# An t-Óglác

THE OFFICIAL ORGAN OF THE IRISH VOLUNTEERS.

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## THE CAMPAIGN.

The campaign is being carried on with vigour and effectiveness all over the country. The initiative has passed out of the enemy's hands into ours, and his futile attempts at meeting the situation by "raids" are becoming the laughing-stock of the people of Ireland. To-day everybody in Ireland realises that a state of war exists and the fact is beginning to sink into the minds of Englishmen. It is widely recognised in America and a leading French newspaper only a week ago described the situation in Ireland as "two Governments waging war on one another." The Government of the enemy obstinately refuses to admit the existence of this state of war in Ireland, while showing by their acts and their military activities that they know it to be so.

At all events the forces of the enemy have no illusions on the subject. The leading article in a recent issue of the *Constabulary Gazette*, described as "the accredited organ of the R.I.C. and D.M.P." lets the cat out of the bag with unusual candour and makes a number of amusing admissions. All pretence of speaking in the capacity of the police of an established Government is abandoned and the writer throughout speaks in terms of war, as of outposts of an Army of Occupation in a hostile country. The Irish Republicans—in other words the people of Ireland—are spoken of throughout the article as "the enemy," a refreshing illustration of the R.I.C. point of view.

The writer groans: "The Police are being beaten and the enemy is jeering." "The offenders are having by a long way the best of the battle." "They are clever, enterprising and daring and the fact is conspicuous that in the majority of cases they are succesful. An extremely small percentage of captures or casualties are recorded." "There is no use for underrating the ability and resource of the enemy. Not only have they bombs, rifles, revolvers, amunition, motor cars, but they have also a first-class Intelligence Department, and their objective is a small building containing a handful of helpless men who can only look at each other and pray for relief."

The burden of the writer's complaint is substantially that his Government fails to recognise the state of war and adopt the most up-to-date military methods. In reading his account of things we were reminded strongly of the description of the methods by which Cuban insurgents waged guerilla warfare on Spain for years, written by a British military expert, Lieutenant Barnes, who studied the campaign on the spot. He says: "Although the Spanish Government maintained in Cuba an army numerically far stronger than the insurgent forces, much better armed and organised, they were utterly unable to subdue or even check the revolt which spread rapidly. The Spanish troops were obstructed by the intense hostility of the inhabitants. They could get no information of the rebel movements while the rebels were never in doubt about theirs. An insurgent was distinguished from the peaceful cultivator only by his badge which could speedily be removed and by his rifle which was speedily hidden. Hence the Government forces, whether in garrison or operating in the country were closely surrounded by an impalpable circle of fierce enemies who shot stragglers, intercepted messages, burned stores and maintained a continual observation."

It will be noted that the writer, with true British mentality talks of the Spanish as the "Government" and the Cubans as the "rebels"—but farther on, rather inconsistently, he complains: "They tried to treat the rebels as though they were merely agrarian rioters. . . . It was a war, and this the Spanish Government would never realise."

Another English military writer, Major Calwell, commenting on this, adds: "It must be remembered that the Cuban insurgents were intelligent men, well armed and most determined and that to coerce such

a people into submission is no easy task." Quite so!

The Cubans kept up the struggle for three years without their Spanish would-be conquerors gaining any advantage; then by the intervention of America, Cuba gained her freedom. Such a state of war as Lieutenant Barnes described in Cuba exists now in Ireland and we are prepared to keep it going for three years or ten if necessary, and to wage it with ever-increasing intensity. Each day sees a fresh success, a fresh blow struck against the enemy.

The foe makes feeble and futile efforts at retaliation, for the most part ludicrously ineffective. The more incessant our activities are, the more the offensive is kept up in accordance with our plans and the methods of warfare we have evolved and made effective, the more will the foe be demoralised. His machinery, the machinery by which he crushed and "ruled" Ireland for so long, is breaking or broken in his hands. It is quite impossible for him to carry on as "a Government" in Ireland any longer. He can only "carry on" as an invader with an Army of Occupation holding a precarious position in a hostile country. To such a state the Army of the Irish Republic has brought him by its courage, skill, devotion and efficiency. Much remains to be done, but we feel sure that our Volunteers will be found no more wanting in the future than in the past. What is at stake is the freedom of Ireland; we are giving back the enemy blow for blow; and on his own admission we are getting the best of it. There should be a healthy spirit of emulation among the various corps of Volunteers in their endeavours to show their courage, discipline and efficiency. In those few cases where satisfactory results were not obtained, men will profit by their experience and bring off their next feat succesfully. The enemy is in for a hot time of it. From political no less than from military causes his hold on our country grows daily more precarious, his power in it more limited. A triumphant issue to the present war depends upon the loyalty, courage and efficiency of the Irish Republican Army, and above all upon their discipline and prompt obedience to orders.

## NOTES FROM HEADQUARTERS.

### TALKS TO N.C.Os., II.

One of the things that recruits, and indeed everybody, expects of a good N. C. O. is that he will *never be at a loss.* He knows at once what to do in any given circumstances. Did you ever hear of the incident in 1915—very long ago, that—at Volunteer manœuvres in Dublin? A post of three men occupied one of the canal bridges when some police started to interfere, as there were signs of a row. The three Volunteers were all fairly green although they were armed: but fortunately there was passing by a section commander off duty. He belonged to *another battalion* altogether, but he saw how things were and that nobody was in charge. So he took charge himself right away, and there was no more trouble. That's only one case in scores, but it will serve to show the kind of thing expected of the N.C.O. that's fit for his job.

TAKE CHARGE—that's what it amounts to. If there's no officer on hand it's up to *you* to take hold of the situation. If there *is* an officer about, report to him at once and place yourself at his orders. In the German Army every report made to a superior ends up with the words: "*Zu befehl*"—"Any further orders, Sir?" That is to say: until you're definitely told there's nothing further for you to do, you must expect that there is.

Here's a case that constantly occurs: a number of men turn up for parade before the Company Captain arrives, and you're the senior there. You just Take Charge and fall them in instead of leaving them lounging about. Will they regard this as "Prussian Militarism?" Not they—it was for "Irish Militarism" they came there, and they'll recognise it when they see it. Then when the Officer comes along you give "'Shun" and salute and he takes charge himself: you've probably saved him, yourself, and them a full ten minutes.

Just think things over for yourself and you'll find dozens of little points like that where your own action will help enormously to give the men under you a military feeling. And if you do that the men *over* you will get to place a corresponding confidence in you. You will be well on the way to promotion—if you'd like it. But you will be more—a man able to stand *efficiently* between danger and his country.

## ENGINEERING NOTES.

### EXPLANATION OF CONTOUR LINES IN MAPS

All spots on the same contour line are of an equal height above sea level. The following will illustrate this:—Take a large irregular stone with a flat base, and place it in a bowl; pour water into the bowl to a depth of one inch, and subsequently to a depth of two and three inches, and so on, and at each stage draw a chalk line round the stone where the water reaches it. Take the stone out of the water and draw

on a table a chalk line round the base of the stone. This represents the datum (or given) level from which the vertical interval is measured. The datum level in maps is mean sea-level. Every spot on the first contour line is one inch above the datum level, every spot on the second contour line is two inches above, etc. Look down on the stone, and compare its appearance, as thus seen, to the representation on the map of a hill of similar shape to the stone. Suppose the stone a hill, and the one inch interval a hundred feet, and suppose that the sea, lapping at first the base of the hill, rose gradually, leaving watermarks at 100, 200 and 300 feet respectively, and then receded. These watermarks, if viewed from above, would be the same as the contour lines on that part of the map representing the hill. From this it can be seen that in a valley the higher contour encloses the lower and on a spur or ridge the lower encloses the higher.

The following facts about contour lines may now be grasped:—

The nose of a series of contour lines is *up* a valley, and *down* a spur; *i.e.* contour lines read low to high *up* a valley, and high to low *down* a spur.

If the contours (*a*) get higher on each side, we shall be walking in a valley; (*b*) get lower on each side, we shall be walking on a spur.

Where the contour lines are close together, the slope is steep; where they are far apart, the slope is comparatively gentle.

The smaller the area of contour, the greater the relative height.

Closed contour lines are round high ground, with the exception that separate hollows, *e.g.* lakes, may be surrounded by closed contours.

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## GENERAL NOTES.

Arrangements are now completed by which the difficulties attending the printing and publication of An tOglach will be overcome and the irregularity with which recent issues appeared will be henceforth avoided. In future An tOglach will appear regularly twice a month. It lies with the Brigade Officers to see that the distribution of the paper in their Brigade areas and the forwarding of the subscriptions for it are equally regular. Punctuality in this matter will be regarded as a test of efficiency.

Preparations are now well in hand for the establishment of a scheme for the examination of all officers. Meanwhile we would urge all officers at present in command to neglect no effort to ensure that they shall be found fully qualified for office when the time for examination comes.

It seems necessary to reiterate and emphasise the order issued two years ago and recently repeated that raids for arms on private houses are in general *strictly forbidden* and should never be attempted without express permission from Headquarters. It is to be hoped that it will not be necessary to refer to this matter again.

Biodh súil inárde agus cluas le héisteacht agaibh, de ló agur d'oidhche, a bhuachailli! Ní fios cathoin a gheobhaidh sibh amach rud éigin a bheadh úsáideach dúinn. Ba cheart díbh beith ag faire go geur ar imtheachtaib na namhaide agus éin eolus, beag nó mór, a thárluíon nbhur dthreo, do sheóladh chun bhur n-oifigigh ceannuis.

Special attention is called to the instructions on explosives appearing in this and subsequent issues. Inquiries on the subject frequently reach H.Q. which will, we trust, be found sufficiently answered in these instructions, which are couched in the simplest, non-technical language possible.

We have on several occasions warned Volunteers of the danger of taking unknown men who arrive in a district on trust. However plausible their story, it is necessary to wait until the Volunteer officrs in the district they come from are communicated with. While extreme caution against enemy spies is always necessary, there is another danger to be avoided, the danger of starting spy scares on insufficient grounds, which can only have a bad effect. The policy of the enemy in the past has been to stimulate distrust of one another on the part of Republicans and convey the impression that there were "informers in the ranks." In the case of the Volunteers this has proved impossible; the failure of the enemy's raids proves his failure to get information in many cases well known to large numbers of Volunteers. While like all military bodies in times of war, it is necessary for us to be extremely cautious, circumspect and uncommunicative, it is quite clear that the enemy's efforts to secure information of any value with regard to us have up to this proved wholly fruitless.

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## INSTRUCTIONS ON EXPLOSIVES.

### INTRODUCTORY.

When dealing with explosives, two things are necessary, (1) to treat them with respect, (2) to under-

stand the principle of their working, so that we may have some idea of the things they can do, and may know for certain the things they cannot possibly do.

To understand these things, a slight knowledge of chemistry is desirable or at least of the chemical action of the explosives with which we are concerned. Much may be learnt from the consideration of gunpowder—the first real explosive. Now, gunpowder (in future we shall call it G/P) is simply a mixture of *nitre* (other names for this are saltpetre or potassium nitrate), *charcoal* and *sulphur*, all very finely powdered—separately—and very well mixed. [The proportions are: nitre, 75 parts by weight, charcoal, 15 parts and sulphur, ten parts]. This seems a very simple stuff to make, but to make it well requires great care and what is more, much machinery and plant. For some purposes, it can be made well enough by hand.

Before coming to what happens when we apply a light or fuse to our G/P, let us study one or two points. If you take a bit of candle and light it under an inverted glass jam-jar, you will find that it soon goes out, because, in burning it has used up all that part of the air (called oxygen) which allows it to burn, which was at its disposal. Now, the reason that the powder in a fuse, in a bomb, or even under water, can burn, is because it contains in itself enough oxygen to allow it to burn. Sulphur and charcoal are both what are called Elements; that is, they contain and will yield nothing else but sulphur and charcoal respectively. Nitre, however, is different. It is what is called a Compound and can be split up into simpler stuffs, as the name "compound" would indicate. It can in fact split up into simpler compounds or into elements—the stuffs that will not split up any further. Now, oxygen happens to be one of the elements which nitre contains and it is this fact which allows the powder in a fuse or anywhere away from air to burn.

Now, where does the explosive part come in? You know that water, when heated, turns to steam and if kept compressed by closing it in a boiler or etc., it can do tremendous work, such as drive a steam-engine etc. So it is with G/P. There, we have a solid mixture which when heated or ignited, undergoes an extraordinary change. The oxygen joins with the sulphur forming an unpleasant-smelling *gas*, "sulphur dioxide" chemists call it. The oxygen, a very lively element, also joins with the charcoal (or carbon, as it is called more often) forming carbon oxides (more gases) and finally joins with the nitrogen, which the nitre also contains, forming yet more *gasses*, nitrogen oxides. Now, you know that a small amount of water yields a very large amount of steam (which is simply water-vapour or water-gas) and similarly these solids yield a huge volume of gas. And as the whole burning takes place in a flash, this huge amount of gas suddenly bursts out and—damage is done. That is the history of G/P (or indeed any explosive) in action. With a big gun, a man need not be struck by anything but gas, bursting out suddenly, at a terrific rate, like a tremendous wind, and he may be struck down dead.

## PART I.

### Divisions of Explosives

With these few ideas in the introduction, we shall now go on to consider explosives proper. For practical military purposes, there are three main divisions of explosives, Low Explosives, High Explosives and Detonators (or Fulminates).

Low Explosives. These are progressive or propelling explosives. For, just as when a paper is burnt the flame gradually travels through the whole of it, so, with a low explosive, the burning takes a certain time to travel through the entire mass of the powder. This time is very, very small, of course, compared with the burning of—say—paper, but it is big compared with the times of other explosives.

Low explosives are used in fire-arms of all kinds. The best example of a low explosive is gunpowder.

High Explosives. These are detonating or disruptive explosives. Here the burning does not seem to spread in one direction as with low explosives, such as gunpowder, it travels with extreme rapidity in all directions at once from the point of initial explosion, or ignition. The transformation of the solid into gases is here very, very rapid; the rate of propagation of what is called the explosive wave reaches the enormous speed of 17,000 to 21,000 feet per second, (say 12,000-15,000 miles per hour).

These high explosives are used in shells, in torpedoes and in demolition work.

Examples of high explosives are: Picric Acid; T.N.T. (short for a yellow compound, which chemists call tri-nitro-toluene); dynamite; gun-cotton; nitro-glycerene; gelignite; blasting gelatine, etc.

Detonators or Fulminates. These are much the same as high explosives, except that their action is much simpler and proceeds with much greater speed than even high explosives, so that their report is much sharper and they give off, bulk for bulk, much more heat.

All cap compositions and detonators belong to this class. Their use is to give the start to the explosive reaction of either Low Explosives or High Explosives.

*(To be continued)*