engineer camps, and, after passing practical examinations, to return to their Corps as *Troop sappers* to instruct others. Each company has to put in two "practices" at inspections, and

¹ The 4.63 howitzer is meant. Details of this and a photograph of this are given in the Report under "Artillery Material" (p. 398 of Text, and Plate 3).—E.G.

² See the JOURNAL, January, 1911, p. 71.—E.G.

three in open country, Generals and inspecting officers are to certify that they are efficient in their annual Reports.

As regards field works : It is more than ever necessary that these should only be constructed in accordance with the tactical requirements of each case. It is imperative that our commanding engineers should therefore be well acquainted with the ideas and intentions of the Commander of the Force. The defence of localities, valuable as concealing the defenders, is now, it is said, rendered doubtful by the increased power of modern artillery. But the extraordinary use made of these localities by both Russians and Japanese in Manchuria leads one to look upon artillery fire effect as somewhat overrated. Considering the great extent of cover troops now occupy in a modern battle it may be doubted whether the loss inflicted on them can be commensurate with the immense amount of ammunition expended. General Langlois thought that artillery could effect little against such extended defensive positions, and that all the shells carried by an Army Corps would not suffice to destroy a large village. It is different of course when artillery fire is directed against an isolated house or farmstead. Unless the actual effect of artillery fire can be observed, it is comparatively useless. These ideas, if generally accepted, will modify the plans hitherto usually adopted heretofore for the distribution of the defenders in large villages, etc. More stress will be laid on the careful selection of good, well placed walls, and on the inclusion of certain suitable buildings.

The attack of entrenched positions is becoming more like that of a fortress. The various ways and means are well indicated in the *Mitteilungen über Pionierwesen*, 1911, Vols. 1 to 4. The Russians still use redoubts, which do not find much favour in France and Germany.

MILITARY BRIDGING.

Captain Normand gives us a fairly detailed account of the bridging train of a French Army Corps. The engineers, as with the two divisions of the Corps, carry no bridges, but only floating inflatable bags, with which they can construct rafts to push patrols across or send them over singly. The Corps Engineer Companies, composed of two-thirds *pontonni*ers and one-third miners at present, will probably in future consist of *pontonni*ers only. The cavalry divisions have no light bridging train yet. Captain Normand describes the whole arrangement as a happy-go-lucky business. The Austro-Hungarian cavalry is much better provided, four 4-horsed wagons carry the bridging apparatus. In the Herbert System (1908) aluminium portable boats in two parts have replaced the former steel boats. The superstructure is formed of strengthened chassis 3.99m. (13 ft. 1 in.) long, .7m. (2 ft. 2 ins.) wide, and of these ramps, roadway, etc., are formed as required. Road bearers are also

carried, which can be used as trestles. Interesting details of length, breadth, etc., are given, and of the troops carried across, which we regret we have not space for.

Various details of bridging expedients are given in the Report, especially of a Norwegian appliance for rapidly crossing ditches, etc., in face of the enemy. Much attention has been paid to pile bridges and pile driving by the aid of auxiliary bridges alongside.

PERMANENT FORTIFICATION IN 1911.

The Report says that the Italo-Turkish war in Tripoli furnished little useful experience, and that we are for this thrown back on the great siege of Port Arthur by the Japanese in 1904, regarding which two studies are especially brought to notice,¹ and many other works are mentioned, which we have not space to enumerate. The new German text-book, *Anleitung für den Kampf um Festungen* (1910), has, the Report says, been received everywhere with the greatest interest. Major Tœffer's lectures² are spoken of and many articles on coast defence, etc., such as *Die Landesverteidigung Hollands Internat-Revue*, 1911, (Beiheft 120), *Die Küstenverteidigung des Britischen Weltreiches* (Stavenhagen), (Jahrbücher, October, 1911), are cited. A long chapter on "Fortress Warfare" is given, which is of especial interest, sketching, as it does, under different heads, German and foreign views on, (a) methods of attack; (b) the inhabitants and the question of constructing an *enceinte*; (c) the artillery of the attack and defence, in which the question of advanced positions comes in; (d) the close attack, in which the employment of machine-guns is discussed; (e) the Russian methods of attack; (f) the practice of fortress warfare in peace. This is followed by a chapter on ideas as to construction of fortresses, subdivided into (a) hill fortresses; (b) coast defence. Lastly comes a short chapter of the development of fortification in Europe in 1911, of which an epitome is given.

Austria-Hungary. — Besides strengthening certain fortresses, improvements were made in the communications by rail and road. The country between the valley of the Adige³

¹ The distant and close attack of fortresses (*Fern u. Nahkampf*), *Mil. Wochbt.*, 95, 96, 97, of 1911.

Artilleristische Wahrnehmungen. Art. Monatsheft, 8, 9, 10, of 1910.

Takowleff *Défense des ouvrages permanents* and *Internationale Revue*, 1911, Suppl. 140.—E.G.

² *Wiederholungsbuch der Festungslehre u. Kampfes um Festungen 2^{te} Auflage*, Berlin, Eisenschmid, 1911.—E.G.

³ The Adige rises south of the Reschen-Scheideck Pass, flows past Glurns-Meran in Austrian Tyrol, by Botzen, Trient, Verona, Legnago, into the Gulf of Venice. It is in Italy broad, deep, unfordable, and of great military importance.—E.G.

and the Western Spurs has been connected up by a railway leading from Botzen over the Mendel Pass to Mezzo Lombardo, where it again joins the line Botzen—Trient. This much assists the defence of S.W. Tirol. The railway from Partenkirchen by Mittenwald and Scharnitz Pass to Innsbrück has been so advanced that it may be worked (it is said) in the course of 1912.

Belgium.—As regards the Scheldt defences the Report says:—In consequence of the strain between Germany, France and England, in the course of 1911, the Belgians were inclined to open their gates to the two latter Powers, free access to Antwerp being of importance to them. This seemed to be imperilled by the intention of the Dutch Government to erect new fortifications at Flushing on the lower Scheldt. Some sought to represent this as an injury to the neutrality of Belgium, and invoked the aid of the Great Powers, which guarantee this, to stop it. The facts that Flushing was formerly fortified, and that fortifications still exist on the lower Scheldt, were silently ignored. The acknowledged right of the Dutch to fortify the mouth of the Scheldt in order to preserve their own neutrality is therefore the only matter in dispute. The Belgians, however, demanded plainly that the Scheldt should remain open in case they were threatened and a friendly Power wished to come to their aid. As they felt themselves (without any reason, in the opinion of the German writer of the article), threatened by Germany, it was apparent in whose interests they wished to hinder the barricading of the river.

Germany.—The fortresses Breslau, Kulm, Marienburg, are now included in the official list. In the other places formerly fortified the ramparts are being levelled. At Cologne the old lines of the left bank are being levelled, and the old forts Paul v. Mecklenburg, Prince Nicholas, Prince Frederick of Holland, and forts Prince William and Henry of Prussia are being left open, as is the north-west front of Königsberg.

Great Britain.—The Admiralty has decided to connect by a canal the inner basin of the naval harbour Rosyth with the neighbouring Bay of Inverkeithing, to prevent the enclosure of the fleet, as the great Forth Bridge could be easily disabled by an enemy and the chief outlet from Rosyth be thereby imperilled. This canal would be of strategic importance. The Inverkeithing Bay could also be utilized as a central station for torpedo boats and destroyers for the relief of Rosyth, and as an advantageous flank position in defence of the outer waterway of the new naval base. These works are to be completed by 1913.

Italy.—The following harbours are of military (naval) importance: Ancora, Brindisi, Gaëta, Genoa, Messina, Naples, Palermo, Spezzia, and Taranto. The disuse of Taranto as a

war harbour is sharply criticized by the naval war correspondent de St. Pierre, who gives in detail his reasons and his opinion as to what work ought necessarily to be undertaken to fulfil the requirements of a fleet there. On the Lake of Garda the island of Trimelone has been fortified, and commands the roads to Peschiera and Desenzano.

Russia.—On the northern shore of the island of Sveaborg (south of Helsingfors) additional works are being constructed. What their armament is we do not know. Two other points in the Gulf of Finland are also to be fortified to bar the approach to Kronstadt and St. Petersburg.

Sweden.—About a million gold kronen¹ are being allocated yearly to a Sinking Fund to provide for the fortification of certain coast defences, and the Defence Committee has recommended the completion of the works at Basholm and Oscar-Fredricksborg, as it considers the safety of Stockholm is exposed to attack by sea owing to the development of modern naval artillery.

Turkey.—The Report mentions the appointment by the Government of a special commission, which was to take into consideration in 1911 such projects as the strengthening of the works on the Bosphorus and Dardanelles, the construction of naval harbours at Smyrna and Salonika, as well as the fortifying of other important points on the Turkish Mediterranean coast. To save money it was decided in 1911 to dismantle several old fortresses, which are enumerated. At Salonika new works were to be erected, as Cape Burun and the old fort Kasaburun are dismantled. Monastir and Mitrovica were to be fortified, but Preveza, at the entrance to the Gulf of Arta, was to be left open. The unexpected invasion of Tripoli by Italy, however, prevented these plans from being carried out.

SMALL ARMS IN 1911.

General.

The question of the automatic and repeater-rifle is still hovering in the foreground of general interest. No one has as yet followed the example of Mexico, but besides France and England other States have approached this question. There are few great Powers that have not a repeater of one pattern or another in hand. The suitability of such a weapon for war must, however, first be demonstrated. In some cases there is talk of these rifles having been issued for trial by certain troops. It remains to be seen whether this in fact, is because a re-

¹ About £5,500.

armament has been decided on, or whether such trials have for their object to see how a particular pattern that has already met with favour would suit the troops. Latterly the so-called "armoured ammunition" is being discussed. This is a special pointed ammunition, of which the bullet is either all-hardened or has its kernel formed of a particular hardened steel. The effect of pointed ammunition against the present artillery shields is already greater than that of rounded (ogival) bullets. With the above-mentioned armoured ammunition the penetration would be considerably increased. The *Journal des Sciences Militaires*, No. 81, of 1911, has an essay on "Automatic Rifles," in which it divides these into three classes or groups, according to the way in which the repetition of the firing is produced by the action of the gases, the recoil, etc.; others divide the known self-loading systems into four groups, (1) those in which the barrel recoils; (2) those in which it glides forward; (3) those in which the barrel is immovable; (4) those in which the fixed barrel has a parallel tube alongside.

The Report appends a table of the magazine rifles in use by the armies of the world. This was epitomized in THE JOURNAL for February, 1911, page 190. Exigencies of space then prevented the inclusion of the following:—

Nation.	Designation or System.	Year.	Calibre.		Rounds on mag.	Weight of Bullet.	Weight of Rifle and Bayonet.		Distance sighted for.	Muzzle Velocity
			mm.	m.		grs.	lb.	oz.		
Bulgaria ...	Mannlicher	1890	8.8	.315	5	162S	10	11	1,145	2,171
Greece ..	Mannlicher } Schönaauer }	1890	6.5	.256	5	160R	10	5	2,180	2,338
Roumania ...	Mannlicher	1890	6.5	.256	5	159R	9	12	2,180	2,527
Servia ...	Mauser	1890	7.0	.275	5	170R	9	8	2,180	2,296
Turkey ...	Mauser	1890	7.65	.303	5	155S	9	3	2,180	2,778

S = Spitz or sharp pointed bullet.

R = Round or ogival bullet.

Austria-Hungary.—Successful experiments are said to have been made with a bullet filled with a smoke giving powder. On the bullet striking the ground a percussion cap is ignited, which causes a visible little smoke cloud to be emitted from the bullet. Two or three volleys with these will give quicker and better indication of the range and direction than any range-finders, it is thought. Experiments are also being made with an automatic rifle on the "Bang" system. The loading mechanism is combined with a "silencer" (Maxim). This moves forward a few centimetres on firing, and this movement connects it with a lever under the barrel, which is acted on by the gas pressure. This throws out the empty cartridge, brings up the new cartridge into the chamber, and closes the breech,

which latter action works by a spring on the "silencer" and draws it back into its place. This system is considered advantageous in that no gouging of the barrel is necessary, and thus the fouling of the grooves and the hindrance to smooth and rapid loading is avoided. *Per contra* it gives increased weight. The problem of fixing a bayonet or sword bayonet on to this rifle is, moreover, not yet solved, whether the above combination, which introduces additional springs, etc., into a rifle, which has already enough small parts in its mechanism, is doubtful.

Belgium.—The experiments at the Beverloo camp with pointed bullets have been continued. It seems probable one of 12 grammes (185 grains) will be adopted.

Bulgaria.—The 9mm. (3.06-in.) Parabellum pistol has been approved of by the authorities as the weapon for the equipment of all officers carrying pistols.

Italy.—The *Genovori-Revelli* automatic rifle has been improved, and 6,000 of these are to be issued for trial to 12 Bersaglieri Cyclist Battalions. The details of this rifle are, of course, kept secret. It is said to be of the same weight as that now carried, and to have a fixed barrel. It is called the *Terni* automatic rifle, as the *Terni* Small Arms Factory makes it.

The *Glisenti* automatic pistol is to be introduced for officers.

Switzerland.—The Technical Committee has not yet recommended the adoption of any pattern of automatic rifle, though experiments have been carried on with many, none of which, however, justified the opinion that they could advantageously replace the present rifle. Moreover, they are of opinion that no existing automatic system satisfies the requirements of a military rifle. The Swiss *Monatschrift* does not concur in this, but continues in its belief that the birthday of an automatic rifle fulfilling the exigencies of war is approaching.

United States.—A "silencer" on the Moore system has been tried against that of Maxim, over which it claims the following advantages: (1) it is $2\frac{1}{2}$ ins. long against the $5\frac{1}{2}$ ins. of Maxim; (2) its attachment is lighter yet firm; (3) it can be utilized with the bayonet or sword fixed, which the Maxim cannot. Neither were, however, found quite satisfactory, so both of these manufacturers are busy with improvements, and further experiments will be carried on.

Machine-Guns.—The Report gives a table of these guns and their carriages, calibre, etc., but says there is nothing new to report. It says that there is a tendency to increase the thickness of their shields beyond those in use for artillery, notwithstanding the additional weight,¹ the defects of their small

¹ The table does not give the thickness of the shields in use.—E.G.

cone of dispersion as compared to that of the fire of rifles is known, so that if the distance judged is incorrect the fire effect is small, and much ammunition is wasted. A French invention is said to remedy this.

The effect of machine-gun fire would be increased if each machine-gun were furnished with a telescopic attachment. The Report describes in detail such an apparatus, which we have no room to epitomize here. The Italian Captain Revelli is said to have designed a new pattern of machine-gun.

Bulgaria.—All machine-guns were fitted with shields by 1911. They use the Maxim 8mm. (3.15-in.) calibre.²

France.—The new automatic bullet-dispersing attachment for machine-guns, invented by Major d'Auriac, was tried at the camp of Chalons in 1911. It answered up to 1,600 metres. It acts without diminishing the rate of fire. A cone 200 metres wide and deep was formed, and fired from 1,500 to 2,000 bullets in about three minutes. *Automobile-Mitrailleuses* machine-guns mounted on motor lorries, to fire at a high elevation against aircraft, were also tried, but could not generally be halted and aimed rapidly enough to produce good effect.

Italy.—An ingenious Captain of Bersaglieri has invented an apparatus to be attached to a machine-gun which imitates its tat-tat exactly, so that if intelligently used in action at times much ammunition may be spared.

The new *Revelli* machine-gun has been tried by the Experiments Committee and given especial satisfaction. Its chief feature is its lightness (12 kgs., or 28 lbs., against 15 kgs. of the older patterns), without injury to its ballistic properties. It is also said to be extremely simple. It can be used automatically for single gun or rapid continuous fire. There are three different methods of cooling the barrel: by air, water, or by changing the barrel. The rate of fire is about 600 shots in a minute.

ARTILLERY MATERIAL IN 1911.

There is scarcely anything of importance to report as to changes in artillery material last year.

Many States are paying particular attention to mountain guns. These are mainly of two classes: (1) those with movable elevating barrels, etc., and alterable recoil; (2) those firing at a fixed elevation with unalterable recoil. The Krupp 4.3 shielded howitzer is an example of the latter type (a photograph of it is given with details, for which we have not space here). All gun factories are striving to perfect their field howitzers, the importance of which in modern war is recognized. A long

² The Servians use a Maxim of 7mm. (.276-in.) calibre; the Greeks one of 6.5mm.; and the Turks one of 7.65 (.301-in.) calibre.

chapter gives details of these by Krupp and Erhardt (*Rheinische Metallwaren Fabrik*), and of aircraft destroyers, etc. Details of new guns for this purpose, 8 $\frac{3}{4}$ -pounders by Krupp, and 14 $\frac{1}{2}$ -pounders by Erhardt, are given, with ranges of 11,000 and 9,140 metres, respectively. Photographs and details of the British (4.63-in.) field howitzer, the Erhardt L/17 Norwegian mountain gun, and of the Schneider 28 cm. (11-in.) portable siege mortar, are also given.

Austria-Hungary.—In the spring of 1911 trials were made in the presence of a Technical Committee of a *Skoda* 30.5 cm. (12-in.) siege mortar. It can be taken to pieces in three parts for its travelling carriage, and put together for firing from a mortar bed. It is reported that it gave satisfaction as to accuracy, weight, and simplicity of service. The new telephone apparatus, as provided for the infantry, was adopted. Experiments have been made with a new 12 cm. (4.7-in.) heavy artillery steel gun.

Belgium.—The 18 field batteries sanctioned in 1910 have been provided. The gun is a 7.5 cm. (15.5-in.) Krupp barrel-recoiling one.

The eight guns of 28 cm. (11-in.) calibre that were ordered for the fortress of Antwerp have been mounted; four of them on disappearing carriages.

Bulgaria.—The delivery of the 12 cm. (4.7-in.) Schneider field howitzers was commenced early in 1911. It is not known how far it has progressed.¹ The newspapers say that this howitzer has a pneumatic break and fires a heavy shell of 21 kilos. (46 $\frac{1}{4}$ lbs.) weight, muzzle velocity 984 f.s.

Great Britain.—Full details of the British 60-pounder (12.7 c.m.) siege gun are given, with the number of rounds carried for each gun, and in the battery; the muzzle velocity is given as 2,160 f.s., range 13,600 metres. It is noted that a small fort has been erected on Walney Island for the defence of Barrow-in-Furness and the Vickers Maxim dockyard, and that comments have been made in the press as to the deficiencies of many coast batteries, which have still only 9.2-in. guns wherewith to combat modern warships, for which much heavier guns are required.

France.—Experiments are still being carried on with a view to a thoroughly satisfactory heavy artillery gun. It must be lighter but of the same calibre and as effective as the field artillery gun. The War Minister says these conflicting re-

¹ It is remarkable that so little should be said in Germany, judging by this publication, of the great progress made by Bulgaria, Servia and Greece in military matters. Yet the possession by Bulgaria in 1911 of the Schneider-Canet Q.F. gun, and of heavy 4.7-in. and 5.9 Creusot guns must have been known, as well as of the six batteries of 12 cm. (4.7-in.) howitzers.—E.G.

quirements are difficult to fulfil. One newspaper says that by using the very latest pattern barrel recoiling system the weight of the gun carriage could be reduced to about 30 hundred-weight. A new observation wagon, with ladder, has been tried and approved. In its limber are carried two *Satz* (electric piles) of telephone wire and apparatus. Each *Abteilung* (artillery brigade of three batteries) is supplied with five piles. All batteries are to have this observation wagon by the end of 1912. The telephone apparatus and length of wire (500 metres on the drum), tools, etc., carried by three riders are described. The introduction of light field howitzers and the reorganization and increase of the heavy artillery was urged by M. Clémentel in his Report for 1911. The details of the *Rimailho* howitzer are again given.

The light field howitzer recommended is one from 4-in. to 6-in. calibre, carrying a shell of about 15 kilos (33 lbs.) weight. The combining of fire effect and a good supply of ammunition with sufficient mobility is what is to be aimed at; and four batteries of such howitzers are to be added to each Army Corps; each battery of four howitzers is to work, in every engagement, in co-operation with the field artillery.

Italy.—From Tripoli the reports of the Italian field artillery are quite favourable,¹ especially as to its mobility. This army is supplied also with a 14.9 cm. (5.86-in.) Krupp field howitzer. This piece has a long recoil and is covered by a large shield. The barrel can be withdrawn from its cradle into a travelling position for the march. The *Temps* says these field howitzers have proved very mobile and handy at the manœuvres in 1911. At the Turin Exhibition in 1911 a 13½-pounder mountain gun and several others were shown.

Russia.—The heavy artillery comprises some mortar batteries, 12 cm. (4.7-in.) field howitzers, Schneider-Canet make, weight in action 1,324 kg. (26 cwt.), firing over 5½ ft., with a range of 7,500 metres, weight of shell 55½ lbs., muzzle velocity 1,100 f.s.

The 15 cm. heavy howitzer (5.9-in.) fires a 58 lb. shell at an elevation of 43 degrees. The gun is the chief weapon for coast defence to oppose hostile armoured vessels, but it is supplemented by the fire of howitzers, which are, however, of small calibre.

Turkey.—In 1911 88 barrel recoiling field guns, 2.95-in. calibre, were ordered from Krupp, and 18 mountain batteries of 2.95-in. calibre from Schneider (the mountain batteries have four guns each). They carry a shell weighing about 11½ lbs. They fire over a height of 2 ft. 4 in.

United States.—For coast defence most of the guns are of 5 ft. 9 in. calibre and upwards. For the defence of the

¹ This was the 7.5 cm. (2.65-in.) gun of 1906, carrying a 14½ lbs. shell, muzzle velocity=1,675 f.s.—E.G.

Panama Canal guns of 14-in. calibre are to be mounted on the Pacific side, and, for the Atlantic side, guns of 15.9-in. and 14-in., and mortars of 11.9-in. calibre. Trials have been made with aircraft-destroying high-angle guns of small calibre.

OBITUARY.

Lieut.-General Rudolph von Caemmerer, of the Prussian Army, born at Coblenz on 25th June, 1845, and died at Schönberg on 18th September, 1911, entered as a *Fähnrich* the 29th Regiment of Infantry from the Cadet Corps in 1862. He served in the war of 1866, including the battles of Münchengrätz and Königgrätz (Sadowa). He joined the Staff College after the war and served in the Franco-German war as First-Lieutenant, being severely wounded at Wörth. In 1873 he was appointed Instructor at the War School in Cassel. Thence on promotion to Captain he was appointed to the General Staff, and attached to the XVth Army Corps (Strasburg). In 1878 he was transferred as a Company Commander to the 83rd Regiment. In 1880 he was promoted Major and again employed on the General Staff with the Vth Army Corps at Posen Headquarters. In 1886 he commanded a battalion of the 21st Regiment. In 1887 he became Lieut.-Colonel, and in 1890 Colonel and Regimental Commander of the 114th, and in 1893 Major-General and Brigade Commander. He was knighted in 1896, and in 1897 promoted Lieut.-General and Commander of the 26th (Royal Württemberg) Infantry Division. He retired in 1900. When he retired his industry as a military writer brought him to prominent notice. Among his works were: *Frederick the Great's Plans of Campaign for 1757*; *The War in 1859—Magenta*; *The South German Armies in 1866*; *Clausewitz—Development of Strategic Science in the 19th Century*; *The War of Liberation of 1813-15: A Strategic Review*; *The War of 1866 in Germany* (a new edition of Von Letton-Vorbeck's work). As a writer on tactics he was highly esteemed. He owed this to the late General Von Schlichting, to whose writings he especially bore tribute, and whose battles he skilfully fought against all who opposed his views. His latest work, written in collaboration with Baron v. Ardenne, on *Wehr und Waffen*, is not yet completed.

General Wilhelm von Scherff, of the Prussian Army, was born at Frankfurt in February, 1834, and died on 16th April, 1911, in Naumburg. He entered the Army from the War School in 1860, rose to be First-Lieutenant, and was on active service in 1866 with the Federal Troops, acting as General Staff Officer to General v. Beyer. He served on the staff in many capacities, and in the Franco-German war of 1870-71 he served as General Staff Officer of the 19th Infantry Division. He was severely wounded at Tours. In 1871 he was again appointed to the General Staff and Instructor of Tactics at the Staff College

in Berlin. He became Lieut.-Colonel, then Colonel-Commanding the 29th Regiment, in 1883, Major-General Commanding the 41st Brigade, and in 1888 Lieutenant-General and Commander of the 18th Division. He retired in February, 1891. His works on tactics are well known and very numerous. *Studies in New Infantry Tactics* was considered an epoch-making work¹ in the German Army; *Some Tactical Principles for the Leading of Troops*; *Tactical Theories and Practical Tactics*; *Delbrück and Bernhardt*; *Considerations of the Battles of Colombey, Vionville, Mars la Tour, Gravelotte, Noisseville, The Sedan Campaign, etc.*; *Tactical Principles and Boguslawski*; *United or Individual Methods of Attack, from the Experiences of the South African War*; *Attack in Battle in the Light of von Schlichting's Tactical Principles*; *A Comparative Retrospect of the Literature of the Day on Infantry Attacks, etc.* As a tactician von Scherff laid the greatest stress on the unity of infantry attack. He thereby came into collision with many other military writers, but also with the new Regulations of 1888. In spite of this, and though, owing to the peculiarity of his style, his works, which are full of thought, did not meet with the wide circulation that they deserved, his influence on the intellectual education of the German Army must be considered a high one.

The Report ends with its usual brief *résumé* of the campaigns of the year, which embrace those in Marocco and the Riff against the Moors, the Italo-Turkish war in Tripoli, etc., the Turkish war against the insurgents in Yemen, etc. Some short notes and sketches of these have already appeared in THE JOURNAL.

¹ This book was translated into English at the time, and to this and other works of eye-witnesses of the battles and combats of the Franco-German war may perhaps be attributed the revival of the study of tactics by British officers, though it was long in bearing fruit. General v. Scherff's later works took a more philosophic tone e.g., *Die Lehre vom Kriege*.—E.G.

