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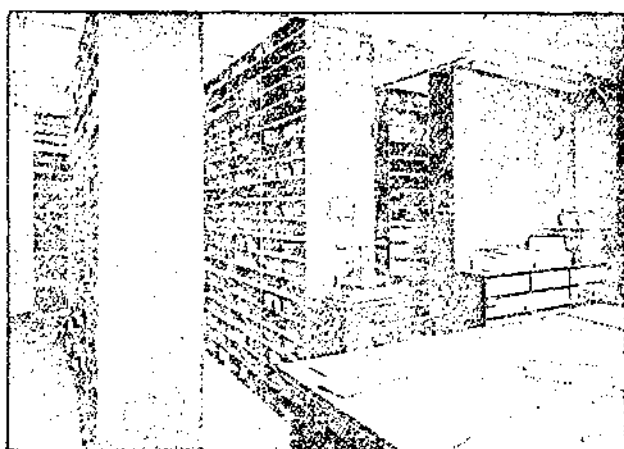
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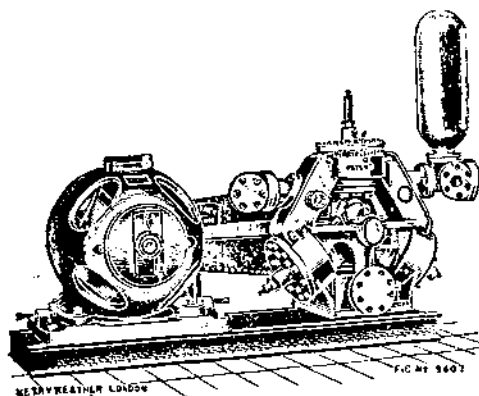
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Authors alone are responsible for the statements made and the opinions expressed in their papers.—(G. 5281).

MUD TOBOGGAN TO CARRY ONE STRETCHER OR
200 LBS.

Designed by MAJOR A. C. FINNIMORE, R.E.

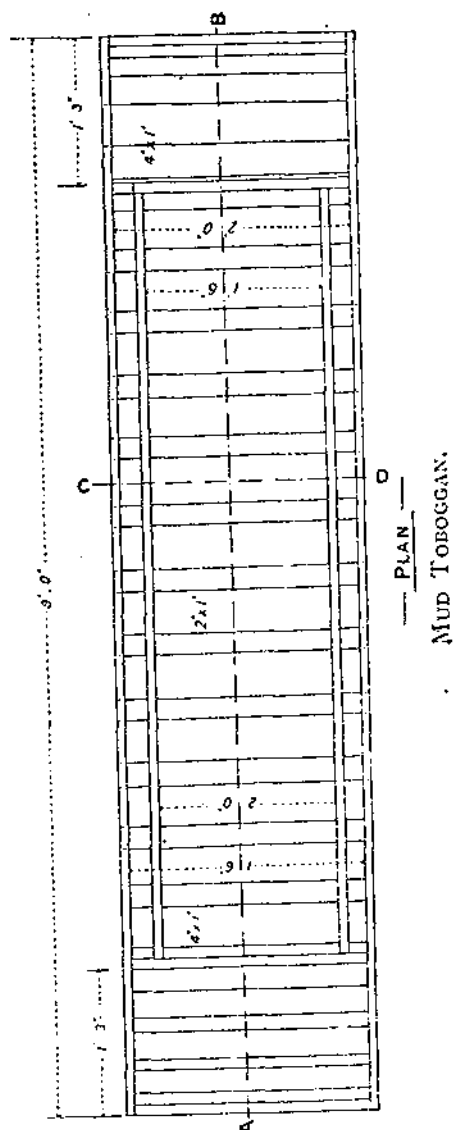
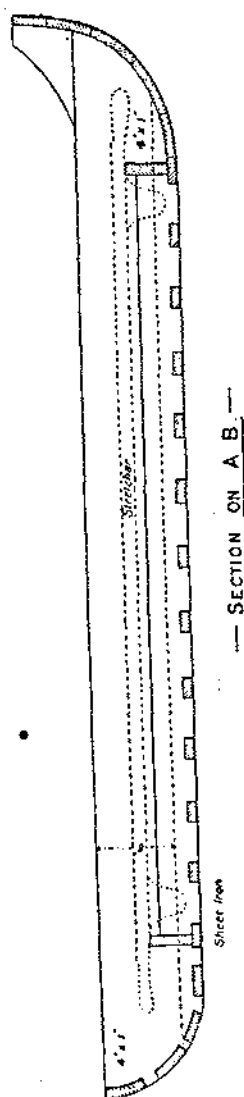
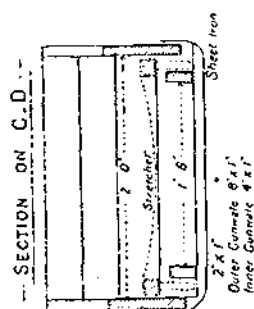
MANY experiments have been carried out in an attempt to discover the easiest method of carrying weights over mud, into which ordinary wheels sink deeply. Sledges of many varieties were tried and the following main principles were established.

Resistance to traction increases nearly proportionately to the area in contact with the ground except when this area is very small. Runners or ribs under the sledge largely increase the resistance to traction.

Sharp edges gather an accumulation of mud and increase the resistance. The smallest resistance was obtained with a spoon-shaped article with curves of large radius. This however necessitates a very low centre of gravity to prevent capsizing on uneven ground and when turning sharply. The design shown in the figures is a modification of the last. It is flat enough to be stable, but leaves the ground in easy curves everywhere. The area actually in contact with the ground is not very large and the centre of gravity can be carried very low.

To obtain these results, a pair of inner gunwales is utilized, which fit in between the legs of a stretcher. They are cut to a slight curve, which becomes more abrupt towards the ends. The canvas of the stretcher sagging between these inner gunwales makes full use of the curves in the bottom of the sledge to lower the weight of the man without actually bringing him into contact with the frame of the vehicle. The outer gunwales take little weight normally, and are chiefly intended to keep out the mud. If the sheet iron, of which the outer skin is made, can be obtained in sufficient width and of sufficient ductility, it can be utilized, instead of the broad wooden gunwale, to close in the side, thereby affecting a considerable saving in weight at the expense of a slight sacrifice in strength.

This toboggan will carry one stretcher or 200 lbs.



MUD TOBOGGAN.

RIFLE RANGE TARGET FRAME—WINDMILL PATTERN

By LT.-COL. A. A. CROOKSHANK, R.E., C.R.E., ——— Division.

TARGET frames on rifle ranges in France are usually made either immovable and single, with just the legs stuck into the ground, or movable and double—of the shutter type, with the legs resting on a double wire over a pulley (in imitation of peace-time metal patterns), the two targets running up and down vertically between two posts.

The objections to the latter type are :—

1. Suitable wire and pulleys are not easy to get.
2. The target frame is very liable to jamb.
3. The target frame posts require heavy timber—in addition to that required for holding up the walls of the trench.

In this design the windmill principle is adopted, *i.e.*, one target is at each end of a windmill arm.

The advantages of this type of target are :—

1. The materials used are those ordinarily obtainable.
2. The target frame supports can be used also for holding up the trench walls.
3. Jamming is almost impossible.

Of the windmill target frame, two types suggest themselves, *viz.* :—

1. A revolving axle, with frame fixed to it. With this type, if the axle is to be used as a strut between the walls of the trench, the earth pressure should be taken by an iron pivot driven into the end of the axle and bearing upon an iron plate fixed to the revetment of the trench walls.

2. An immovable axle, with the target frame revolving on this axle. This enables considerable earth pressure to be thrown on to the axle (used as a strut).

The target can be more easily revolved by the marker and with less strain on the framework ; the moved portion is lighter and more easily repaired, and it is also simpler to make (being devoid of metal work).

In the design shown on page 209, which is of the latter type, the following points should be noted :—

1. Two sizes of targets can be used, *viz.*, 6 ft. × 6 ft. and 4 ft. × 4 ft.

2. The bearing is made as long as possible, to keep the revolutions true and free, especially when there is wind pressure on the face of the target.

3. The central portion of the frame (between the two targets) is made as small as possible, to reduce the depth of the trench. The targets are consequently placed on opposite sides of this central portion.


4. The legs of the targets are held against horizontal movement, by wooden dees, and against vertical movement by dowels or pins (to prevent the lower target from running out when it gets below the horizontal).

5. The targets are in a plane, inclined (towards the firing points) at 4 degrees, the inclination being given by shaping the axle. This enables the marker to see each hit on the target, although the trench is kept very narrow. It also gives more room for the 'markers' feet and for movement in the trench.

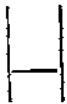
6. The planes of the targets are "staggered," *i.e.*, kept 6 in. apart to enable them to be placed close together without fouling each other and to thus reduce the length of the trench.

7. The target frames are placed at 12-ft. centres to enable the horizontal strut of the intermediate revetting frames to be placed at a suitable height (about one-third of the way up the wall of the trench). The small amount of trench traffic can easily step over these struts.

8. The targets are held in position when in action and under fire by two small wooden battens, one on each side of the lower target. The battens are loose (movable), and are placed by hand across the trench in notches in the lower of the two 3-in. x 6-in. horizontals.

9. As regards holding up the walls of the trench, the revetting frames which carry the targets are of this type,  the ground

sill being countersunk flush with the floor of the trench, so as not to interfere with movement in the trench.

Other revetting frames are placed half-way between the target supports; they are of this type:— 

The trench walls are thus supported at 6-ft. centres.

The walls are panelled with wire netting, expanded metal or corrugated iron, held by two horizontals (of 3-in. x 6-in. timber), one at the top of the wall and one half-way down, also by wooden pickets at the bottom, driven into the trench floor.

10. The revetting shown in the design is exceptional; the trench was dug in a steep valley-side:—a moraine slope of small grained (almost powder) chalk—almost as bad a face to hold up, after the protective armouring of bushes and shrub roots had been pierced, as could be met with—a berm 5 ft. wide had to be left on the uphill side and continuous corrugated iron panelling was a *sine qua non*.

I have had valuable suggestions for this design from Major A. C. Finimore, R.E.

REVIEWS.

A SHORT ACCOUNT OF EXPLOSIVES.

By A. MARSHALL.—(Messrs. J. & A. Churchill, 7, Great Marlborough Street).

THE author's object is, as he says in a brief preface, to present in a clear and simple manner the main facts concerning explosives and their properties in the hope that those who read the book will carry away a clear conception of the different varieties. In this he has certainly succeeded.

The book, which is a much condensed edition of his larger work, *Explosives*, commences by briefly outlining in an introductory chapter the general nature of explosives, and the methods of dividing them into various classes according to their composition, their properties, or their uses. In succeeding chapters he discusses Black Powder and similar mixtures, Nitrocellulose, and Nitroglycerine and Nitroglycerine Explosives, touching briefly on their history, and going more fully into their composition and methods of manufacture. Commercial explosives of many kinds, Smokeless Powders, which include the modern propellants of most European nations, and Fireworks are each given a chapter, as are also Properties of Explosives and Precautions for factories and magazines.

To the military engineer the most interesting chapters are those on Military High Explosives and Ignition and Detonation. The former includes such explosives as Lyddite, T.N.T., and Ammonal; as well as various types of shell and hand grenades, whilst fuzes are not neglected, being included in the chapter on Ignition.

It will be seen that the book, which is well and profusely illustrated, has a wide scope; as it deals not only with explosives themselves, but also with the different forms in which they are packed for express delivery to the unwilling recipient.

Mr. Marshall has succeeded in compressing a very large amount of information into a small space, and yet has avoided the appearance of overcrowding. To the man whose dealings with explosives are confined to their dissipation rather than their manufacture the book is of more academical interest than practical value; but to anyone who wishes to gain a further knowledge of their why and their wherefore it can be recommended with all confidence, if only as an introduction to deeper study.

J.D.B.

PAGES D'HISTOIRE, 1914—1917.

(Librairie Militaire Berger-Levrault, Paris: 5, Rue des Beaux-Arts).

The 132nd number of this series is entitled *Les Dévastations Allemandes dans les Départements Envahis (Mars—Avril, 1917)*. This volume deals with the wanton destruction carried out by the Germans in Northern France; four photographic views are reproduced which give some idea of the completeness with which the twentieth century Huns have ravaged the fair lands of France up to recently in their possession.

The volume is provided with a preface by Monsieur Henri Welschinger, which practically constitutes a summary of its contents. Monsieur Welschinger tells us that, having in mind the reports of the Official Commissions of Enquiry in which are faithfully enumerated the crimes of which the German troops have been guilty, since the first days of the War, in Belgium, in France, in Serbia, in Poland and in Roumania, recalling the clear and damning account of their criminal doings set out by Monsieur Mirman, the stout-hearted Prefect of the Meurthe-et-Moselle, it seemed inconceivable that these creatures, who are human beings in name alone, could have found it possible to commit acts of greater horror or to sink to greater depths of infamy than those related in the records referred to. Nevertheless, unthinkable as it may appear, the extreme limits to which the Germans were prepared to go in their orgy of atrocities had by no means been reached by them until very recently; indeed, not till the irresistible pressure of British and French arms drove them out of the positions so long held by them north of the Somme did the Germans demonstrate the lengths their spirit of vengeance was capable of carrying them. The ravages committed by them in the towns, villages and countryside through which they passed in their retreat to the "Hindenburg Line" were such as to cause a storm of intense indignation to sweep through every part of the civilized world as soon as the facts connected therewith became known. A report on the subject having been made to the French Senate recently, it passed the following resolution on the 31st March last and ordered it to be publicly exhibited in every Commune in France:—"The Senate hereby publicly denounces the criminal acts committed by German troops in the territories of France until recently occupied by them, consisting in offences against private property, against public buildings, against the honour, liberty and lives of persons;

"It hereby declares that these acts of unprecedented violence have been perpetrated without the shadow of an excuse and without any military necessity; indeed, in wilful defiance of the provisions of the International Convention of the 18th October, 1907, ratified by the representatives of the German Empire;

"It holds up to universal condemnation the authors of these misdeeds, to whom should, in the name of justice, be meted out the punishment they deserve;

"It salutes with respect those who have been victims; to these the Nation makes a solemn promise and gives a binding pledge that the enemy will be made completely to indemnify them against their losses;

"It further affirms that it is the will of France, sustained by her brave

soldiers and in accord with the wishes of the peoples of the Allied countries, to pursue the conflict forced upon her until German Imperialism and Militarism, forces which have been responsible for all the misery, all the ruin and all the mourning brought upon the world, are definitely crushed out."

At the sitting of the Senate at which the above resolution was passed, Monsieur Henri Chéron, Senator for the Calvados, gave an account of what he and delegates of the Senate had seen during their visit to the territory recently vacated by the German forces. Put shortly, they found that all ranks of the German Army had treated the provisions of the Hague Conventions with the same disregard that von Bethmann-Hollweg treated the Solemn Contract whereby Germany had undertaken to safeguard and respect the neutrality of Belgium. Monsieur Chéron employed no exaggerated language when he stated that one would have to go back to the remotest periods of history to find a record of acts of savagery and devastation at all equal in atrocity to those committed by the Germans in the recently evacuated French territory. Even then it would be impossible to find anything disclosing conduct so outrageous as that of the Germans in Northern France.

The delegates of the Senate visited many towns and about 50 of the villages until recently in German occupation. Everywhere there existed visible signs of German barbarity: farm buildings in ruins, residences burnt and pillaged, strong boxes blown up with dynamite or forced with burglar's tools, sepulchres violated, coffins emptied of the remains of the dead and filled with filth, household goods of all kinds smashed to atoms or disfigured, orchards stripped bare, trees barked and sawn through, wells either filled in or poisoned, etc., etc.

The recital in the French Senate of the acts of pillage, destruction and systematic barbarism of which the German troops have been guilty, and to which the members of the French Commission of Enquiry bear testimony, moved many Senators to tears of sympathy for the sufferers from German vengeance, and, at the same time, led to demonstrations of intense anger against the perpetrators of the diabolical acts in question. These acts, be it remembered, were committed by members of that Nation which is so proud of its *Kultur*, of its incomparable civilization (*sic*), of the nobility in character of its people, and its honour as to prompt it boastfully to claim superiority over all other races. Having pledged itself to respect private property, to proscribe pillage, to become administrators and usufructuaries only of public buildings, forests, lands, etc., of an enemy State; having forbidden the seizure, destruction or violation of public institutions, churches, schools, hospitals, museums and historic monuments in an invaded country; having ratified the articles of Conventions which provided that the civil population of invaded territories would be safe-guarded and placed under the protection of International Law; having accepted the usages and customs of civilized nations, the rules governing humane conduct and the dictates of public conscience as guiding principles by which to control its own acts in a theatre of War, nevertheless the German Nation has seemed to take downright pleasure in doing evil; voluntarily, knowingly, even joyfully, it has trampled under foot all rights, all principles, all rules,

all laws. And turning to those broken in heart at the destruction of their towns and villages, witnessing as they did the transformation of a flourishing countryside into a hideous desert, the Germans have taunted them with cruel banter and a savage sneer, telling them: "We offered you peace, you would have none of it . . . You have only yourselves to blame now. This is the consequence of your refusing our offer." One can only say what Tacitus long ages ago said of barbarians of earlier times:—*Ubi solitudinem faciunt pacem appellant!* (In the desert made by them, there reigns that which they call peace!)

The conduct of the Germans has been so villainous throughout this War that it is no longer possible to credit them with possessing the smallest sentiment of honour or of justice. When reproached with their misdeeds, they merely reply that they are carrying out the orders of superior authority; they are but exercising the rights of a conqueror, etc., etc.

Not only have the Germans committed acts of theft and pillage, but they have proved themselves guilty of indescribable acts of filthiness; they have, in their mode of life in the occupied territories, seemed to vie with the harpies.

Not satisfied with pillaging, sacking, robbing, ruining, burning and ravaging in all directions, the Germans have even gone the length of wilfully destroying fruit trees in order to reduce the productiveness of the land and to dissipate the capital wealth of the poorer people. Having failed to break the spirit of the French people, the Germans have vent their rage in this stupid manner on things inanimate. But even acts of this kind shrink into insignificance when placed by the side of the maltreatment and cruelties inflicted on the old and on the young, on those of the weaker sex as well as on those of the stronger. Great then, as may be imagined, was the joy of those who, having been practically slave-driven for nearly two years and a-half, were able, early this year, once more to live under the rule of the tricolour and to welcome French and British soldiers in their devastated homes.

It is felt that an example should be made of those who have been guilty of the misdeeds and crimes committed in the occupied territories. It is urged that in the interests of Morality, of Justice and of the Law those of the enemy who have committed excesses of the grosser kind in French and Belgian territory should be indicted and brought before the bar of an International Supreme Court in order that the charges against them may be regularly investigated, and judgment entered in due form of law against those found guilty. This done they should be sentenced and made to undergo that punishment which best fits their crimes, as indeed the Resolution of the Senate voted on the 31st March last contemplates shall be the case.

The French Commission of Enquiry appointed to investigate the violations of International Law by the enemy recently travelled through the portions of the Oise, Aisne and Somme regions liberated from German domination and have addressed a report to the French Premier, in which the statements and accusations reported to the Senate by its own delegates are fully confirmed. The Commissioners report that the nature of the ravages which came under their notice during their visit to the liberated

regions was such as to leave no doubt in their minds that the Germans had acted deliberately on a considered plan, every detail of which had been carefully worked out by them. They refer to the state of servitude in which the French people had been obliged to live under German rule, to the carrying off of women and young girls, to the acts of pillage committed in private dwellings, to the havoc done in towns and villages, to the ruining of industries by the destruction of machinery, to the laying waste of the countryside, to the shattering to pieces of implements of agriculture, to the burning down of farmhouses, to the tearing down of trees. All these misdeeds were committed simultaneously and with the most savage ferocity, no doubt with the definite intent of increasing the misery of the poor victims, of inspiring terror in them and in order to create a spirit of the deepest despair. Before entering upon the latest of their acts of barbarism, the Germans began by seizing a certain number of French citizens as hostages, by shooting certain unoffending inhabitants, by arresting *soi-disant* spies, by requisitioning supplies and goods, by levying enormous contributions (in specie), by multiplying the vexatious acts to which the French people had been obliged to submit, by taking from the shops (without payment) whatever they wished to have, by inflicting severe penalties for the slightest infractions of their Draconian rules and regulations, lastly by doing violence to women and young girls. It was in the month of February last that the conduct of the Germans became more outrageous than ever, *i.e.*, at the time that the preparations for their retreat from the Somme were put in hand. They had already removed French subjects from their homes in order to employ them in Germany and in Northern France; they now increased the extent of these operations regardless of the complaints and protests of their victims. The unhappy people, among them invalids, were torn from their homes by force and subjected to such severe ill-treatment that many died daily. The details of the cruelties practised by the Germans are so revolting as to sicken even the stout-hearted. It is said that von Bissing and von Fleck not only ordered the infamous deeds to which attention has been drawn but personally initiated them; whilst people like Schinderhannes heartily approved of them. The German 338th Regiment is said to have behaved particularly disgracefully in this connection. When it was about to leave the village in which it had been quartered, the officers of the regiment ran along the streets, firing revolvers at the windows of the houses in order to excite their men to acts of destruction.

It is not only against inanimate things and the living that the disciples of *Kultur* wreaked their vengeance. They have even exhibited their hatred by profaning and despoiling the tombs of the dead and by disturbing the ashes of those who passed to their eternal rest many decades ago. German soldiers have broken open coffins, hoping probably to find articles of value therein; the remains contained in these coffins have, in many cases, been turned out on to rubbish heaps. Such is the respect in which the Germans hold the dead. At one time, their behaviour in this respect might have caused surprise and might have been looked upon as the isolated act of a few madmen. But in view of the recent disclosures concerning the *Kadaververwendungsanstalt*, a company

with a capital of 5 million marks promoted with the object of utilizing the waste of the battlefield, the corpses of combatants and the carcasses of animals, for the purposes of the manufacture of munitions and for the feeding of swine, one must regretfully conclude that the misdeeds in question were not the acts of a few whose minds had become unhinged, but were acts indicating the mentality of an entire race, whose whole code of ethics has become perverted by reason of its successes in former wars of a half century ago, by its discoveries in the fields of science and by its material progress in the fields of commerce and the industries.

The most disturbing feature of the situation is that the Germans have been led to believe by the pastors of the Lutheran Church that they are a people beyond reproach. These guardians of public morality have held up France as being the home of laxity and frivolity, whilst extolling the demeanour and conduct of their own people. This is what Pastor Rumps, of Berlin, is reported to have said recently :—" William II. is a veritable knight by the Grace of God, a sovereign and a prophet by the same token. The Germans are altogether innocent of having started this War and evidence has, since its commencement, been flowing in from all quarters regarding the noble and chivalrous manner our troops have conducted themselves in all things ! . . . How can the sons of France have any enthusiasm for a War such as that now in progress ? They know not for what they are fighting, whilst we Germans are aware that what we are fighting for is *Kultur* and our religion, for right and morality, for our very life and well-being." He has had even the effrontery to proclaim that the Almighty was safeguarding German submarines in their warfare against the Allies' merchantmen. The hypocrisy of German pastors in the matter of the War would be hard to beat ; much blasphemy has been poured by them into the ears of their parishioners, during the past three years, in the sermons which have been delivered from the pulpits of German churches. The *noble souls* of the German, it has been claimed, are formed out of the gold of Luther, the silver of Goethe and the iron of Bismarck. It is souls of this alloy that are capable of invoking the Almighty in the following terms :—" Oh Thou that dwellest in the high heavens above with the Cherubims, the Seraphims and the Zeppelins send down, we exhort Thee, Thy light and lightning, hail and tempest upon our enemies ! Let them be blasted into the deepest craters dug by our shells ! Help us to punish ; with Thy holy anger, all those who seek to appropriate to themselves Thy Crown !"

There can be little doubt that it is utterances of the nature of the above that have been responsible for the burning fanaticism, the unprecedented rage, the mad excitement of the crowds that have been guilty of acts of pillage, violation, torture, arson and indiscriminate slaughter. Much evidence is available to prove that the acts of destruction chronicled were not committed in the heat and excitement of a battle but were deliberately planned. Orders issued by the commanders of the German troops have been found from which it is clear that, in March last, it was decided to use dynamite and the torch in order to destroy the property of the French people. Special parties were formed for this purpose and named *Brandkommandos* (Torch Parties), *Sprengkommandos* (Ex-

plosives Parties), *Zerstörungskommandos* (Demolition Parties). In the XVII. German Army Corps, the officers and N.C.O.'s for these parties were found by the 17th Pioneer Battalion. Each company of the Corps was required to furnish five men, drawn from the cripples of the unit, for the several parties enumerated above. In the case of one of the battalions of the corps no volunteers were forthcoming and it became necessary to detail the required number of men. Accounts of the work done by the *Kommandos* in question have appeared in the German Press which has given its whole-hearted approval to these infamous proceedings on the part of the German military authorities.

Comparing Attila, the King of the Ancient Huns, with William II., Emperor of the Modern Barbarians, the opinion is expressed that the former was really a less cruel tyrant and indeed a more generous conqueror than the latter, whose hordes have not hesitated in conducting this War to make use of the worst abominations that science has put within their reach; they have banished from themselves all the old chivalry formerly associated with the profession of arms. Attila, it has been said, fully established his claim to the title of the Scourge of God by which he is known; what then is the appellation by which William II. will be known in the ages to come? Inexplicable crimes have been committed in his name with unsurpassable ferocity; so barbarous have some of these crimes been that an *Instrument of Satan* can alone have been responsible for them.

The well-known American authoress, Edith Wharton, has recently visited the devastated regions; she has called these regions the "Land of Death." The utter desolation of the countryside through which she passed has aroused in her a feeling of intense indignation; she has stigmatized the acts of insane cruelty committed by the Germans in unmeasurable terms. The only result of German savagery, she tells us, has been to create a revengeful hatred in the hearts of the peasantry, their victims, and of the French soldiers now at the Front against the perpetrators of the dastardly misdeeds in question.

Others who have visited the same scenes are as severe in their condemnation of this explosion of bestiality as is Edith Wharton.

Needless to say that so far as there may have been an intention on the part of the Germans to hinder the advance of the Allies, by the laying waste of the countryside, their efforts entirely miscarried. French and British soldiers braced themselves to overcome the obstacles placed in their way. What seemed to the German to be unsurmountable barriers were quickly passed by horse, foot and guns. It was the Army of Vengeance that followed the retreating foe to the "Hindenburg Line!" Thirty-five thousand prisoners were taken by this Army, and this was but a part of the penalty paid by the Kaiser's hosts; they also left about 300 guns and more than 1,000 machine-guns in the hands of their pursuers, and the corpses of 100,000 Teuton soldiers strewed the routes by which they had retreated. The whole conduct of the Germans exhibits the same appearance of despair as that shown by wild animals when they stand at bay on being driven into a tight corner. They are being by degrees slowly hemmed in and the day cannot now be far distant when the whole world will witness the collapse of that nation which, by

reason of the excesses committed by its members, has brought the human species to shame and has caused disgust in those possessing the smallest spark of humanitarian feeling.

In the market square of Peronne, in the midst of the terrible scenes bearing testimony to their spiteful fury, German officers, before departing, chalked up, on an immense board, the four words :—" Nicht ärgern ! Nicht wundern ! " that is to say, " Don't lose your temper ! Don't be surprised ! " No one who is aware of the atrocities committed in France, in Belgium, in Serbia will be in the least surprised at this display of brutal cynicism. Can it be wondered then that France is ardently looking forward to the day when Germany will be made to pay the full penalty for the multitudinous and abominable crimes of which she has been guilty since the first days of August, 1914 ?

It is urged that when peace reigns once more and thriving towns and villages have sprung up on the ruins of to-day, where so much sorrow and suffering have been experienced, commemorative tablets, containing a record of German misdeeds, their dates and a brief outline of the essential particulars, should be placed in the churches and Town Halls, in order to remind posterity of incidents which nothing can or ought to efface from the memory of future generations of Frenchmen. The hope is expressed that the weakness and indifference shown with regard to similar matters after the War of 1870—1871 will not be repeated at the conclusion of the present conflict. The French Foreign Office has taken the initial steps in the matter ; it instructed its diplomatic representatives in Neutral Countries, on the 24th March last, officially to communicate to the Powers to which they were accredited, a detailed report of the ravages committed by German troops in the French territories recently evacuated by them and to enter a protest regarding this conduct of the enemy.

The German manual relating to the customs of War—*Kriegsbrauch im Landkriege*—sets out the correct principles relating to the treatment of the civil population and their private property by an invading army ; these principles, however, have been completely ignored by German officers of all ranks. The opinion is expressed that the Allies should be done with brave words, eloquent speeches, and demonstrations of all kinds. The fear of reprisals, the application of the *Faustrecht*—Fist Law—will alone make the German barbarians desist in working their criminal intentions against the unoffending civilians. It is urged that before it is too late and in order to prevent the sacking and destruction of Lille, Roubaix, Tourcoing, Cambrai, Brussels, Strassburg, Metz, etc., Germany should be plainly told that the principle of the *lex talionis* will be applied by the Allies, and that for each town sacked or destroyed in France or Belgium a town in Germany of equal importance will be laid waste by the Allies ; for example, Munich will have to answer for the destruction of Brussels, Nuremberg for that of Ghent, Essen for that of Lille, Cologne for that of Strassburg, Mannheim for that of Mulhausen, Mayence for that of Metz, Frankfort for that of Roubaix, Stuttgart for that of Turcoing, etc. Those who are inclined to oppose the adoption of this course of action are recommended to pay a visit to the devastated region before raising their voices in opposition ; if they are unable for any reason to do this, then let them carefully study the photographs

showing the German handiwork in this region. They will then be in a better position to judge whether the situation is one which would justify moderation and generosity towards the invaders. They should remember too that the German Press has with cynical indifference to the opinions of the World at large openly admitted the crimes charged against German soldiers and has gloried in the misdeeds of the latter; illustrated papers such as the *Illustrte Zeitung* of Berlin have even taken a savage pleasure in reproducing photographs of the *Sturmtruppen* in the act of breaking, burning and blowing up towns, villages and isolated cottages.

In order to stimulate the consciences of the over-sensitive they are reminded of the views held in Germany contained in the following excerpts:—Was it not the Germans who on the 30th July, 1914, said: "Poor France! It will not this time be a question of an indemnity of five milliards (200 million sterling), but she will be made to pay thirty milliards or even more! The lovely Mother of Lourdes, miracle worker though she may be, will have her job cut out if she attempts to undertake the setting of the bones of all the poor devils on the other side of the Vosges, bones which our men will be breaking . . . France will feel the effects of our blows for many generations to come." Was it not Bismarck who prophesied: "The War in 1870 will be only child's play as compared with the next War. The conqueror of the future will bleed the vanquished white." And von Bülow, has he not said of the French: "What matters their hatred?—*Oderint dum metuant!* That they hate us, may be; but there is no question that they fear us!"

The Germans appear to be immensely proud of the fact that they are cordially hated in all quarters of the globe, as witness the applause with which Professor Rætger's remarks were received in April last on the occasion of an address to a vast crowd on the 102nd anniversary of Bismarck's birth when he said: "*Wir sind das bestgehasste Volk der Welt und wollen stolz darauf sein.*" (We are the best hated people in the whole world, and we are proud of the fact).

Monsieur Welschinger concludes with a message to the victims of the German outrages; France has heard their cry of anguish and their outburst of righteous anger, and he says to them:—"Have confidence in the Almighty, and in us. Justice will be meted out!"

The remainder of the volume is devoted to the proceedings in the Senate at the meeting of that body held on Saturday, 31st March, 1917. The President, Monsieur Antonin Dubost, on this occasion announced that a motion had been placed in his hands denouncing the criminal acts committed by the enemy in the regions of France until recently occupied by them; the terms of this motion (*vide* the resolution quoted earlier in this article) were accepted *nemine dissentiente*. The speeches delivered at this meeting of the Senate are reproduced *in extenso* in the volume under review. The volume also contains appendices, three of which give particulars relating to the villages destroyed by the Germans in the Pas de Calais and in the Aisne regions and in the Department of the Oise. In a fourth appendix are reproduced the texts of the 8th and 9th Reports of the French Commission of Enquiry appointed on the 23rd September, 1914.

The volume concludes with extracts from the German, American and Swiss Press, dealing with the German acts of vandalism, etc.

The 133rd number contains the official communiqués issued by the Central Government to the French Provincial Authorities during the month of April, 1917; it is the XXIX. number of the series dealing with this subject. The volume is provided with appendices; these consist of the text of the telegram sent by the President of the French Republic to President Wilson expressing the appreciation of the Western Allies for the active support the American Nation is about to give them on joining up as a belligerent, and the American reply thereto; the message of sympathy delivered in the Senate by Monsieur Antonin Dubost to the Council General of the Isère on the 16th April, 1917; the text of the telegram sent by King George V. to President Poincaré on the 23rd *idem* congratulating him on the successes of the French troops and the latter's reply thereto.

The 134th number is entitled *L'Alsace-Lorraine sous le joug qui se brise*; in it Monsieur Émile Hinzelin describes briefly how weighty a burden the German yoke has been to those dwellers in these provinces whose sympathies lean towards France, a yoke from which, it is hoped, they will soon be liberated.

Monsieur Hinzelin tells us that Germany claims to have effectually provided for the silencing of Alsace-Lorraine, but as a matter of fact the present sufferings of the Alsatians and Lorrainers are well known in France. Every important item of information finds its way through the curtain of iron hung between the people of these provinces and the French people. So strong is the bond of sympathy between France and the lost provinces that even the most pitiless oppression cannot prevent clandestine correspondence from passing between those in the Motherland and those under the German yoke.

That the lot of French sympathizers is an extremely hard one no one will doubt. The Abbé Wetterlé has made the world acquainted with the severity of treatment meted out to one Meyer. Meyer was a member of a business house in Mulhausen and was accused of carrying letters intended for France into Switzerland. He was found guilty and sentenced to imprisonment for life. One of his judges advised him to appeal against this sentence and the unfortunate man followed the advice given him. The Appeal Tribunal promptly condemned Meyer to death; the sentence was duly carried out. The newspapers of French sympathy having all been suppressed at the beginning of the War, only those run in the Pan-German interest are now being published in Metz. It is an offence in some in that they see and a still greater one in that they but speak, as a certain Madame Genneson of Metz found to her cost. Some French aviators flew over the Sablons railway station at Metz and were fired at by the Germans; one shell from a German field gun, falling in the Place Saint Louis on this occasion, killed Monsieur Genneson. The *Metzerzeitung* and the *Lothringerzeitung* thereupon launched diatribes in which they stigmatized the Allies for their barbarism in making War on unoffending civilians! Madame Genneson replied to these attacks by stating that she saw her husband killed and that he was hit by a 77-in. shell which exploded on the pavement. She was at once put into prison for circulating false information.

Naturally the Pan-German Press desire the world to believe that the people of "Alsace-Lorraine wish to live under the German flag," and have been conducting a campaign to this end. Yet these are the same people who are threatened with imprisonment for a term of 12 months in a proclamation issued by the German General Esa, on the 19th October, 1916, should they fail to respond to the call for workers.

Their recent experiences have made the Alsations and Lorrainers more eager than ever to be delivered from their German taskmasters to the tender care of France, and they await the dawn of their new liberties with an intense longing.

The hunt for copper has extended into Alsace-Lorraine. Objects which for centuries have been held in veneration, and have practically been treated as heirlooms, have been taken from their possessors by the Governmental Authorities for conversion into munitions of War.

The petty persecutions which the Germans are continually inventing are in keeping with their whole character; one of the latest of their pin-pricks has been to compel the Alsations and Lorrainers to remove the inscriptions in French on the tombstones of their dead, and to replace them by inscriptions in German. For some years past, a decree has been in force that new epitaphs in French would not be allowed in Alsace and Lorraine, but the then existing tombstones were not interfered with. But now the dead of centuries ago are no longer permitted to lie in peace under the slabs bearing the words: "Ici repose . . ." which had sounded so comforting to their ears in their lifetime.

Many of the towns of Alsace and Lorraine are to-day deserted. In driving the wretched folk from their homes, the Germans have taunted them saying: "You did not wish to belong to the German Empire. To be quits Germany does not want your company; she will plant true Germans here." This is really nothing new. When Germany found years ago that her attempts to germanize Alsace-Lorraine had been fruitless, she announced openly that "the Alsations and Lorrainers must yield or depart; there could be no middle course." This feeling became particularly strong after the Forstner affair in 1912.

Some of the information which leaks through from Alsace-Lorraine is extremely touching. Recently some French prisoners were being conveyed through Strassburg by train. They noticed an old woman in Alsatian dress on the platform and they saluted her. The old lady burst into tears, and this was a signal for all the women and children present there to do likewise. The German authorities were non-plussed; their regulations are not yet sufficiently comprehensive to meet a situation of silence and tears.

One of the most powerful weapons in the hands of any State, whether in times of peace or in those of war, is that connected with the sequestration of a person's property. It is needless to say that the German authorities have been particularly busy making a full use of this weapon in Alsace-Lorraine. Every day lists are published of properties against which writs of sequestration have been issued by the authorities. In some cases it is the property of a foreigner which is attached, in others that of an absentee who is treated as a deserter, or even that of the relatives of a deserter. By German Law, the *Zwangsverwalter* or Trustee of the

Sequestered Properties administers such properties "in the interest of the economic welfare of Germany as a whole" and not in the interest of those who are normally looked upon as beneficiaries in such cases. A great deal of the funds which have come into the hands of these Trustees have been diverted to purposes connected with the War and in the purchase of War Loan Certificates.

To-day French is totally proscribed in Alsace-Lorraine. It is an act of treason for a mother to give her infant daughter of eight directions in French, in the public streets, to open her umbrella. Parents too must suffer for the indiscretions of their offspring. A youngster of six began to sing the *Marseillaise* in Strassburg. The police immediately arrested his father, who was taken before the magistrates and duly punished.

The attachment of France to Alsace-Lorraine is, as everyone well knows, very deep. The six and forty years of German occupation have made these provinces something of an enigma to Frenchmen; some forget that during this period there has been a continuous immigration into Alsace and Lorraine, so that at the beginning of the War 400,000 out of their population of 1,874,000, i.e. about 20 per cent., were Germans.

When the French made their advance into Alsace in the early days of the War, some of the officials in that province were placed in an extremely difficult predicament. At heart they were French, but, being in doubt as to the permanency of the French occupation, they were not able openly to show the direction in which their sympathies lay. It is said that when a certain French battalion arrived in one of the Alsatian market towns its Commander ordered the Mayor to hoist the French tricolour. This official was an ex-officer of the French Army and absolutely loyal to France, but he declined to do as he was ordered. The Battalion Commander had him arrested and hoisted the French flag himself. A few hours later the French were obliged to evacuate this town, but before doing so they released the Mayor. The Germans followed quickly on the heels of the French, and finding the offending bunting still hanging out over the door of the Town Hall, they in their turn arrested the Mayor and put him into prison. On such occasions, after the French had evacuated any town, the Germans seized a certain number of old men and women who were regularly denounced by the German *immigrés* as being those who had welcomed the French. The Germans made short work of them; they were lined up against a wall and shot forthwith. It is said that these poor people met their death with great fortitude. Many examples are given of the severity of the sentences passed upon the residents in Alsace-Lorraine for quite trivial acts, scarcely amounting to an offence except in accordance with the German code.

Nearly every male person has by now been removed from Alsace-Lorraine by the German authorities. The majority of them have been sent to fight against the Russians and have suffered very heavy casualties. Even where young men have received their education in German Universities, they have shown most decided French sympathies. So much so that the Prussian Ministry of War in a circular issued on the 11th January, 1916, expressly recommend that no Alsatian or Lorraine soldier should be put in a position of trust.

The Germans have announced that 30,000 Alsatians and Lorrainers have deserted from the ranks of the German Army during the War. On the other hand many young men from Alsace-Lorraine are to-day voluntarily serving in the ranks of the French Army. Knowing what is the fate that would overtake them if by chance they fell into the hands of the Germans, the French Government is wisely employing these young fellows with the troops in the French Colonies, in Algeria, in Morocco, etc. France is not likely to forget her debt of gratitude to these sons of the two lost provinces; their names will duly appear in the pages of the *Livre d'Or*.

It must not be thought that there are no renegades in Alsace-Lorraine. Unhappily, in these provinces as well as in all other parts of the world, there are some who have no thoughts outside those connected with their own careers and selfishly personal successes. The numbers of these renegades are, however, small, but a few of them have acted in an extremely harsh and tyrannical manner against their compatriots. Frenchmen will know how to deal with them, if ever they should become answerable to French law.

It has naturally always been difficult during a casual visit to Alsace-Lorraine to learn from the inhabitants which way their real sympathies incline. These people have learnt to be distrustful of their questioners. The reserve shown by the people of Alsace-Lorraine in relation to this matter has led even French publicists to declare that the attachment of France was not reciprocated in Alsace-Lorraine. But those who know how and where to look for the necessary indications concerning the true feeling of the people of these provinces will discover abundant evidence to prove that the affection of France is requited in equal measure. In the same way that no single Deputy would dare to urge in the French Chamber that France should give up her claim to regain Alsace-Lorraine from Germany, so also not a single inhabitant of Alsace-Lorraine would for a moment think of opposing the restitution of these provinces to France; if one were to do so he would be instantly stoned by his compatriots.

Should there be any who have doubt as to the loyalty of Alsace-Lorraine for France, they are reminded that, in 1912, at the time of the Zabern affair, von Jagow, the Prefect of Police in Berlin, wrote :—" The German officers quartered in Alsace-Lorraine feel that they are camping in an enemy's country." Again in 1914, when formations of the German Army entered Alsace-Lorraine on their way to the French frontier, the officers said to their men : " Hier sind wir im Feindesland " (We are now in enemy country).

The War has very completely altered the external appearances in many parts of Alsace-Lorraine. Timber and young trees have been ruthlessly cut down and many of the hilltops are now quite bare; military roads have been made to their summits. In many a stubble field the craters made by shells have filled with water and droves of cattle may be seen quenching their thirst at these drinking-fountains improvised by the forces of War. The song of the birds is now completely drowned by the music of the artillery of the contending troops. Barracks for men and standings for animals have sprung up like mushrooms in a well-spawned field. Ammunition dumps, tool dumps, ambulance

depôts, communication trenches, defensive positions are met with in every direction in which one travels through these provinces. Military motor-cars rush at a terrific speed through the villages, regardless of the lives of the little ones who make the streets their playgrounds as of yore. Enormous supply wagons of the Mechanical Transport Service are driven at extraordinarily high speeds through inhabited regions making the whole countryside tremble as if an earthquake were taking place.

In spite of the increasingly heavy weight of the yoke under which the inhabitants of Alsace-Lorraine have been living during the past six and forty years, they have jealously maintained their independence in all that relates to the spiritual side of their existence; their genius is still of the French type.

In conclusion, Monsieur Hinzelin reviews Germany's attitude with regard to Alsace-Lorraine. He tells us that:—

(i.). *This is what Germany wishes the Alsatians and Lorrainers to think of her:—*

That nothing that these people do is unknown to her. They live, they breathe, and they speak alone because Mighty Germany permits them so to do.

(ii.). *This is what Germany wishes France to think of the Alsatians and Lorrainers:—*

The Alsatians and Lorrainers are *Boches*.

(iii.). *And finally, this is what Germany wishes the Alsatians, and Lorrainers to think of France:—*

In the eyes of France, the Alsatians and Lorrainers are Germans. In consequence, France distrusts them, insults them and imprisons them. If the French soldiers should ever penetrate into the two provinces, they will lay it waste with fire and sword.

But the Alsatians and Lorrainers know Germany too well to be duped with any lies of this order. They know that France has given many outward and visible signs of her attachment for the sons and daughters of Alsace-Lorraine and that she has given the warmest of welcomes to those of them who ran to her for protection at the beginning of the War and to all those who have done so subsequently. They are well aware of all that is being done in the Department of the Loire for their compatriots, who have practically founded a colony for themselves in that region of France.

France will take care to see to it that neither Germany nor her agents shall mislead public opinion regarding the two provinces torn from her after the War of 1870-71; their restitution is one of the essential War aims of the conflict begun in 1914. These two provinces are French by race, by tradition, in their aspirations, French to the very marrow in their bones and French as long as the world shall last.

W. A. J. O'MEARA.

NOTICES OF MAGAZINES.

REVUE MILITAIRE SUISSE.

No. 6.—June, 1917.

THE CHIEFS OF THE BELGIAN GENERAL STAFF AND THE NEUTRALITY OF BELGIUM.

The original article is from the pen of Major W. Marsily, of the Belgian General Staff, and is accompanied by a sketch-map of Belgium. It is well known, says Major Marsily, with what audacious and persistent bad faith the Germans have exploited the famous Ducarne-Barnardiston documents as evidence in support of their allegation that, long before the outbreak of the Great War, Belgium had deliberately failed in her duty as a neutral, in that she had concluded a Secret Treaty of Alliance with Great Britain in 1906.

When the documents in question first fell into German hands at Brussels, the German authorities at once set about doctoring them. Apart from misrepresenting the word *conversation*, which appeared in the text of the original, as being the word *convention*, they with intent omitted to reproduce a marginal note, in the Belgian general's handwriting, the existence of which completely destroyed the German case. The note in question ran as follows:—"British troops will only enter Belgium after our neutrality has been violated by Germany."

Taken *flagrante delicto* in their assault on the truth, the Germans, after waiting five months, with very bad grace, reluctantly admitted that they had misread the text of the document. They, however, obstinately persisted in the charges they had originally levelled against the Belgian Government of having, in agreement with the British Government, planned a combined military campaign against Germany.

Being obliged to withdraw this accusation, owing to the formal denials of the Belgian Government, supported as they were by irrefutable evidence, the Germans fell back on the argument that "the *Chiefs of the Belgian General Staff* had, in complicity, more or less dissimulated, with their Government, on two occasions at least—General Ducarne in 1906, General Jungbluth in 1911—prepared in conjunction with the British General Staff a plan of combined operations against the German Army."

The above is the latest form which the German accusation has taken. As late as the 20th February, 1917, the *Norddeutsche Allgemeine Zeitung* published this version of the charges made by the German military authorities and claimed to have adduced fresh evidence in support of their contention.

Not only the fact that no action was taken on the *conversations* between General Ducarne and Colonel Barnardiston in 1906, but also the fact that Colonel Bridges continued the *conversations* with General

Jungbluth in 1911, goes to prove one thing and one thing alone, namely, that the relations of the two staffs were of a *strictly personal* nature and therefore the bottom is knocked out of the so-called evidence to which the Germans would wish the world to attach such great importance.

Since the Belgian General Staff was responsible for making arrangements to meet every probable contingency, in the event of a war, in which the employment of the Belgian Army might be involved, it was but natural that its members should take every opportunity of discussing problems affecting Home Defence with those qualified to speak on the subject. They would have been equally glad to have had the views of German or French Military Attachés as they were to have had those of the British Attachés.

The Germans claim to deduce from the conversations which took place the argument that the Belgian military authorities concentrated their attention on the study of the question of Home Defence, based exclusively on the hypothesis of a violation of the neutrality of their country by Germany, under the perfidious inspiration of Great Britain, and that the Belgian Staff had, in consequence, premeditated an alliance with the British Isles and France, going so far as to work out the details of a deliberate and preconceived combined aggressive action.

The absurdity of this accusation is clearly shown if trouble be taken to examine the dispositions decided upon for the preliminary mobilization of the Belgian Army (*vide R.E. Journal* for November, 1915). The centres chosen for this mobilization show that of the six Divisions of the Belgian Army, four were employed as outpost troops on *three fronts* viz.:—two covering Belgium against an advance from France, one covering the country against an advance from Germany, whilst the fourth was in a position to meet an attempted landing of British troops on the Belgian littoral.

Had Belgium really entered into an alliance with Great Britain and France, it is, to say the least, highly improbable that the Belgian General Staff would have disposed the bulk of their small field army on mobilization as they actually did dispose them, actually after the note despatched at 7 p.m. on the 2nd August, 1914, by Germany demanding a free passage for the German Armies had been received at Brussels, *i.e.*, at a time when the Belgian Government ought definitely to have known that two of the contingencies which these dispositions had been originally designed to meet no longer existed. The German allegations are further refuted by the attitude taken by King Albert with regard to the offer of assistance from the French Government. At the same time that His Majesty refused to comply with the German demand, he politely declined the military support tendered by France.

It was not till the night of the 3rd—4th August, 1914, when absolutely reliable information was obtained that the Germans intended marching through Belgium, that orders were given for the concentration of the Belgian Army on the Gette position, under the protection of the two Divisions at Liege and Namur. The fact too wants to be remembered that the Belgian Government actually waited till the 4th August before making an appeal for military support to the Powers that had guaranteed

the neutrality of Belgium; this step was then only taken because at that time German troops had already marched on to Belgian soil. The hesitation of the Belgian Government in making their appeal for help involved the loss of precious time.

The impartiality of the Chiefs of the Belgian Army and their intention to defend their country against all aggressors alike, whoever they might be, is likewise evidenced by the nature of the Staff Rides carried out in the years immediately preceding the present War. An excellent article has been published on this subject under the title "Témoins de Moralité" in the *Écho Belge* for the 11th February, 1917, in which reference is made to the practical exercises carried out during the third and fourth years at the Belgian *École de Guerre* in connection with Staff Rides and in written theses. For some years the exercises set under both these heads had been framed on the supposition alternately, first that one, then that the other of her powerful neighbours, i.e., France or Germany, had felt justified in violating the neutrality of Belgium. The balance was so evenly held that on the occasions when the Special Idea for the Staff Ride involved the problem of defence against a German Invasion, the written thesis required the appreciation of the situation in connection with an anticipated French Invasion. The future Staff officers of the Belgian Army were thus required to study constantly and successively the nature of military operations which the two armies, most likely to come into collision with their own army, were likely to undertake in the event of Belgium being involved in a war. It may be argued that the nature of the schemes set to the aspirants for Staff employ affords no relevant evidence regarding the alliances entered into by a nation. It must be admitted that strictly this view is correct. On the other, if the Chiefs of an army hold preconceived ideas on the subject of the rôle that their own army may be called upon to play in a war experience teaches that in time their views are sure to become widely known and will not fail to influence the character of schemes set by those subordinate to them. So far then the absence of any bias, as indicated above, tells in their favour, although of negative value as evidence. But evidence of positive value is to be obtained from an examination of the studies carried out by a General Staff in connection with Home Defence schemes, and the author of the *Revue* article, therefore, appeals to the record of what was done in this matter in Belgium in 1897 and subsequent years, as a basis on which to assess at a proper value the German accusations levelled against the Belgian General Staff. In the 17 years that preceded the outbreak of war, the Belgian General Staff carried out 14 such studies—for certain reasons no such studies were made in 1900, 1905 and 1915—under five different Chiefs of the General Staff. On seven occasions France was the supposed enemy of Belgium, on six this rôle was assigned to Germany, and on one occasion it was perfidious Albion which, with the complicity of France, was credited with the intention of invading Belgium. Strange as it may appear, it was General Ducarne, a man more suspect than any other in German eyes, who was responsible for framing the scheme in which Great Britain was assumed to be Belgium's enemy. He was responsible for four more out of the 14 schemes; on two occasions he assumed Germany would

be the aggressor and on two occasions that France would play this rôle. General Jungbluth was only responsible for one scheme; and he indicated France as the supposed enemy. Short particulars of the several schemes are given in the *Revue* article; any unbiased person examining this record can come to one conclusion only, viz.:—the German charges against the Chiefs and General Staff of the Belgian Army are baseless and have been fabricated, by the wilful distortion of facts, for the purpose of taking away their characters in the eyes of the neutral world.

THE GERMAN OPERATIONS IN THE WESTERN THEATRE OF WAR, 1914 TO 1917.

Colonel Feyler's article on the above subject, begun in the May number of the *Revue*, is concluded in the issue under notice (see *R.E. Journal* for September, 1917).

4. *Battle of Flanders.*

The events that now occurred on the part of the Front between Ypres and the sea were, says Colonel Feyler, the logical outcome of those preceding them and born of the same inspiration. It was again a counter-attack and one which had the same objective. In spite of the noise made in Germany with regard to the "March on Calais," the offensive in Flanders possesses the character, above all things, of an ultimate counter-offensive, delivered with the object of regaining the initiative by an envelopment of the enemy's outer flank.

To effect its purpose, the Great General Staff had formed a New Army, composed partially of Volunteer Corps, which had been rapidly expanded, but whose courage was not able to make up for its inexperience. It consisted of 14 Army Corps and 4 Cavalry Corps.

The first attack of the Volunteers was delivered along the sea. They advanced in serried masses, through which the artillery of the defence ploughed deep furrows producing hecatombs of dead. The German Higher Command persisted in their efforts to gain a victory, regardless of the losses being suffered. The whole thing recalled Napoleon's part at the Battle of Eylau. After ten days of attack and of immense casualties, the game had to be given up. Inundations came to the aid of the defenders; the survivors of the German legions were obliged to withdraw.

It was next around Ypres that the battle raged. The Franco-British troops now took the offensive; the fight continued from 21st October to the 16th November. The Allies, who had been obliged to give ground, were able on the 14th November to retake some of the lost positions. The battle then came to an end.

Comments on the Strategy.

The *communiqués* and commentaries of the Great General Staff, it is pointed out, claim that the German manœuvre in Flanders was an independent operation, and something quite apart from the preceding events. The "March on Calais" was directed against Great Britain, the operations against France being represented as having been brought to a successful conclusion on the Aisne.

The whole thing is fantastic. In a military campaign one ought not, says Colonel Feyler, to make a series of capricious deer-like leaps, or to abandon one operation in hand for another wholly unconnected

therewith. An examination of the succession of events discloses that in the Battle of Flanders we have what is the fourth phase of one and the same manœuvre ; a manœuvre conducted for the purpose of enveloping the Allied Armies, which, however, continued to elude the Great General Staff to the end.

The first phase was the manœuvre on the Meuse. The Germans at that time possessed the initiative ; they drove back their adversaries some 110 miles into the interior of France.

The second phase was the manœuvre on the Marne. The Anglo-French Armies now in their turn had the initiative and forced their enemy back some 50 miles towards Belgium.

The third phase is directly connected with the preceding one and is in continuation thereof, namely, the manœuvre on the Aisne and on the Somme. The Germans tried to regain the initiative ; the Anglo-French endeavoured to retain theirs.

The manœuvre in Flanders was the fourth phase. The Germans, finding they could not regain the initiative, were in despair and tried a change ; they moved some 60 miles further northwards, inclining westward at the same time. Their intention remained as before, but their enemy refused to surrender the advantage gained and at the same time sought to profit by the existing circumstances to make good by means of a counter-manœuvre.

Shortly put :—The manœuvre on the Meuse was a German offensive which was broken by the Allies.

The manœuvre on the Marne was an Allied offensive which was broken by the Germans.

The manœuvres on the Aisne and in Flanders were conjointly an Allied offensive and a German defensive accompanied by a counter-offensive. The Great General Staff executed on a great scale that which it had attempted on a smaller scale at the beginning of the manœuvre on the Aisne. By withdrawing troops from the original German battle front, by liberating the German Army employed against Antwerp, by bringing up a New Army from Germany, a powerful *réserve de manœuvre* had been formed, which enabled the Kaiser's armies to overlap to their right the front they held on the Aisne and also to throw it forward.

5. *The Battle of Verdun.*

The Battle of Verdun has no direct strategical connection with the operations of 1914 ; the latter failed definitely on the fields of Flanders. The whole front between Switzerland and the sea being continuously occupied by troops, it was no longer possible to attempt to turn a flank, at least without violating the neutrality of Switzerland.

The German decision to launch an attack on Verdun was probably taken in view of the disappointing results obtained by the Austro-German Armies in Russia and in the Balkans in 1915. The territory won in the East did not obtain for the Central Powers that which the destruction of the enemy's forces would have procured for them ; a peace on German terms. Russia had still large armies at her disposal and was not willing to treat for peace. Serbia and Montenegro, although completely invaded, were not seeking peace either. It would have been useless for the Austro-German Armies to advance further eastward so

long as the Western Powers remained in a position to threaten the Germans with ever-increasing forces. There did not appear any other way out for obtaining the peace desired by the Central Powers than that they should once more try conclusions with their western foes.

The offensive against Verdun took the form of the *attaque brusquée*. Such an attack is in the nature of a manœuvre in which a very complete and very prompt decision is sought. By its means an attempt is made to obtain a defeat of the enemy in such a way that the surprise experienced in consequence causes him, so to speak, to lose his head; he is knocked down before he has time to think and is therefore ready to give in.

Four German Army Corps were selected for this operation and received special training over a period of some months. They were placed on a narrow front of some $7\frac{1}{2}$ miles, and strongly supported by artillery. They attacked with ferocity and suddenness. The sector at Verdun chosen for this attack was particularly strong. The risks run by the Germans were serious, but the prestige which would have accrued had the attack succeeded would have been immense. Think of the effect that would have been produced on the world at large by the announcement: "Verdun captured after three days of heavy fighting!"

Before the attack the Kaiser came to show himself to the troops under the command of the Crown Prince, as he had done at Nancy, at Ypres. When the attack was first launched, the German newspapers announced that William II. had himself signed the order for the attack.

The nature of the operations, the choice of the sector chosen for the offensive, and the staging of the piece by the Higher Command—features repeated almost identically in the offensive in Roumania—appear to betray the purpose in view; it was a case of angling for a success the prestige of which would dazzle public opinion; the success hoped for would justify the offer of *generous peace terms*.

Other reasons have been put forward to explain why this battle was decided upon; it has been said that the capture of Verdun would release the Briey Basin and that it would at the same time prevent the French from launching an offensive from the neighbourhood of this fortress. Colonel Feyler is of opinion that the foregoing considerations may have entered into the German calculations in the selection of the sector attacked, but he feels that the real motives must be sought for in a more remote and in a deeper purpose. The German Government wished and hoped, he explains, to bring the War to a successful end at Verdun; a war which, in its own interest, in that of the German Empire and of German hegemony in Europe, and for dynastic reasons also, it was necessary to show had been successful in every field. In no quarter was the necessity greater for effacing the memory of the checks suffered by the German Army in the operations of 1914, in Russia and in the Balkans than in the West. If the attack on Verdun had been successful, it is more than probable that even at this period an offer of peace, which the nature of the victory of the Central Empires in Roumania alone had not been thought sufficiently to justify, would have been made. However the offensive of 1916, instead of neutralizing the failure of that of 1914, accentuated it. The frontal attacks and localized operations failed as completely as had done the wide turning movement of an earlier date.

6. *The Battle of the Somme.*

The Battle of the Somme opened in the last days of June, 1916. During the whole of that month public attention had been rivetted on Verdun. Towards the end of June, after a period of calm, the struggle recommenced suddenly with great violence to the east of the Meuse, the fighting took place at Thiaumont and Fleury, in the second line of defences, whilst on the west bank of the river Hill 304 was the point contested for.

On the 1st July, Berlin announced to the public that much activity prevailed in the Somme region, but without indicating that the German arms had already suffered a reverse; no admission was made of the fact that the German trenches had been captured on a 15-mile front and that the defenders had been obliged to retire to their second line of defences. The Western Allies continued to make progress, capturing large numbers of prisoners. At no period since trench-warfare had been inaugurated had so rapid an advance on so wide a front taken place to so considerable a depth. At Verdun the Germans had spent five months in gaining the same extent of ground; at Arras and on the Champagne the French had suffered heavy casualties for the tactical successes won there. From the first the results obtained on the Somme were very different; the question was debated as to how these results would react on the operations then in progress round Verdun. And when the Allied forward movement towards Peronne, in the direction of the German communication on the Aisne began gradually to take place, the effect of this advance on the German Noyon front began to be discussed also. At first, no essential change in the attitude of the German Higher Command was noticeable. To the north of the Somme, after their first rush forward, the British troops, forming the left wing of the attacking forces, were brought to a halt, and the French troops, forming the right wing, marked time astride the river, waiting for the British to come up level with them. The Berlin *communiqués* affected to treat the situation with contempt; for all that could be learnt therefrom, the Battle of the Somme had no existence in fact.

But by degrees information filtered through. Mention was made of the transfer of three divisions from Verdun to the Somme. On the front engaged the sector reserves had come under fire; scratch battalions had been formed by the grouping of companies in various localities, etc. The situation on the Somme was indeed far more serious than Berlin has ever admitted. Indeed, on the 13th July, the great attacks on Verdun were brought to an end by it. It was now the turn of the French to counter-attack; they retook the works at Thiaumont and Fleury on the 5th August; Douamont Fort on the 25th October; Vaux Fort on the 2nd November; finally, reaching the region north of the line whence the German *attaque brusquée* was launched on the 21st February, the French reached Vacherauville and Louvemont, at the same time, capturing 115 guns and 7,500 prisoners; including the prisoners taken on the day that Douamont Fort was captured, this made the total 12,000 officers and other ranks.

Thus the Battle of the Somme extinguished the German offensive at Verdun.

The Franco-British attacks on the Somme followed their course. At the end of July the French and British troops had made about equal progress, the former towards Peronne, the latter towards Bapaume; at the end of August, they were both nearing Combles, a *centre de resistance* between the two towns named. Powerful *pushes* were made successively along different sectors of the front engaged, sometimes in the north, at others in the south, and at times in the centre, all directed towards the gradual envelopment of the great fortified maze. Once Combles was reached, the British pushed towards Bapaume *viâ* Saily Saillisel and the French made their way towards Peronne *viâ* Bouchavesnes. Whilst directing their operations against Saily Saillisel the British made a *push* against Thiepval and the Valley of the Ancre, and ultimately a *push* to the north of the Ancre, *viâ* Puisieux and Achiet, with the object of gaining the German trench system at Bapaume *viâ* the north. The French operated against Chaules for the purpose of reaching Peronne *viâ* the south.

Combles fell to the Allies at the end of September. During the three months that fighting was in progress in this region and in the successive retreats of the Kaiser's troops, 60,000 German soldiers were made prisoners. At the end of October, the *push* towards Peronne *viâ* the north carried the Allies beyond Bouchavesnes; the British had also reached the banks of the Ancre, north of Thiepval and Courlelette; the number of German prisoners rose to 70,000. At the end of November, whilst the French were threatening Chaules at close quarters, the British, having extended their attacks to their left penetrated into the plateau on the north bank of the Ancre and captured 4,000 prisoners. The situation was thus prepared for the next spring campaign.

When activity broke out afresh, in February, 1917, the British obtained more successes; their artillery bombardments reached extreme intensity and made the enemy's trenches untenable. At the end of this month Bapaume was hemmed in from the north, west and south; the St. Pierre Vaast Wood, between Saillisel and Bouchavesnes, had been occupied by them; the envelopment of Peronne was approaching completion.

The situation had become too uncomfortable for the Germans; they began to retire. The Noyon arc collapsed on to its chord and the Germans betook themselves to positions on the line Arras-St. Quentin-Laon-Soissons. The second purpose of the Battle of the Somme was attained; not only had the German offensive against Verdun been extinguished, but the west wing of the German front on the Aisne had been obliged to give way.

Comments on the Strategy.

The Battle of the Somme was the cause, or one of the causes, of the German retreat in March, 1917. But other reasons existed for the step taken; a recapitulation of them may prove instructive.

Strategy possesses some of the qualities of Nature herself; it abhors a vacuum and its course does not consist in discontinuous steps; strategical operations are like a sound chain of which each of the links is perfectly welded: each link regularly follows the motion imparted to the chain as a whole, so in war the sequence of operations.

are dictated by that act of war which modifies an existing situation ; this situation alters continuously as each subsequent act makes its force felt.

To-day when the German retrograde movement has involved the withdrawal of a part of the troops on the front to which the duty had, in 1914, been assigned, by the Great General Staff, of enveloping the Allied forces on the Aisne ; to-day when the disappearance of the Noyon Salient removes one of the most pointed indications of the march projected on Paris, one is tempted to reconstruct the chain of events by which the offensive of 1914 is linked up with the retreat of 1917, to seek out the moment when the question of retreat was first brought under discussion and the moment when the situation became such that this movement could no longer be postponed. Colonel Feyler traces the necessity for the retreat of March, 1917, to the date of the check of the Germanic offensive in Poland. Since the Russian Army had not been completely put out of action in 1915, a campaign in the East had to be undertaken in 1916. But the French Army had suffered, if anything, less discomfiture than the Russians, and in the meantime, the British New Army was rapidly growing more and more in size and in efficiency. Since the date of the second Battle of the Champagne, in the autumn of 1915, the Germans had had to bring back to the Western front the troops transferred to Galicia in the preceding spring. The Austro-German Army, even though augmented by the Bulgar Divisions, was weakened by the troops sent to the Italo-Austrian theatre, and, in consequence, was not in a position actively to wage war simultaneously in the Eastern as well as in the Western theatre of operations. If peace could not be secured forthwith, it became imperative that German troops should be withdrawn from one or other of the two main fronts. This indicates the approximate date when the question of a retreat must first have been discussed.

Peace, the Germans fully realized, could alone be secured by striking the Allies in the West a blow of such violence as to knock them out of the ring. Thus was born the idea of the attack on Verdun. Russia, it was felt, would require a long time in which to get her breath and be ready for the next round ; this would give the Great General Staff sufficient time to attend to other business.

The Germans were unable to pull off the event ; the *succès brusqué* failed them. The moment the affair began to drag, it became necessary to think of cutting losses. Thoughts were turned to a peace, in which bargaining would have to take the place of a peremptory dictation of the clauses which, had events taken a different turn, the Kaiser's plenipotentiaries had no doubt intended to insert into the agreement for the purchase of a German peace.

Once more, the Russians had recovered and returned to the charge sooner than had been expected, and as, in the meanwhile, the German troops were committed on the Somme, it became necessary to devise means to prevent General Broussiloff gaining a great victory. The Turks were made use of, and Falkenhayn's Army came into existence. The Germans now fell back on the defensive along the whole of the Western front. The attack on Verdun was broken off and preparations were made for an obstinate resistance on the Somme.

Colonel Feyler sums up the six great phases of the operations of 1914—1916 on the Western Theatre as follows :—

In 1914, the general offensive of the Germans did not meet with success ; in spite of the great resources at their disposal, which were utilized to the fullest extent, and the power of manœuvre possessed by the wings of the invading force neither were the Allied Armies not destroyed, nor were they deprived of the power to continue the struggle. The respite the Western Allies obtained in 1916, whilst Germany was seeking a decision in the East, gave them breathing space in which to gain strength for the continuance of the contest.

In 1916, the regional offensive undertaken by an Army, specially organized and trained, did not come up to German expectations. This Army suffered greater wastage than it inflicted on its opponent. This is evidenced by the fact that the Franco-British replied with a counter-offensive against Verdun. The counter-offensive put an end to the Verdun Battle, where the French were able partially to regain their old positions ; although, on the Somme, the Germans were not able to re-establish themselves in their old defences and had to retire without obtaining any counter benefits.

The peace offer made after the Roumanian campaign, in which the Great General Staff had made use of the New Reserve Army organized in 1916, had its origin in the peculiarly unfavourable position in which Germany found herself, owing to the setback her arms had experienced in the Western Theatre.

If the Great General Staff did not consider it possible to undertake an offensive in the spring of 1917, with the help of the Reserves built up during the preceding winter, this must have been due to :—

(a). A conviction that it was not possible to attain results with such Reserves which neither the Old German Army of 1914, nor the Specially Trained Army of 1916 had been able to secure.

(b). The impossibility of at once making good the wastage caused by the Allied counter-offensive on the Somme.

It may be said that the feature in the opening stages of the fourth campaign of the Great European War which most impresses is the tacit admission by the Great General Staff of the superiority of their enemy, a superiority which prevented them from imposing their will under conditions similar to that in which the conflict was begun ; for this reason the Germans were obliged to surrender advantages gained in the early days of the War, in the hope that by doing so they might obtain successes which might prove relatively more profitable to their cause.

THE ITALO-AUSTRIAN THEATRE OF OPERATIONS.

The article on the above subject begun in the number of the *Revue* for April, 1917 (see *R.E. Journal* for August, 1917) is continued in the issue under notice. The text is accompanied by a sketch map showing the Austrian trench system in the Monté Pasubio zone, and three photographic views of a part of the Alps in which Italian and Austrian troops are struggling for the mastery.

The operations in progress in the Alps during the autumn of 1916 consisted of a series of tactical enterprises undertaken by considerable numbers on the two sides.

The Pasubio, situated S.W. of Rovereto, is bordered on its west by the Arsa Valley ; the region is one of stiff slopes, its main features being the Monte Spil, in the west ; the Monte Testo in the centre ; and the Monte Pasubio in the east. The Austrians had strongly fortified the three heights in question and had also occupied the Corno in advance of the western sector, whence they were able to take in flank the lines of approach towards the Monte Spil ; from the Corno they could launch a counter-attack with considerable prospect of success. The character of the ground was such that only small numbers of troops were required to hold the Austrian trenches. On the slopes east of the Foxi Valley—a valley descending from the Monte Testo to the Arsa Valley—the Austrians had constructed a line of defences with a strong point near the summit of Monte Pasubio ; 1,000 yards in rear of this point a second line of defences had been constructed along the Ruite Buse di Bisorte. The wire entanglements provided in front of this trench system was in places 50 yards wide and at a great many points covered approaches to the fire trenches had been cut out in solid rock.

A brief outline of the principles of mountain warfare is given in the original article ; the Austrians, it is stated, correctly applied these principles in the defensive measures adopted by them in the Monte Pasubio zone.

Although the Alps provide a formidable defensive rampart to the countries they cover, still it is possible for an enemy to penetrate them, if such an enemy possesses sufficient determination.

The very best of positions in the Alps, however, are of little or no value without approaches thereto and without shelters for the troops. In the provision of these the Italians have done an enormous amount of work. The roads they have constructed, the telfer lines they have run across this mountain region, and the shelters they have provided have enabled their troops to occupy and hold on to positions in regions formerly reputed to be inaccessible. They have fully realized that in connection with operations in mountainous countries defence works are of secondary importance, but that a well-laid-out system of communications and ample shelter accommodation are prime necessities.

A short account is given in the original article of the operations of the 44th Italian Division which had the task assigned to it of capturing the Pasubio ; its first objective was the Alpe Cosmagnon. The mastery of this particular region gives its possessor a dominating position and access, under the best conditions, to the Pasubio Plateau. The fight for these positions began on the 9th October, 1916 ; at the outset, the Italians succeeded in driving the Austrians out of a part of their positions between M. Pasubio and Lora and in maintaining their gains for several days, in spite of violent counter-attacks. On the 27th *idem*, after having consolidated the positions won from the Austrians, the Italians renewed their attacks against the Dente di Pasubio. The Austrians now launched a heavy counter-attack, the issue remained in doubt for a little time, success and failure alternated ; finally the Austrians were able to render the Dente untenable by the Italians, who had to withdraw. Bad weather now set in and put a stop to further operations.

The activity in other Alpine sectors and in the Dolomites was equal to that on the remaining portions of the Italian frontier; however, it had but a very small influence on the general trend of the operations. It was on the Carso and in the neighbourhood of Gorizia that a decisive issue was being fought for by the belligerents.

The Italian positions on the latter front have been described in an earlier part of this article. The first Italian attacks on the Carso front were delivered in the middle of September, 1916. The XI. Italian Army was employed in this region and succeeded in penetrating into the Austrian defences between and in the neighbourhood of Pecinka and Oppacchiasella. In a few days' fighting the Italians took 4,104 Austrians prisoners, including 101 officers and a large quantity of valuable stores.

On the 10th October, the offensive was resumed by the II. Italian Army to the eastward of Gorizia and by the III. Italian Army on the Carso. Two days later the Italians had reached the slopes near Pecinka and were about half-way on the road connecting Oppacchiasella and Kostanjevica. Some idea may be gained of the importance of this action from the fact that the Italians captured 8,219 prisoners, including 254 officers. Towards the end of the month further inroads were made into the Austrian defence positions; the III. Italian Army carried the Pecinka positions and pushed forward as far as the western borders of Kostanjevica, the total number of prisoners taken having increased to 8,982, including 259 officers.

The author of the original article states that he has purposely refrained from discussing the operations in which the Italians took part in 1915. The battles on the Isonzo, he remarks, were trying, long-drawn-out and sanguinary. The results obtained were not commensurate with the effort expended on them. It is suggested that some who have written on the subject of the Isonzo campaign (in the summer of 1915) have come to erroneous conclusions. They have not given sufficient consideration to the question of the topography of the theatre nor to the state of disorganization in which the Italian Army was at the beginning of 1915. Italy had first to develop her military power before she could be capable of a continuous effort, hence the disjointed nature of the operations in 1915. In 1916, the Italians were able to contain the Austrian offensive in the Trentino and to make a thrust simultaneously elsewhere; and this provides evidence that they were in the ascendancy, in spite of the fact that their enemy was able at times to act on the offensive also. At the same time, it is admitted that the Austrians, in having employed small numbers of troops to hold their defences, whilst maintaining ample reserves in hand, undoubtedly acted on correct tactical principles.—*(To be continued).*

NOTES AND NEWS.

Switzerland.—One of the regular contributors to the *Revue* writes that the Swiss Army recently experienced a somewhat disagreeable surprise in the industrial town of Chaux-de-Fonds, a Neuchâtel Regiment billeted in this town having come in for hostile demonstrations from an anti-militarist clique. The demobilization of this regiment was effected in due course without any further unpleasant incidents. A few days later, however, an *émeute*, amounting almost to a revolution,

broke out in Chaux-de-Fonds and had to be put down by the military. Blame is thrown on personages in high quarters for the existence of a situation involving such an outbreak; at the same time, it is stated, that it would be a mistake to attach too great significance to the incidents in question.

A reference is made to a discussion in the Great Council of Berne on the subject of the exacting treatment experienced by the 3rd Swiss Division; it has been alleged in the Great Council that the Division has had to make excessively long route marches, and that proper arrangements have not been made in connection with the billeting accommodation provided for it. Resentment is shown in the Press at this interference in military matters by a civic authority. The Canton of Berne, it is pointed out, is the only one that has been accorded the privilege of providing a complete Division for the Swiss Army. There appear to be grounds for fearing that the friction between the Bernese Government and the Command of the 3rd Division is likely to continue, much to the detriment of the Division. The contributor of the original notes hints at the remedy which should be applied to put an end to this conflict between the civil and military authorities.

It is announced that the Federal Council have accepted the resignation of his Staff appointment by Major Bircher. Major Bircher has come much into prominence recently, having been accused of a want of tact; the Swiss Press do not appear to be altogether satisfied with the manner in which the Federal Council have handled his case.

Belgium.—A special correspondent points out that one of the very interesting aspects of the present War lies in the greater and greater *industrialization of war*. That is to say, war has become an extremely vast undertaking, with many branch establishments which continue to increase in numbers day by day. In former times a few industrial institutions of the country, in addition to the Government arsenals, provided all the stores, supplies, etc., necessary for the maintenance and sustenance of armies in the field. To-day, the demands of the War Department have become so exacting that the Department has been obliged to become its own contractor, its own manufacturer in respect of all articles of which the consumption is very great. This is particularly so in the case of Belgium. An immense industrial establishment has been erected for the repair and cleaning of soldiers' soiled, damaged or partially worn-out garments of all sorts. The operations carried out there are conducted on commercial lines; nothing is allowed to go to waste. Uniforms which have been turned in there in tatters, covered with mud, stained with blood, etc., are turned out again in perfect order, clean, dry, disinfected and complete in every detail. A single far-seeing energetic officer has general supervision of the establishment and is assisted by a number of N.C.O.'s who are experts in the jobs overlooked by them.

In another domain, widely different from the foregoing, evidences exist of the same industrial spirit which is boldly renovating the Belgian Army. It is well known how very important a *rôle* has been, and is being played, by trench artillery since the day that the war of movements came to an end and relative immobility of opposing fronts has been the order of the day. The Belgian Army has borne its full share in invent-

ing, designing and perfecting the various types of trench guns, trench implements, etc., which form so large a part of the equipment of the trenches in France and Flanders. The Belgian Army continues to play its part on the Yser-Yperlee front, and Belgian aviators have been particularly active in co-operating with British and French airmen in the attacks on the German naval establishments at Ostend and Zeebrugge.

A note of regret is sounded at the lack of interest shown by the public in the doings of the Belgian troops in the Congo. The successes obtained by General Tombeur in his campaign against the Germans is briefly touched upon. This expedition was prepared and organized very methodically and with great care. The black troops have done exceedingly well. Science has been put under liberal contribution, so that in the Tanganyika region battles have been fought comparable in their nature, from the technical standpoint, with those which have been witnessed on the Yser, though naturally falling far short in magnitude in comparison with the contests in Flanders.

The British and Belgian African campaigns are interesting by reason of the results attained; these campaigns have destroyed at a single blow the possibility of the German dreams in the equatorial regions of Africa ever maturing.

United States of America.—A special correspondent draws attention to contemporaneous events in the Old World; he feels that in view of the rapidity with which the situation is developing his news will be very stale by the time it is in print, owing to the delays in the post.

At the time of writing the cry for universal service had many supporters in the United States of America; Mr. Baker, the War Minister, who had been opposed to it, had recently been won over to the cause. The actual position of affairs with regard to the American Army, when the original notes were written, was as follows:—

(a). *Regular Army.* The enrolled strength had not reached the establishment authorized by the Law of 1916.

(b). *The Militia* had an enrolled strength of 129,000 men; some 75,000 of these troops had recently returned from the frontier, along the Rio Grande, after from six to eight months' duty there and to this extent they were in a better state of training than was any part of the Militia on the eve of the Spanish War in 1898.

(c). The *Reserves* of the Regular Army and of the Militia had not started getting ready for war.

The Central Government and the Federal Authorities did not wait for the declaration of war before taking action in relation to the millions of people belonging to the German race settled in the United States. Among other steps taken was the remobilization of a number of infantry and cavalry regiments, which were demobilized on return from the Mexican frontier; these regiments find the necessary guards for the protection of the ammunition factories, railways, etc., against which Teuton conspirators may have designs.

The municipalities also have not remained inactive; wherever large numbers of munition factories exist and a strong German element is present, the City Fathers have raised *Home Guards*, on the Canadian model.

Before the declaration of war against Germany, the American General

Staff had prepared a scheme for raising an army of four million men ; one and a-half million men were to be enlisted and trained forthwith ; one and a-half millions three months later ; and one million were to be retained as a reserve to be organized into units at a subsequent date. According to official statistics the numbers that the United States Army could have put into the field at the date of the declaration of war against Germany amounted to 517,868 men. A doubt is expressed as to the probability of the United States raising an army of five millions, in addition to the men required for her fleet, within a reasonable time. As there is opposition to universal service on the part of some Congressmen, it has been proposed that double pay should be offered with a view to attract recruits ; this would mean raising the pay of a private from £3 3s. to £6 6s. per mensem. The question is, however, one fraught with many difficulties of an economic and social order. The universities and colleges have taken in hand the matter of organizing courses of instruction for candidates aspiring to commissions. This instruction is on lines similar to that adopted by the McGill University, Montreal. Further, a school of instruction for cadets has been formed at Governor's Island, New York, and 1,500 young men are already receiving instruction thereat.

INFORMATION.

Switzerland.

In the Cavalry.—A short note is contributed under this heading, which deals with the measures adopted for *modernizing* the Swiss Cavalry, in accordance with the lessons of the present War.

Major Bircher's Case.—The disciplinary aspect of Major Bircher's case is reviewed, and the opinion is expressed that the method in which the case has been handled shows that there is an absence of the necessary firmness at the head of the Army. It is urged that, in the interests of the Army, an officer possessing serious faults of temper should be so dealt with as to prevent him from doing further harm.

The number of the *Revue* under notice concludes with bibliographical notes on works of military interest.

SUPPLEMENT.

With the number of the *Revue* for June, 1917, is issued the last part of the *Supplement* entitled *L'Occupation des Frontières par les Troupes Suisse en 1870—1871* by Colonel Galiffe (*vide R.E. Journal* for June, 1917).

This instalment consists of the Third Part of the Volume and deals with the Swiss Army.

Chapter I. deals with the troops. It is stated that the Swiss obeyed the call to arms with alacrity and carried out their patriotic duties in a most satisfactory manner, in spite of the climatic and other difficulties which had to be contended with during part of the time they were mobilized. Acts of indiscipline of a serious nature were exceedingly few, and only on rare occasions was it found necessary to arraign offenders before the military tribunals.

Although in matters connected with the moral and physical qualities of the troops all was as it should be, yet the reports on their fighting effi-

ciency were in certain cases adverse, largely due to the insufficiency of their training under normal conditions. It was as regards the infantry that most fault was found; there were, however, great differences, it is stated, in the contingents furnished by the several Cantons. The engineers and artillery came in for the highest praise.

Great defects in the armament and equipment of the troops were also brought to light. These were cured, owing to the remedial measures adopted by the Military Department and the strictness of the control established.

Chapter II. deals with the mobilization and the transport. Three days after the orders were sent out for the mobilization, the five Divisions called out, with the exception of a Ticinese Brigade, were at the disposal of the Federal Government; two days later they were in occupation of the positions assigned to them. The credit for this is primarily due to the Cantonal authorities. The railways also had an important part to play, particularly during the latter part of the period during which the Swiss Army was mobilized, and performed the duties imposed upon them with considerable success.

Chapter III. is devoted to questions affecting general organization and command. The Government merely placed the various units composing the Swiss Army at the disposal of the Commander-in-Chief and the Divisional Commanders, but properly speaking nothing in the nature of an organized force existed. The military authorities had therefore to work out, with the assistance of the Federal Authorities, a military organization suitable to the situation. The obligations devolving on the several parties were often ill-defined and this frequently led to conflicts, which did not help matters forward.

All the auxiliary services, *e.g.*, medical, transport, etc., had to be started *ab initio*; and several days elapsed before the Swiss Army was in a really fit condition to take the field. In order that the various problems of command and administration should be expeditiously dealt with a staff organization had to be provided to relieve the Headquarter Staff at Berne of detail work. Criticism is made concerning the absence of *contact and of liaison* between the Divisions and Brigades; there appears to have been too great a tendency on the part of the Commander-in-Chief to deal directly with Brigades, and to ignore the Divisional Headquarters.

Chapter IV. is devoted to the Sanitary Services; it is divided into two parts.

The first part deals with the Medical Services. The regimental system was in vogue, medical officers being attached to the units; however, in addition thereto each Brigade had a Field Hospital attached to it.

A good deal of sickness prevailed in the early days of the mobilization, an epidemic of typhus carrying off a large number of victims. There were 9,610 cases of sickness in a force of 37,500 men, involving medical treatment for a total of 17,825 days; sore feet represented 22.9 per cent. of the cases treated. The second part deals with the veterinary services. Veterinary Hospitals were established at Morgenthal, Zurich, Nidau and Berne. During the first period of mobilization the wastage in horse flesh was relatively heavy; no information is available with regard to

the second and third periods, but the money value of animals lost has been put on record as £7,160.

Chapter V. deals with the Commissariat.

No provision had been made by the Confederation in connection with supplies for a war, so that everything had to be improvised. In view of the urgency of the situation it was not possible to arrange for competitive tenders to be invited and, in consequence, high prices had to be paid for all the purchases made. At first troops were billeted, with subsistence, on the population or on the communes. It was not till the 27th July, 1870, that the Commissariat Department was able to commence issuing supplies.

A main supply dépôt was provided for each Division—W.E. 8,400 men and 800 horses—containing rations for one month; and at the same time, an advanced dépôt, containing rations for eight days, was also provided for each Division. These dépôts were supplied from Central Supply Dépôts, in which 100 days' rations were stored for 50,000 men and 6,000 horses.

At the time that the French Army of the East entered Switzerland, the Swiss Commissariat Department was able to send 200,000 bread rations from Berne to Neuchatel, which arrived at the latter place on the 1st February.

The total expenses in connection with the mobilization of the Swiss Army, which lasted from July, 1870, to March, 1871, was £400,000; of this sum £100,000 represented pay, £252,000 the cost of rations, and £24,000 the price paid for horses. To meet this expenditure the Federal Government raised a loan of £600,000 at 4½ per cent. per annum.

Conclusion.

Finally, Colonel Galiffe justifies the decision arrived at by the Federal Council, in July, 1870, to mobilize a part of the Swiss Army. He says that perhaps to-day, with the full information regarding events in one's possession, it may seem that too exaggerated a view was taken of the situation and that too large a number of troops were mobilized and that they were kept under arms too long. However, it must be remembered that the Federal Council, at the time that the measures described were adopted, were not aware of the zones in which the belligerents were concentrating, nor could they foresee what their intentions were. It had not been realized that France was so unprepared that she would be unable to resist Germany; further, the trend of political events had been such as to make it appear by no means improbable that Austria and Italy might intervene in the quarrel. The Federal Council could not very well run the risk of putting off defensive measures until Swiss territory had been violated.

The neutrality of Switzerland had, it was true, been guaranteed in 1815, but even in 1870 there was much evidence to show that diplomatic guarantees were after all platonic. Those responsible for the honour of the Helvetic Republic wished to make it clear that they did not consider Swiss neutrality to be some meaningless term; on the contrary, it was to them something real which they had the means to fight for and, indeed, to do so without external assistance.

The unanimity with which the Chambers, the Cantons and the citizens

expressed their approbation of the steps taken is the best answer that can be given to those who argue that the Federal Council acted hastily and took too exaggerated a view of the possible danger to Switzerland.

On the other hand, the Federal Council is blamed for not providing the reinforcements asked for in January, 1871. Swiss officers, who had come into contact with the Chiefs of the French Army of the East, had formed the decisive opinion that the latter would not have hesitated to make use of Federal territory, even if it meant coming into collision with Swiss troops.

It is felt that the energetic action taken by the Swiss authorities and the scrupulous care with which the nation performed its duty as a Neutral enormously raised the prestige of Switzerland in Europe.

The brochure is provided with three appendices, viz. :—

App. I.—The General Staff of the Federal Army.

App. II.—Order of battle of the troops mobilized.

App. III.—The Convention of Verrières.

Eight sketch maps are provided which show the following situations :—

Map 1.—Zone of concentration and first deployment of the Federal Army.

Map 2.—Situation of Federal, German and French Armies on the 17th January, 1871.

Map 3.—Billeting areas of Federal Army on 29th January, 1871.

Map 4.—Billeting areas of Federal Army on 30th January, 1871.

Map 5.—Situation of Federal, German and French Armies on the evening of 31st January, 1871.

Map 6.—Billeting areas on 1st February, 1871.

Map 7.—Billeting areas on 2nd February, 1871.

Map 8.—Billeting areas on 6th February, 1871.

Map 9.—Billeting areas on 13th February, 1871.

Map 10.—Headquarters of Administrative and Medical establishments of Federal Army, July and August, 1870.

W. A. J. O'MEARA.

RIVISTA DI ARTIGLIERIA E GENIO.

April, May, June, 1917.

ITALIAN MILITARY OPERATIONS FROM DECEMBER, 1916, TO MARCH, 1917.

The Second Winter Campaign.

Snow and Avalanches.—The experience of the preceding winter campaign had furnished to the Italian Army many precious lessons which tended to facilitate the organization and the conduct of the War during the second winter. But such advantages were largely discounted by the greater inherent difficulties owing to the increase in the masses of the said army, and the more complex organization, and especially by the greater severity of the climate. The number of days in which snow fell was about 50, equal to the normal annual fall for the Alpine zone; the depth of the snow in many cases reached to 5 metres, in others over

10; the temperature, persistently low, in some mountain zones of high elevation fell to 28 degrees below zero. The immediate and grave consequences of such exceptional meteorological changes was the fall of many extensive and ruinous avalanches of which there were memorable and sad instances on the 15th December, 1916, and the 10th and 16th January, 1917. For example on the 13th December not less than 105 avalanches were signalled; in one of these at *Cauriol* there slid down more than 2 million cubic metres of snow; about 2½ millions in another avalanche in the Osanna Valley (M. Baldo), and not less than 6 millions in the valley of Costeana.

Fortunately the complete studies of the meteorological office at Headquarters had been able to ascertain a direct correlation between a special isobaric situation in Western Europe and the Mediterranean, and the intensification of the avalanches on the Alps. It became possible to establish a service of urgent telegraphic warning to the troops, which together with repeated instructions for precautions to be taken against the danger of avalanches contributed not a little to lessen the consequences of these ruinous phenomena. The Italian Alpine Club, also, with its vast experience gave valuable demonstrations for making commonly known the importance of precautionary measures.

The Defensive System on the Theatre of Operations.

The first necessity imposed on the attention of the Supreme Command and the Military Authorities for the winter season was the development of a complete systematic defence along the whole of the frontier and especially in the southern tract of the front Giulia, where by effective advances the Italian lines were pushed forward into the enemy's territory. A strong systematized defence had effected a considerable diminution in the guards of the first line, and had reduced the number of troops exposed to the rigours of the climate and the hardships of life in the trenches.

The critical points of the defensive organization were the making a first line as mobile as possible with the object of succeeding by means of sudden attacks in improving the extension of the Italian trenches and maintaining an aggressive spirit among the troops; successive lines of trenches radiating from the main trenches and redoubts, and constituting in their complexity a complete barrier, securely fortified against the enemy's attacks, and as a solid base for the setting out of a further offensive; systematizing bombardments by masses of artillery and by adapting positions for observatories, etc., for a well co-ordinated and efficacious fire; and finally a convenient network of communications that would allow of free circulation between the lines with relative security.

It is easy to imagine the enormous mass of work imposed by such an organization especially in a mountainous country composed of naked rocks which had to be mastered by the help of machinery. Nor was the work of construction wanting, as the abundance of snow which filled the trenches, burying the lines of barbed wire, imposed an incessant work of clearing, besides the rectification of portions of the front in order to escape the insidiousness of the avalanches. For this heavy work, in addition to the combatant troops, there were many hundreds of work

men less innured to the fatigues of war, detachments of territorial militia and squadrons of town labourers all enduring the inclemency of the weather, and the danger of the enemy's fire, and resisting fatigue with the calmness and good humour characteristic of Italian workmen.

In addition to the problem of the systematized defence of the front was the question of shelter for the troops, an arduous and vast problem, considering the rigours of the winter season, and the increase in the mass of the armies with limited encamping spaces in these Alpine regions. Convenient and secure shelters had to be provided directly from the front towards the rear, and a regular rotation of units had to be arranged so that all should enjoy equal periods of rest. The trenches, generally concealed so as not to offer easy targets to the enemy's artillery, had to be provided with shelters against the intemperate weather and as far as possible free from damp. Further to the rear, shelters for warmth were arranged for in places either natural or excavated in the rocks. The reserves were lodged in huts of wood and cement, not exposed to the fire of the enemy's artillery and providing greater resources. For the resting troops, camps were utilized, real village barracks well heated and lighted by electricity with beds of wood and iron, lavatories, baths, and establishments for disinfecting garments, stations for firemen, etc. Where it was thought necessary, on account of the rigid temperature, the huts were constructed with double walls and protected by strong beams from the danger of avalanches, the roofs following the slopes of the mountains so as to facilitate the sliding of the snow.

The construction of an immense number of shelters necessitated vast provision for the production of the material required. This was obtained by means of an extensive organization of an industrial character for utilizing the local resources, and purchasing materials from the most convenient markets. There were also provided the plant for furnaces, cement works, laboratories, and offices of various kinds, partly worked by electricity. The *personnel* for these establishments was by preference drawn from soldiers incapacitated from the fatigues of war and skilled in the various works.

The work of constructing the barracks alone required 300,000 cubic metres of wood, and 20,000 tons of various metal materials. Beds of iron and wood were constructed for about 1,000,000 men, 20,000 stoves, tarred boards, felt, zinc plates, etc.

The Transport Service.

The immense work of providing such materials for the life and welfare of the troops would have been impossible without a vast organization for the means of transport.

To commence with the railway services; this, although it underwent diminution during the winter, acquired a greater activity than it had ever done since the commencement of the War. Altogether in the period of time under consideration, about 34,000 military trains were run on the Venetian lines, besides the passenger trains and those for goods for the public. The transport of firewood, of wood for building, of munitions, and of animals alone employed 110,000 railway trucks. The sending of troops on leave required the continuous use of 2,000 carriages in each week, and in addition 1 million men were sent on

leave to their families for short periods, and transported back to the War zone, and the crisis of coal told even more severely on the transport. The active development of the railway organization made it necessary to construct some hundreds of kilometres of new lines, the enlargement and construction of several stations, and the provision of immense quantities of wood.

The organization of means of transport by water, together with the widening and deepening of the channels of the canals that intersect the Venetian plains, and making them navigable for barges carrying 600 tons, was also intensified. New canals were constructed with a view to developing and completing the navigation between the Po, the Adige and the lagoons of the Isonzo. Finally, the improvement for the navigation of certain rivers, and the communication between the railway stations and these waters was established. Great attention was given to the transport by means of the Decauville railways, completing a network of some hundreds of kilometres with trunk lines in contact with the troops. For this network, for one army alone, these circulated normally 38 locomotives and 1,400 wagons, which in a few months transported 144,000 tons of material.

The employment of autocars was also widely spread, for preventing the freezing of the water in the radiators. The greater losses to which these means of transport were subject in the winter rendered necessary a system of new offices, and laboratories for repairs, etc. For transport not of an urgent character, animal traction was used, served by numerous squadrons of auxiliary military trains assigned to each army. Where the conditions of the roads and the encumbrance of the snow did not allow of transport by wagons, sledges were adopted with success, these being of a large type, drawn by animals carrying three quintals and a smaller type drawn by hand for small loads.

The most secure and rapid means of transport in the mountainous zones traversed by fluvial obstacles, however, were the wire conductors adopted on a large scale which conveyed large quantities of material to the troops where the snow had created obstacles to the progress of reinforcements. Finally there was the great assistance given to the ordinary transport in high mountains by means of war dogs trained in pairs and not affected by the cold, sometimes even in storms drawing a sledge with a load of 70 or 80 kilogrammes. An immense transport movement cannot be possible without a network of roads which no mountainous region usually possesses. So, great works are necessary for the construction of new roads and for increasing the width of existing ones. To-day, the army in Alpine territories disposes of a network of communications well arranged for the development of the operation, but it requires an incessant and intense work for its maintenance.

A special organization, imposed by the winter season, was that directed with the object of keeping the communications free from snow, conditions essential for securing the life of the troops. The roads have to be always free from snow and fit for sledges. They must however have a slight stratum or layer of snow. For the better execution of this work the road network is subdivided in portions and entrusted to the charge

of officials similar to civil engineers. Each portion comprises a certain number of stations, with the necessary workmen and shelters for animals, and stores for the tools, etc.

In the higher mountain zones, for freedom from the snow excavated galleries are preferred. These galleries, which for all the front measure hundreds of kilometres, were 2 metres in width and height and allowed for free passage of the baggage. They saved the work of disencumbering the snow and assured a continuity of transit even in the case of storms or violent winds. In some places more dangerous from land slides and avalanches the galleries were excavated in the solid rock as those at the Corno della Vecchia in the Conca d'Arno (Valle Camonica).

Finally it is worthy of note to record the valuable work done by our skiers, who under very unfavourable conditions maintained the communications with the more elevated localities. If in the mountains the gravest obstacles were those of the snow, in the plains the abundant precipitation was the cause of inundations. But the arrangements provided in time (watercourses, embankments, rapid transmission of alarm signals) tended to limit sensibly the damaging effects.

The importance of the movements of transport during the winter may be judged by reference to one of the principal stations on the Isonzo which from October to February transported 17,000 officers, 380,000 troops, 19,000 workmen, 29,000 quadrupeds and 2,500 wagons.

Commissariat.

The victualling service during the winter assumed a complex character owing to the greater needs of the troops and the difficulties of transport. Advanced bases were formed, provided with abundant dépôts of provisions, forage, firewood, etc., and resting places for men and animals. From the storehouses to the bases the transport was effected by autocars, and from the bases to the troops by sledges or wire conductors according to circumstances. In the more difficult zones, winter dépôts were formed, partly for provisions continually requiring renewal and partly for reserves. So that the detachments, who it had been foreseen would be blockaded in the snow for six months, were able to live without inconvenience. Abundant rations were provided for supplying warm food and drinks to those affected by the cold or by fatigue, frozen meat being largely used, and wine of a kind that resisted freezing. Special kinds of food were also distributed to the troops in the trenches and those exposed at great altitudes; rum, marsala, coffee and tea. With the use of field kitchens, thermos spirit lamps and all kinds of heating apparatus, two warm meals could be given daily to the soldiers.

Special attention was given to the supply of potable water, especially in the more arid zone such as the high plain of Asiago and the Carso. Plant was constructed for extracting the water from the sub-soil, and for raising and conducting it to the first lines. For the Carso about 3,000,000 litres of water were supplied daily. Other aqueducts were in use on the high localities of Asiago, all the plant being placed in action by electric motors. In the case of interruption owing to exceptional freezing special arrangements were made with covered tanks and cisterns, etc.

Sanitation.

Sanitary organization was a subject of the greatest care. Special arrangements had to be made in the mountainous countries for the transport of the sick and wounded by difficult routes and under unfavourable atmospheric conditions. In cases where the transport had to be effected in the plains from posts far distant from one another there were several hospitals. For the transport of the sick, wire conductors, ambulances, sledges, wagons, autocars and hospital trains were used.

Bacteriological offices for periodical vaccination and for frequent examination of potable waters, and for disinfection, were also provided, for combating the results of frostbite and damp. The organization for convalescents and for sending these from the war zone and returning those cured to the army was also perfected. The results obtained were in every way satisfactory, the death roll of the forces descending to 1.5 per cent. and epidemics being reduced to a minimum. Assistance to the civil population in the war zone was also not forgotten. The sanitary service was carried on with the patriotic devotion of the Red Cross and Military Order of Malta in assisting in the work of succour to the sick and wounded and carrying comforts to the first line.

Assiduous care was given to the animals, and for the removal from the mountains to the plains of such as were not necessary for the exigencies of the service during the winter. For the remainder stables and covered shelters were provided.

Telegraphic, Telephonic, and Postal Communications.

Among the other services that worked regularly, the development of the telegraphic and telephonic communications, on which depended so much of the activity of the army, are well worthy of note. It may be recorded for example, that in the zone of one of the Italian Armies there existed 5,000 kilometres of telegraph lines besides 3,000 kilometres of wire for the immediate service of the artillery; there were distributed 3,000 telephones and the number of telegrams and phonograms amounted to about 10,000 a day.

Military Operations.

Instruction and Moral Preparation.—The indispensable element of success in modern warfare is the perfect knowledge of the complex affairs of which it consists, of the intricate mechanism which regulates it and especially in a knowledge of the technicalities by which it is conducted. Hence, the importance of instruction for the troops, and especially in the winter. Many spaces were allotted for the instruction of the units in exercises of attack and defence, in target practice with rifles and mitrailleuses, and in numerous subsidiary details. Special courses were instituted for instruction of officers in staff work, on the use of bomb throwing and the mitrailleuse, on works of defence, and various specializations of artillery, on photography, ski-ing, etc. Other spaces under the direction of able teachers were allotted for improvements in the study of war, and lectures were given to the troops in well warmed and comfortable places.

Operations of some importance were carried on at the head of the valley of S. Pellegrine. Here, on the 4th March, one of the Italian detachments stormed a strong position at about 2,700 metres capturing

61 prisoners, 1 gun, and 2 mitrailleuses. On the night of the 17th the enemy destroyed the defences on this position by a violent artillery fire, and occupied a portion on the more elevated part. His further attacks on the 20th were repulsed.

Further to the north there were interesting episodes of mine warfare. Ab Sief (Height of Cordevole) had commenced excavating with a view to blowing up some of the Italian positions. Having ascertained the direction of the galleries, the men prepared a countermine that was exploded on the 5th March, demolishing part of the enemy's lines. On the Giulia front and especially in the Gorizia zone, greater activity was developed owing to the milder conditions of climate. From the end of December, 1916, until the first days of the following February there were some small engagements to the east of Gorizia resulting favourably for the Italians. On the evening of the 9th February, after a violent artillery fire, the enemy launched three attacks on the slopes of S. Caterina, S. Marco, and south-east of S. Pietro and succeeded in occupying some short spaces of the trenches. On the night of the 12th and the following morning, the Italian infantry with persistent assaults recovered the whole of the position, capturing more than 200 prisoners, and inflicting severe losses. Successive counter-attacks by the enemy on the 14th, 15th, 22nd, and 28th were all repulsed. The enemy's attacks on the Italian lines to the east of Verthoiba on the 3rd and 6th March were equally repulsed and 32 prisoners and 2 officers were captured. On the Carso the Italian infantry advanced with bayonet charges on some further tracts in the Italian front, especially in the sector north of the road from Oppacchiasella to Castagnavizza and in the vicinity of the height 208. On the 18th January the enemy brought to bear violent artillery fire against the Italian lines in the southern sector and especially in the Fanti Wood, and then attempted attacks with infantry detachments which were all repulsed.

Notable incidents in aerial warfare were bombardments by aviators of the enemy's camps at Dorimberga and Comeno on the 20th December, and on the railways and barracks at Rifemberga S. Daniele and Cobdil on the 8th January; the bombardment of the enemy's hydroplane stations on the Trieste Harbour, and the aviation camp in Prosecco on the 12th January; then on the dockyards at S. Rocco, and on the railway station of Opicina, on the 11th February. Dirigibles also bombarded the enemy's camps near Comeno, on the night of the 21st February, the aviation camp at Prosecco on the night of the 23rd, the railway station at Rifemberga on the 26th February; the station of Calliano on the night of the 18th March. Attempted raids by the enemy, inflicting some losses, were made at Aquileia, Monastero and C. Farello on the night of the 12th January, on Villa Vicentina and Cervignano on the 12th February, and on Gorizia on the 13th March. In several aerial combats 12 of the enemy's machines were brought down by artillery fire. The Italian losses were four.

On the Albanese front no important events occurred, with the exception of small territorial gains in the mountainous zone between Vaiussa and Osum (F. Devoli) made with the object of connecting the Italian lines with those of the French, and barring the communication between

the lake zone (Central Albania) and the Epirus. In the aerial raid on Valona two of the enemy's hydroplanes were brought down and the Italians lost one machine.

On the Macedonian front the transfer took place of Italian troops from M. Baba west of Monastir to the Cerna zone and east of that locality. On the evening of the 12th February, after a violent artillery preparation assisted by incendiary bombs and inflammable gas, the German troops broke through the trenches on the height of Quota 1050 east of Paralovo, occupying a tract of about 200 metres. On the 13th by a vigorous counter-attack the Italians recovered the positions except a small tract which had been completely destroyed by the enemy's fire. On the 14th the Germans attempted a counter-attack which was repulsed with grave losses to them.

On the morning of the 27th February, the Italian infantry, by a sudden assault, seized a tract of trenches not yet reoccupied and captured 71 prisoners. The enemy exploded a mine which buried many of the Italian infantry, and from this moment the Quota 1050 could not be occupied by the troops of either of the combatants. The problem of creating satisfactory conditions of life under the great difficulties of ground, weather, and the enemy, together with the numerous requirements imposed by the custom of modern civilization and the complicated mechanism, was completed successfully, and with the resourcefulness and adaptation that is characteristic of the Italians. Since, in modern warfare, military operations represent the result of long periods of assiduous preparation and these results were obtained by the renewal of the energy put forth in the winter season, the Italian Army is filled with confidence, and auspicious of victory in the new year of the War.—*Agenzia Stefani*.

RESUMPTION OF ITALIAN MILITARY OPERATIONS.

The long period of rest imposed on the operations by the winter and protracted by the inclemency of the weather during the whole of April was a time of useful preparation for the Army. With the assistance of the Government and the fervid co-operation of all the energies of the country, the supreme military authority devoted itself actively to developing the organization of the Army, and increasing and reinforcing regiments and squadrons. The transport and commissariat services were perfected and there was issued to it great quantities of war material of every kind, adapted to the new invention of military science. New regiments were created and formed into great units, organically complete with their auxiliary services. Heavy artillery was constructed and distributed and the number of mitrailleuses was largely increased. At the same time the production of munitions and explosives allowed for great issues and abundant reserves, which are indispensable for conducting heavy offensive actions of every kind and for securely guarding the front in the eventuality of having to oppose a tenacious defence against the violent offensive of the enemy. The engineer services were also largely increased. Great encouragement was given to aviation, more numerous and more powerful machines being provided in order to supply this new arm with ample means for the offensive,

and greater facilities for exploration. With these diverse forms of activity harmoniously co-ordinated to a final purpose, the Italian Army, strengthened by experience and encouraged by past results was prepared to confront its third spring of the War.

Direction of the Attack on the Julian Front.

The idea of the supreme command for the spring offensive was as follows:—At first to attack the enemy on the whole of the Tolmino front with intense artillery fire, to keep it in suspense, and uncertain as to the real direction of the decisive attacks; then to make the assault on the right wing to the south of Gorizia and, finally, for the second time to launch an attack on the Carso.

On the Middle Isonzo.

The first phase of the action that had for its objective the heights on the left of the Isonzo from Globna to Salcano was entrusted to the Army of Gorizia. This operation had to be carried out by means of a heavy frontal attack assisted on the right by a resolute thrust on the Gorizian heights and masked on the left by a demonstrative action and a crossing of the Isonzo between Loga and Brodez, with direct threats from the rear on the enemy's positions on the elevated plain of Bansizzo-S. Spirito.

An energetic demonstration on the left of the 3rd Army on the southern margin of the Carso promised success, and the operations commenced on the 12th May with an accurate artillery preparation. The fire gained its maximum violence and intensity on the morning of the 14th. At midday the Italian infantry commenced its advance from Plava and Gorizia. The Quota 383 east of Plava (Poggio Montanari) was won by the Udine Brigade (95th and 96th Regiments) while the Florentine Brigade (127th and 128th Regiments) with magnificent valour succeeded in gaining the spur of Quota 535 of Cucco. At the same time the brigade Avellino (231st and 232nd Regiments) overcame with irresistible force the defences of Zagora, and partially occupied the little forts of Zagomila; the 230th Infantry (Brigade Campobasso) scaling the slopes of Monte Santo penetrated in the evening to the convent east of Gorizia, and the Messina Brigade (93rd and 94th Regiments) captured the strongly fortified heights of Quota 174 to the north of Tivoli. On the remaining tracts of the front, the pressure was very strong; everywhere the enemy's tenacious resistance compelled the Italian troops to engage in a very active combat.

On the night of the 15th, a detachment of two battalions—37th Bersaglieri and Alpines Corrinio—and auxiliary detachments forced the passage of the Isonzo between Loga and Brodez, completely surprising the enemy. At dawn on the 15th the attack on the heights was renewed with fury. They regained the Summit 611 of Cucco and the Quota 524 of Vodice, repelling the enemy's most violent attack, and the occupation of Monte Santo and the Italian lines was established below the summit. On the following day, and up to the 22nd, the ground gained on the 14th and 15th was completely consolidated.

These were days of extremely violent fighting, and of imperishable glory for the Italian troops. Under hurricanes of fire many counter-

attacks were repulsed, and the positions gained were consolidated for defence; the successes were increased by the occupation of the heights of Quota 363 (east of Plava), of the localities of Giobna and Palliova and with the secure possession of the entire mountainous ridge which, culminating in Monte Cucco, separated the Isonzo from the deep valley in front of Alnovo.

The bridgehead of Brodez, having fulfilled its function, was abandoned on the 18th. At the same time the actions on the heights above the Isonzo were developed further to the south along the southern margin of the Carso, these operations being entrusted to the 3rd Army. For several consecutive days our troops also made progress north of Dosso Fatti and towards Quota 126 to the south of Tippacco. At the same time the possession of the rocky bulwark of Monte Cucco and Monte Santo was assured and our lines were carried to Quota 368 and Quota 592, and to the slopes west of Monte Santo. 7,113 prisoners, including 163 officers, 18 guns, very numerous bomb mortars and mitrailleuses and immense quantities of war material were the results of this first stage of the Italian offensive.

The Austrian Diversion.

As soon as the attack on the heights to the left of the Isonzo had been developed, the enemy attempted to carry out a complete diversive action in order to distract attention. This action became intense from the 19th to the 22nd May, with very violent concentrations of fire on the Italian positions on the ridge of Val Sugana and on the high plain of Asiago, and various attempts were made to break through by the enemy's infantry to the west of Garda and in Val d'Adige.

On the night of the 21st an assault was delivered on the Dente del Pasubio, but the attack was repulsed with heavy losses. Other furious attacks were made on the 22nd with large forces against the Italian positions, Piccolo Colbricon in the valley of Travignolo. These, after some preliminary successes, ended in complete failure of the enemy, who left many prisoners in the hands of the Italians, besides several hundreds of dead.

On the Carso.

The endeavours of the enemy intended to distract attention had no other effect than that of causing heavy losses without succeeding in modifying the decision of the Supreme Command, who, now thoroughly prepared, gave orders for the commencement of the second phase of action on the Carso.

From 6 a.m. to 4 p.m. on the 23rd the artillery of the 3rd Army bombarded with extreme violence the enemy's positions which had escaped the previous bombardments, and at 4 p.m. the infantry leapt over the parapet. On the left, in conformity with the plan of the Command, the action was only demonstrative, but was carried out with much decision and bravery. On the centre and right from Castagnavizza to the sea, the enemy's trenches in front of the Italian lines were captured by the Bologna Brigade (39th and 40th Regiments) on the road between Castagnavizza and Boscomalo. 130 aeroplanes took part in the battle, including a group of hydroplanes.

The enemy who at first replied weakly to the destructive fire of the Italians, reserving its power to arrest the infantry attack, was surprised by the rapid incursion of the latter, and towards evening made violent counter-attacks and opened an intense bombardment. But now the victory was in the hands of the Italians, and more than 9,000 prisoners, of whom 300 were officers, were taken by them.

The battle was renewed at dawn on the 24th, being prolonged on the sea by two monitors which bombarded the enemy's position on the coast. The left of the 3rd Army following in support, engaged the enemy and resisted his counter-attack with the Barletta Brigade (137th and 138th Regiments) while the centre undertook the operation of isolating and capturing the salient of Boscomalo, succeeding with the Brigades of Mantua and Padua in regaining the slopes of the heights Quotas 235 and 241 of the Fornaza region, and pushing forward to Quota 219 north-east of Komarje. On the right, the Tuscan and Arezzo Brigades made a brilliant frontal attack near the enemy's lines of Flondar. On the 25th the left wing succeeded in capturing some portion of the enemy's trenches in the direction of Castagnavizza, and the centre completed the capture of the Boscomalo Salient.

On the 27th the Italians completed the occupation of Quota 210 of Fornaza, whilst the right occupied the trenches east of Komarje and San Giovanni. On the 28th detachments of the 45th Division, on the extreme right, pushed forward beyond the Timaro as far as the height Quota 28 which however they were not able to retain. On the following days up to the 31st the Italians rectified and reinforced the conquered positions. The most furious actions were those on the 24th at Tivoli, Grasnigo, and on the 26th at the head of the valley of Palliova. From the 29th to the 31st three successive attacks on Vodice were repulsed by the 53rd Division.

16,568 prisoners including 441 officers, 20 guns, a great number of mitrailleuses and shells were captured. Also a formidable network of trenches which had kept back the right wing was captured. Prisoners made from the 14th to the 18th May numbered 23,681 (604 officers); 38 guns (13 were of medium calibre), 148 mitrailleuses and 27 mortars, besides a large quantity of rifles and war material. The Italian lines from Castagnovizza to the rear were advanced from 1 to 4 kilometres.

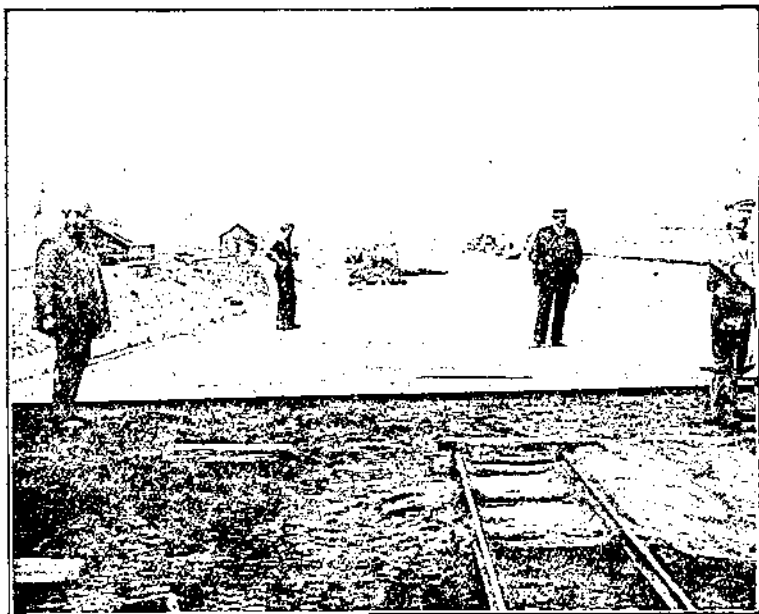
(To be continued).

E. T. THACKERAY.

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