

Contingencies Against Which Britain Must Provide

FOLLOWING is the third of the series of articles written by Rt. Hon. H. O. Arnold-Forster, M.P., for the London Standard, on "Our Military Needs and Policy":

Let me now examine the list of contingencies against which the nation is called upon to provide:

Invasion

It has already been pointed out that such is not the official view; but it is undoubtedly the view of the majority of the people of this country. It is against an invasion that the Territorial Force is, in the opinion of many persons, intended to protect us. It is curious, however, to note that if this statement be categorically made, nine persons out of ten would promptly disavow it. Those who do so will admit at once that the Territorial Force cannot protect us from invasion. No one has spoken more strongly on this subject than the Secretary of State for War, who has told us that one-third of the so-called expeditionary force must be kept at home in the event of an Overseas war, because the Territorial Force cannot be supposed to be ready for war, or competent to defeat a foreign army. The Secretary of State might, of course, have gone a great deal further, and have confessed that if the Navy fails, neither the Regular Army nor the Territorial Force can save us. But it must be remembered that the Regular Army has a great function to perform quite apart from the duty of resisting an invasion; the Territorial Force has none. If it does not exist for this purpose; or, if, existing for this purpose, it is incapable of fulfilling it, it is obviously of no value whatever. And if we accept the view that the function of the Territorial Force is to protect us against invasion by a Continental Army, that is the only conclusion at which it is possible to arrive. If this country cannot be invaded, a force whose sole function is to resist an invasion on the soil of the United Kingdom is absolutely useless, and the money spent on it is a sheer waste. If, on the other hand, an invasion be possible, how do we stand? If it be granted that one of the great military Powers of Europe—Germany for instance—really can

land its armies on these islands, it is not by means of such a force as the Territorial Army that we shall defeat the invaders. Germany has five million soldiers, grown men, who have practically all received a minimum training of two years under the most competent and scientific officers in the world. To defeat such a force as this we must do as other people do who have a similar object in view. We must make great sacrifices; we must enrol and train our entire population; we must increase tenfold the number of our professional officers; we must add to our material; we must create fortresses and prepare positions. But we are not doing any of these things; we have not the slightest intention of doing any of them. On the contrary, we are contenting ourselves with a force which may some day reach, but is forbidden to exceed, 300,000 men, and which is at present more than 100,000 short of that number; a force largely composed of boys, and which, compared with a Continental army, has had no training at all.

Assuming that this little force can ever take the field, its numbers, after providing for the garrison of Ireland and the protection of certain fixed points, and after it has discarded all men who are disqualified by age, youth, infirmity, or occupation, will be insignificant. Nor, despite what some soldiers, who seem to have a passion for winning popularity by saying smooth things, are in the habit of telling us, will good intentions and patriotic zeal make up for all the other qualities which are necessary to secure success in the day of battle. Of course I am well aware that there are a great many people in this country who cannot, and will not, believe this. They do not study military history; they are unacquainted with the military preparations of other nations, and they are pleased and inspired by all the bustle and movement which have accompanied the operation of changing the name of the Volunteers.

Pages of the Gazette are given up to recording the issue of new commissions, sonorous titles are conferred, decorations are invented and distributed with a lavish hand, and everywhere we hear of divisions, brigades, batteries, regiments. It is all very splendid and very inspiring, but it is not war, nor, unless

all the nations of Europe except ourselves are mad, is it anything like it. The sorrowful part of the business is that those who ought to be the foremost in telling the truth are in many cases the most ardent in encouraging the delusion. There are many soldiers in this country who know the truth perfectly well. Nay, more, there are many who, both officially and privately, have stated those truths with a force and conviction which are beyond criticism. But how rarely do we see any one of these experienced officers giving to the public the inestimable advantage of his knowledge? It need hardly be said that this reticence, whatever its cause, is greatly to be regretted, because it encourages and strengthens the belief of an untrained public in two propositions, which are as unfounded as they are dangerous.

The Value of Untrained Troops

A very large number of persons in this country believe as an absolute matter of fact that untrained troops, provided they are animated by a proper spirit, can be relied upon to meet and defeat Regular troops; and that an army fighting in its own country fights at a special advantage. There is no foundation for either of these beliefs. On the contrary, they are opposed to all military teaching and experience. These two fallacies are so widely prevalent, and their acceptance as true is so great a danger to this country, that they deserve special notice.

An Army Fighting in Its Own Country

It is not true that an army fighting in its own country fights at an advantage. As a matter of fact it fights at a great and obvious disadvantage. A little reflection will show that this must be so. A British Army fighting on British soil must have lost one of the greatest assets an army can possess before it goes into action. It must fight as the army of a Power which has already suffered a humiliating defeat. The Navy must have been rendered impotent before invasion is possible. As Sir John French has well said: "Among the considerations which must greatly favor the invader from a moral point of view is the loss of the command of the sea, to which we have so long been accustomed, and the consequent consternation caused by the knowledge that

invasion, which was always thought to be impossible, is, in reality, a fait accompli."

But this is not all. Men fighting in their own country are necessarily embarrassed at every turn by the fear of injuring their own people and their own possessions. A foreign commander need have no scruple in burning villages, destroying bridges, and breaking up railways. The loss is not his. But with the native army matters are quite different. Those who command and compose it must naturally be reluctant to add to the miseries of the civil population, to destroy national and private property, and to inflict damage which will aggravate the penalties of defeat. It is evident, therefore, that the popular belief is unfounded, and that it is untrue to say that an army which fights in its own country fights at an advantage. The moral of which is that if we are really going to be invaded, the army on which we must rely to resist invasion must be of a particularly high quality, in order to overcome the immense disadvantages under which it will take the field.

Citizen Soldiers. The Boers in War.

Still more widespread and more dangerous than the delusion which has just been referred to is that other delusion upon which the whole basis of the Territorial Force rests, namely, the belief that untrained citizen troops can compensate for their want of military training by the excellence of their intentions and the warmth of their patriotic feelings. Unluckily there exists a modern instance which is supposed to support this conclusion. The belief that the Boer war in some way contradicted the teaching of all military history in all time is firmly rooted in the minds of tens of thousands of the people of this country. It would be hard to find a more complete error in reasoning.

That in one sense the Boers were citizen soldiers, not fully trained in accordance with ordinary military practice, is true. But that they were untrained in respect of the work they had to do is not true. On the contrary, for that work they were, in many respects, specially qualified by the occupations of their lives. They had, for the most part, been accustomed from their youth upwards to ride, to shoot at moving objects, to practice conceal-

ment, to bear exposure, to study country. All this experience was undoubtedly of great value to them in the field. When our citizen soldiers can claim to start with an equal measure of experience, they will be formidable foes by reason of it. But this fitness for war was not due to the fact that the Boers were citizen soldiers, but to the fact that, despite their being citizen soldiers, they had studied and practised many of those things which a trained soldier should know. As it was, they were still devoid of many qualities which a trained soldier should possess. Hence it came about that, as a rule, the Boers clung to the defensive; and that in resolute fighting, such as that which took place during the advance on Ladysmith, they were compelled to give way. But the main fact to remember is that the Boer plan of campaign would be absolutely impossible in a populous country. If we can imagine that, after the invader had occupied London, Manchester, Birmingham, Liverpool, and Glasgow, had taken possession of all our roads and railways, and was feeding all our wives and children in camps on Salisbury Plain, the Territorial Army was carrying on a dogged resistance in Caithness and Sligo, we should have drawn a parallel to what took place in South Africa. But to draw the picture is to demonstrate the absurdity of the comparison.

The Germans had even greater difficulties with the Herreros than we experienced with our much more formidable adversaries the Boers, but the German army marched to Paris in a few months, and absolutely crushed every one of the citizen armies of France with a precision and rapidity which might teach us a lesson if we cared to learn.

The fact is, that patriotism and good intentions have never provided an adequate substitute for discipline, training, and organization. Citizen armies have always gone down before trained regular troops. Every War Office in Europe knows this; and that is why each of them prepares for war in a manner as different from ours as it is possible to conceive. From all which it seems reasonable to conclude that, if this country be ever called upon to resist an invasion in force by a modern trained army, the Territorial Force cannot be relied upon to resist such an invasion with success.

Comments by Readers

FEW weeks ago the Colonist invited correspondence from readers upon subjects of general interest, not being political or sectarian in their character. The first contribution of the kind received in response to this invitation follows, and it would undoubtedly give Colonist readers great pleasure if others would follow the example of Mr. Grice and favor us with their views as he has done. Mr. Grice writes from Clayoquot, and we are sure that readers will be glad to read other contributions from him.

Sir,—For some time it has been quite a pleasure to me to read the various articles under the heading, "An Hour With the Editor," in the weekly editions of your paper, and have very much admired the impartial manner you have treated many questions which might be termed of a debatable or controversial character. At the same time there has been many subjects I would have liked to have seen more fully explained, and was pleased to read your short paragraph dealing with Mr. Percival's letter and inviting your readers to discuss any questions relating to these articles. If it is not out of place I would like to draw your attention to your article on "Coal," in the same edition of your paper. After dealing in a very lucid manner with many of the facts relating to the Geological history of the Earth and several of the theories as to how coal was formed, you say that the only conclusion which seems to fit the facts is that this mineral has been formed from the accumulations of vegetable matter where it grew. This conclusion I do not consider at all satisfactory on this assumption. How do you account for the composition of coal ash? If this coal consists simply of the vegetable matter of buried forests its composition should correspond to that of the ashes of plants, and the refuse of our furnaces and coal burning fires would be a most valuable manure. This, we know is not the case, ordinary coal ash, as Bischof has shown nearly corresponds to that of the rocks with which it is associated, and he says that the conversion of vegetable substances into coal has been effected by the agency of water, and also that coal has been formed not from dwarfish mosses, sedges and other plants which now contribute to the growth of our peat bogs, but from the stems and trunks of the forest trees of the carboniferous period, such as "sigillariae," "lepidodendra," and "coniferae," as stated by Hull "on the coal fields of Great Britain."

All we know of these plants teaches us that they could not grow in a purely vegetable soil containing only 2 or 3 per cent. of mineral matter. And such must have been their soil for hundreds of generations in order to give a depth sufficient for the formation of some of our larger seams of coal, as the South Staffordshire 10-yard seam. Another objection which may be urged against this conclusion is the almost total absence of air breathers in the fossils of the coal measures. Lyell, in his Ele-

ments of Geology, speaking of these fossils, says it is very remarkable when we consider all the opportunities we have of examining this strata and broken up myriads of cubic feet of coal still retaining its vegetable origin we continue almost as much in the dark respecting the invertebrate air breathers of this epoch as if the coal had been thrown down in mid-ocean. In a paper read before the British association in 1865 by W. Matien Williams, and in other papers published by him since, he gives us a theory that the coal has been formed by the deposition of trees and other vegetable matter in inland lakes or bodies of water such as the Norwegian fjords. To give all the facts relating to this theory in their entirety would be intruding too much on your space, but if we suppose that during the carboniferous period Great Britain and other coal-bearing countries had a configuration similar to that which now exists in Norway, viz., inland valleys terminating in marine estuaries, together with inland lake basins; to this we superadd the warm and humid climate usually attributed to the carboniferous period on the testimony of its vegetable fossils, all the conditions requisite for producing the characteristic deposits of the coal measures are fulfilled. We know that the land supported a luxuriant vegetation and the contemporaneous seas swarmed with life with articulate, mollusca, radiata and fishes. This explanation of the origin of coal would meet all these difficulties. It would show how vast accumulations of vegetable matter may have been formed in close connection with the ancient land, and yet as Lyell has said, as if the coal had been thrown down in mid-ocean, as far as the remains of terrestrial animals are concerned. It explains the nearly total absence of land shells and of the remains of other animals that must have lived in the forests producing the coal and which would have been buried there with the coal had it been formed on land as usually supposed. It also meets the case of the rare and curious exceptions, seeing that occasionally a land animal would be drowned in such fjords or lakes under circumstances favorable to its fossilization. From the fact that cannel coal and the black shales usually associated with it producing by distillation a different series of hydrocarbons from those obtained from common coal, and that they are nearly identical with those obtained from peat might suggest that they had their origin in peat bogs or something analogous to them.

Owing to the long intervals that occur in our mail delivery on this west coast makes it most difficult for myself or any other residents on the coast to discuss this or any similar subject, but trust some of your many readers in closer touch with Victoria may feel sufficiently interested to take up this scientific subject.

In your article on "The Age of the Earth" a very remarkable passage occurs which I think ought to be of great interest to students of mechanics or physical astronomy. You say that according to Mr. A. H. Darwin some time between fifty and a hundred million years ago the moon was close to its surface, making her circuit around the earth in about four

hours. You also state that although we cannot understand how living plants or animals could exist you say it is not impossible that they did. By this you assume that the earth and the moon were solid bodies, and had acquired a condition somewhat similar to what now exists. Now, the question to a student of mechanics would be not how life could exist, but how the stability of that condition of equilibrium between the earth and the moon would be maintained. It will be generally admitted that some such system as Laplace's nebular hypothesis would account for the formation of the moon by the continued cooling and con-

THE OTHER SIDE

Ten long years back he had turned his face
To the track of the sinking sun;
He had striven his best in the hard-fought race,
Now he knew that his race was run.
All night he had raved as a man distraught,
In the gray of the dawn he died;
And the last faint word that the watchers caught
Where, "A spell—on the other side."

Through the maze of ways where the tentmen went,
He had travelled in fancy far;
And now he was back at the Horseshoe Bend,
And now at the Marble Bar.
They were wide, wide fields that his mind went o'er—
'Twas a long, long tramp that night—
From the fevered creeks of the Northern shore
To the sands of the wind-lashed Bight.

He would count his gain, he would curse his loss,
Anon of old mates he spoke—
How one he had buried at Southern Cross,
How one was at Carey's Lake.
Now he dwelt on the wealth of some distant field,
Now he raved of some bootless rush,
Or told of his claim and the looked-for rush,
In the days when the stamps would crush.

We could only listen, could only wait,
While the sands of the life-glass went;
For Death, that knocks at the palace gate,
Creeps under the ridge-pole rent.
And, when planets pale in their great grave dome,
For sign that the new day comes,
His mind strayed back to his Eastern home
And the shade of the Gippeland gums.

He was there at the end. In the old green glades,
Where the rain-fet torrent leaps;
Far out of the plains where the mulla fades,
The shores where the mangrove creeps,
And the scarred sheer rock we had camped below,
That loomed through the dawning dim—
Though to us it seemed but an ironstone blow—
Was a snow-capped hill for him.

He has gone, may be, to a further side,
He has left for a longer spell;
Than he recked of them. For the gulf yawns wide,
And—who cometh back to tell?
There's a mound the more in that struggling row
That tells of the death king's wand,
And a good man gone from the world I know
To the bourne of the world beyond.
—From Andre Hayward's "Along the Road to Cue."

YET HE SURVIVED

"They charged like demons," said the retired colonel, excitedly. "I never saw anything to touch it. The way they charged positively staggered me."
"Who does he mean?" whispered the man who had just come in to his neighbor. "Is he talking about one of his old battles?"
"No," replied the other; "he is talking about the holiday he spent at the Swiss hotel."
—Exchange.

traction of a mass of vapour or nebulous haze which would go to form the earth and its satellite. In consequence of the velocity of the rotatory movement as it contracted the centrifugal force would predominate and a mass or zone of nebulous matter would be thrown off; this mass from the mutual attraction of its particles would be gathered into a sphere and would continue to revolve around the mass that was left, which by contracting would form the earth. Some considerable distance would intervene between these two masses, but small in proportion to the attraction of the primary preponderating over that of its satellite. The satellite, while still in a fluid state, would be swollen up tide-like towards the planet, and from its rotatory movement being nearly identical with its movement of revolution in a short time these periods would become rigorously equal and the satellite would present the same side to the planet around which it gravitated. The orbit or path in which it would move, owing to the mutual attraction of the sun, earth and moon on each other, would be an ellipse, but nearly approaching to a circle. The moon would continue to revolve around the earth in this orbit and remaining at the same distance from it indefinitely unless it met with a resisting medium which would retard it in its course so that the attractive force of the earth would predominate and gradually draw the moon nearer to itself continually changing its orbit in a sort of spiral form and the nearer it approached the earth the greater would the resistance become until it would ultimately fall on to the earth. There can be no doubt that the moon was formed at a distance from the earth as great or greater than that which it now occupies and if ever it did approach near to the earth as the stage which you mention was the case millions of years ago, from what cause did it recede again? I do not see that this can be accounted for by any known law of mechanics. We can quite understand how a comet or a planet moving in its orbit round the sun or a satellite moving round its primary may, during a period of one revolution, be at various distances from its primary by moving in an elliptical orbit as demonstrated by Kepler's second law but the mean distance remains the same and in no case is it possible to be increased and it may get less, say, as in the case of Encke's comet, whose period of revolution is continually diminishing owing to the existence of a resisting medium, so that the time will come when this comet continually describing a spiral and approaching the sun, will eventually be plunged into the incandescent mass of that luminary. Owing to the greater density of the planets and their satellites the retarding influence is almost inconceivably smaller than that of the comets but the retarding influence in the case of the moon moving round the earth near its surface, as you mention could be, and would undoubtedly be that of the earth's atmosphere. Trusting that this, like Bryon's drop of ink falling on a thought, may be the means of causing numbers of your readers to think of questions like these.

JOHN GRICE.

Canada's Field Crops

THE following statement, issued by the Government Census and Statistics Office, presents final estimates of the yield during the past season in the Dominion of root crops, clover seed, fodder corn and hay, with market prices.

Potatoes, on 503,600 acres, yield on average of 142 bushels per acre, being a total of 71,511,000 bushels. The average market price is reported at 50 cents per bushel, and the total value of the crop may, therefore, be put at \$35,755,500.

Turnips and other field roots, on 271,443 acres, an average yield of 371 bushels per acre, show a total production of 100,705,353 bushels, which is considerably in excess of the preliminary estimate of a month ago. The market price averages 19 cents per bushel, which indicates a total value for these crops of \$19,134,000.

The area in hay and clover is 8,211,000 acres, which, at an average yield of 1.52 tons, indicates a production of about 12,481,000 tons. At an average price of \$10.15, the value of the crop may be put at \$126,682,150.

Fodder corn, occupying an area of 259,770 acres, yielded an average of 11.08 tons per acre, and a total production of about 287,000 tons. The average market price is \$4.05 per ton, and the total value represents, therefore, \$11,656,000.

The production of sugar beets on 10,800 acres, at an average of 10 tons per acre, is 108,000 tons, and its value, at an average of \$5.35 per ton, is \$577,800.

The yield per acre of clover seed is estimated at 2.38 bushels in 1908, as compared with 2.02 bushels in 1907, and of alsike clover seed at 2.92 bushels in 1908, as compared with 3.21 bushels in 1907.

The market price of red clover seed this year averaged \$7.50 per bushel, as compared with \$9.77 in 1907, and alsike clover seed this year averaged \$9.57, as compared with \$9.06 in 1907. It is estimated that the acreage devoted to clover seed this year exceeds that of 1907 by 29 per cent. in the case of red clover and 5 per cent. in the case of alsike.

FEMININE LOGIC

"George, you seem to be losing all control over Jimmie."
"What makes you think so?"
"Why, he won't do a thing I tell him to do."—Cleveland Plain Dealer.

TH
HOW TO



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