

No. 6

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SUGGESTIONS

FOR

THE DEFENCE OF GREAT BRITAIN,

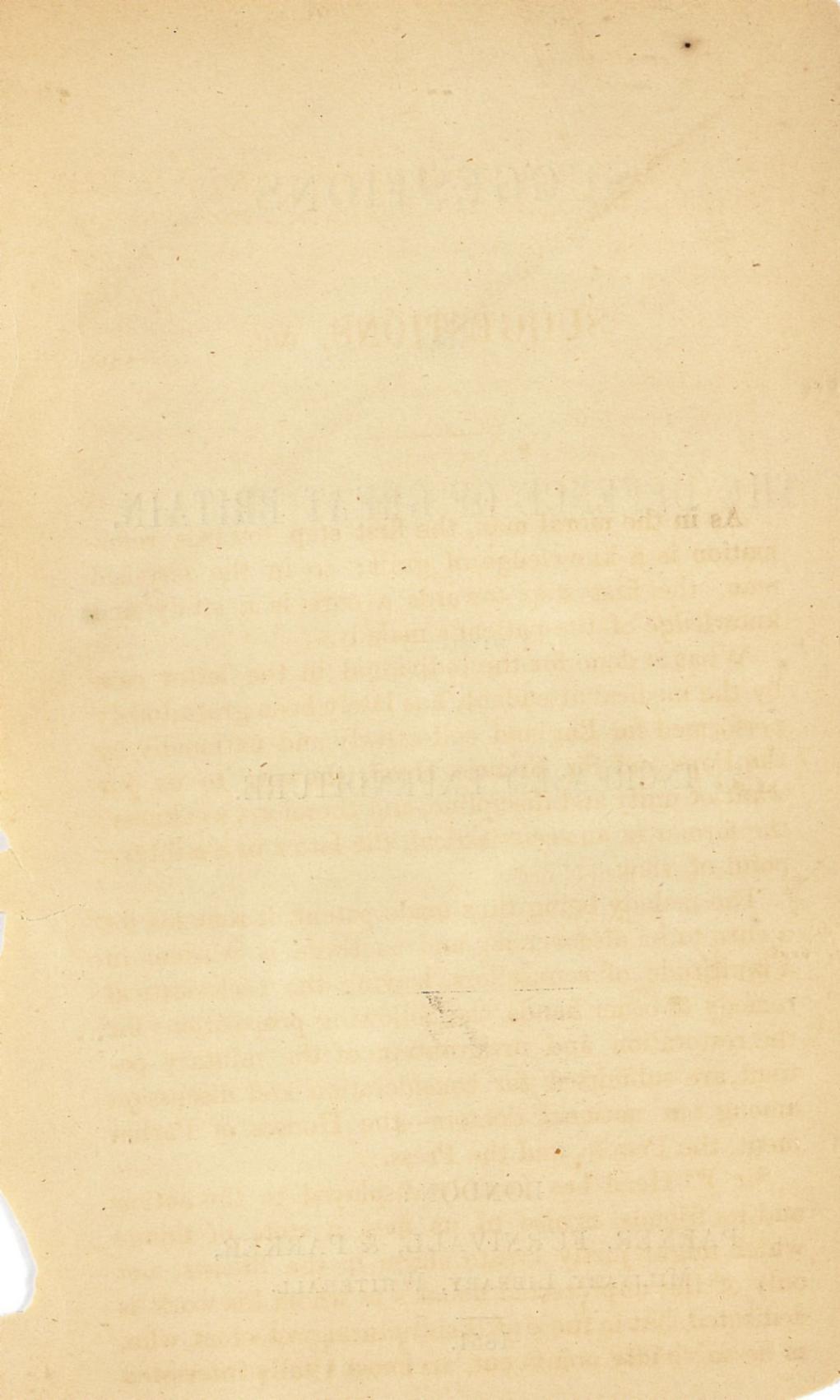
WITHOUT

INCREASED EXPENDITURE.

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SUGGESTIONS, &c.

As in the moral man, the first step towards reformation is a knowledge of guilt; so in the physical man, the first step towards a cure is a study and knowledge of the patient's malady.

What is done for the individual in the latter case by the medical attendant, has lately been gratuitously performed for England collectively and nationally by the Pope and Sir Francis Head, showing to us our want of unity and discipline, and therefore, weakness; the former in an ecclesiastical, the latter in a military, point of view.

The malady being thus made patent, it remains for a cure to be discovered; and as there is wisdom in a multitude of counsellors, leaving the ecclesiastical remedy to other hands, the following propositions for the restoration and invigoration of the military patient are submitted for consideration and discussion among our national doctors—the Houses of Parliament, the People, and the Press.

Sir F. Head has forcibly displayed to the nation and its friends, as also to its foes, a state of things which might justly create alarm in the breasts, not only of the unprotected females to whom his work is dedicated, but in those of their natural protectors, who, as he so vividly points out, are most vitally interested

in their welfare. Having shown the possibility of a hostile fleet being collected within a few hours' sail of our coast, and the dispersed state of the British navy, and its probable absence from the place where it may be wanted at the moment of trial, he goes on to put in motion the electric telegraph, and brings about a sudden embarkation of an overwhelming force; and then a descent upon the English coast, and a march upon its Metropolis. It is not to be denied that all these events may *possibly* take place; and especially that our fleet may be absent from the Channel when required; or even, that if there, it might be passed in a fog or at night; and, however much to be deprecated, the nation, if it reflects, cannot but confess that in the absence of protective measures, unless prevented by the interposition of Providence, a descent upon our coast is possible.

Moreover, a critical examination of the best surveys suggests points where an enemy might effect a landing in perfect security from the effects of weather, and in a few hours take up a position possessing considerable resources for the maintenance of an army, and capable of being held for some time against immensely superior forces attacking it by land and by sea.

Such a position once occupied would allow of the assembly and thorough organization of his force, and would afford a safe point for retreat and for the obtaining of terms, if not for re-embarkation, in case of his failing to maintain his footing in the country.

Now although it is to be hoped that the same Merciful Providence which has hitherto frustrated the endeavours of our enemies in this respect, will continue to us His blessings, and ward off such calamities from our shores, we ought not to be blind to

the possibility of such an occurrence ; and ought to be grateful to Sir F. Head, or to any other man who may have the boldness, in opposition to our national predilections and prejudices, to forewarn us of our condition, and so take care that we should not remain in ignorance on such a momentous subject.

Reflection upon it will, however, tend to convince us of the fact, that however extensive, well-manned and equipped our fleet may be, and whatever superiority it may possess over those of other countries, and which, notwithstanding all that has been said and written by some of its most gallant members, we are still inclined to believe it possesses, no fleet can prevent a sudden descent upon our shores, either by means of a ruse or under the cover of some unforeseen circumstances.

The telegraph and steam power have given to the rulers of nations the power of concentrating forces, or creating them as it were, at any given point, from nothing, so that it is impossible to have opposing forces at all times at all places throughout the Channel to resist such a suddenly created force. The probability of such a power being used may become less and less daily, as forms of governments become more liberal, and kings and authorities are deprived of the power to initiate wars without first consulting the popular voice, and whilst all nations are more or less afraid of the expense of wars and their natural result, national bankruptcy. But in the present position of Europe, and with the remnants of the antipathy which heretofore subsisted so strongly between nations, rendering it probable that any hostile step taken by some of its governments would almost certainly meet, if not with immediate approbation, at least with the cordial support of the people, when once by a single hostile action the national honor was

involved, it behoves every nation to consider the risks and the means of counteracting them, and after estimating their respective values, to give the subject mature consideration, and determine deliberately whether it will incur the risk, or adopt the necessary means to ward off the danger or to render it nugatory.

There is an old proverb that "Might makes right" which seems universally to hold. The strong boy fags the weak boy; the strong man, whether physically or morally, overpowers the weak and simple man: so also with nations; and it is precisely the absence of this overwhelming might which has operated for so many years to restrain the passions of the people of Europe, and to keep them at peace among themselves; though each large nation has almost always had its little war with a weaker and less powerful state, as instance ourselves in Syria and India, the Russians in the Caucasus, the French in Algiers; and, on the other side of the Atlantic, the United States in Texas and Mexico.

It is not, therefore, that the present generation of men are become more virtuous, or less ambitious and less fond of military glory and renown, but that we all count each other's strength, and calculate the cost before rushing headlong into contests which, however successful, must eventually bring ruin and disaster upon the contending nations.

If this cause operates so forcibly, ought we not to cherish the feeling, and be desirous that all nations, both those against whom we have the greatest antipathy as well as ourselves should be strong against aggression, so as to remove and repress the temptation to war.

It may be argued by some that armies are wicked,

expensive, and ruinous, and that they ought to be dispensed with. It cannot be denied that it would be far better for states and for the individuals composing those armies, if they were abolished ; and were it not for the evil parts of our nature which tempt the strong and crafty to take advantage of the weak and simple, all armaments might be dispensed with ; but inasmuch as we have not arrived at this happy millenial state, we must take things and men as we find them, and quietly submit to existing circumstances ; and as a prudent people, place ourselves in such a position that we may be firm and strong enough to render aggression futile—invasion a folly.

The great problem to be solved is to determine the manner in which this can be done without fostering too highly the spirit of ambition and of military fame ; and without giving us the power to intermeddle in the affairs of other people with whom we have or ought to have nothing to do ; we ought also, if possible, to effect this without arming and training the nation, who, in an evil moment, might, if always prepared and trained, turn their arms and hands against themselves ; and without maintaining large forces to overburthen the country with their expense, to gnaw into the vitals of the people, and eventually make the remedy as bad, if not worse, than the apprehended evil of a weak and indefensible, and therefore a tempting, condition for a better prepared and more crafty people to take advantage of. It must be remembered also that this unprotected state may tempt in two ways, either to satisfy cupidity and gratify ambition by obtaining a direct advantage in trade, or shearing us of our transmarine possessions ; or to avert internal difficulties by distracting the thoughts of a people from their own condition and turning their attention abroad.

The former cause may possibly be got over by concessions, occasionally perhaps very inconvenient, and not altogether consistent with our ideas of the nation's greatness and honor: the latter is beyond our control, and rests with others; and history gives but too abundant evidence that unscrupulous characters have always existed who would not hesitate, had they the power, as to the course they would pursue in case of internal difficulties and commotions; and more particularly, if a fine field of operations was before them, with great *chance* of success, and glorious plunder as a *probable* result.

On the other hand, were Great Britain well united in herself, strong in her insular position, well provided with the means of defence and for repelling a foe, she would have nothing to fear from foreign foes, and might proceed on the even tenor of her ways, independent of foreign states, fearless of their attempts to injure her, and consulting her own tastes as to trade and the development of her resources, in a glorious position, the envy of the world, and overflowing with grateful hearts to that Providence who has placed them in a sea-girt land, and enabled them to assume this position without that ruinous expenditure which must terminate in sad disaster to those less favoured nations of the world who have territorial frontiers of a more accessible nature.

Now it having been shown that we cannot absolutely ward off the evil of invasion; let us, taking Sir F. Head's, which seems a not improbable, view of the steps an enemy would take to cripple the empire when once he had effected a landing upon our shores, consider for a moment what should be done to prevent these measures from becoming a very serious and lasting and most ruinous event.

The point upon which an enemy's efforts would certainly be directed, would be London—the heart of our system, the centre of our motion and power—in which, having once gained a footing, he could dictate his own terms. He would probably make a combined movement upon it by water and by land, the one being a cover to the other; but the land attack being that upon which he would have to depend for success.

First, as regards the attack by water; the existing means for repelling such an aggression may be shortly stated as follows:—

A few laden vessels may be sunk in the Channel of the Thames at the most narrow and intricate points of its navigation, so as to interfere with the free course of an advancing squadron. Such a measure may be taken in a few hours, and the probable position for such an obstacle would be Gravesend, where there are a few guns mounted and capable of being fired upon an enemy if entangled and detained for a few moments by such obstructions, not that we can say much in favor of the works or forts erected at this most important point. A few men landed out of reach of the fire from the fort of Gravesend, would find but slight and trivial obstacles between them and the guns. Not so, however, Tilbury, which, thanks to a more liberal expenditure of money in days of yore and its strong natural position, is, with scarcely any of the improvements of modern science, in a far more satisfactory condition, and would cause some delay in its reduction. These are the sole means at our disposal for the protection of the Royal Arsenal and Dockyards at Woolwich and Deptford, and that large and valuable portion of our mercantile marine which continually covers our noble Father Thames.

The means at the disposal of the nation for repelling

an advancing force by land, are but too clearly shown by Sir Francis Head to be of the smallest; it would appear also from testimony of no slight authority, in fact the highest and most faithful in the land, which has been formed by long experience in scenes the most stirring, and the best adapted for maturing his acute and perspicuous genius, that they are not fully adequate to the purpose.

The nation would, therefore, in its present condition, appear to have estimated the danger, and the inconvenience and evils attending the remedies proposed, and to have determined on incurring the former.

This determination is no doubt right, if the remedies are like slow poison, and certain, eventually, to bring destruction and ruin upon the country, as would assuredly be the case if our army and navy were enlarged, and the national expenditure and taxation increased in a corresponding ratio. The question, therefore, as it at present stands, may be considered to lie between an uncertain danger and a certain eventual destruction ; and hence, from the uncertainty of the one and the certainty of the other, it is believed that the national election has been made, and the risk is preferred, trusting to our good fortune, or as it should be more truly expressed, to an over-ruling Providence again to avert the danger, should it ever arise and overthrow an invading force, in like manner as the Spanish Armada. The object of this paper is to endeavour to discover a means to get out of this dilemma, and to ward off the risk, leaving nothing as far as man can foresee to chance, and to do it in such a manner as not to involve the country in debt and ruin, by taking advantage of our national genius, predispositions, and natural productions, and endeavouring to make the most of the means which the nation have shown their willingness to provide.

Our genius is essentially mechanical, as witness our railroads, steam engines, and factories, the Britannia Bridge, and last, not least, the Crystal Palace.

There is nothing scarcely that our national genius, when stimulated, cannot produce. This country is the workshop of the world for substantial and useful, though not for purely ornamental, productions. It excels in the manufacture and movement of large masses, and has probably a larger force of trained mechanical labour at its command than any country in the world, due in a great measure to the natural productions of our land in its mineral strata.

This being so, we ought to, and it is believed that we do, excel in steam navigation. We have the advantage of better trained men to manage and navigate our steamers; we ought also to have the most efficient marine and land force of Artillery, both materially and physically; and ought, moreover, to take the lead in the introduction of superior arms and mechanical contrivances in the science of war; and let it be remembered, that each improvement is a step in the cause of humanity, rendering wars more terrible, and therefore less probable.

The introduction of steam navigation has, without doubt, as compared with the Continental powers, seriously affected our military position. It has, if not bridged, at least afforded great facilities for crossing the moat which has hitherto been a barrier to invasion, and has lessened its width to such a span, that it no longer presents insurmountable difficulties to a resolute enemy bent on mischief, and possessed of the means for invasion.

It may be said, that should a force cross this moat, and safely land in our sea-girt fortress, it will meet with a most unwelcome reception, and that it will fall

a sure and speedy sacrifice to its rashness ; but may it not, before its destruction can be completed, effect incalculable harm.

What are the means then to be adopted to avert this harm ? Either by preventing it from descending on our coasts, or by making such preparations, that in case of a successful descent, it shall fail in its ultimate object and meet with speedy destruction, thereby creating such a risk, that no enemy would dare to encounter it.

Now, it cannot be expected, that we are to be provided at every point of our coast with a bristling artillery and a formidable array of bayonets to repel aggression; nor can our fleet be everywhere at one and the same moment to prevent a concentration of hostile forces and a descent upon our coasts ; so it behoves us to be prepared in other ways. An efficient fleet, however, may be most serviceable to intercept the line of communication by sea with an invader's support, to cut him off from his base of operations ; or it might by chance meet with and arrest his progress ; and it would, certainly, in case of disaster, cut off his retreat. To perform these services, however, the fleet must be efficient.

Now, the question arises whether, with our large annual expenditure, which is counted by millions, we have this efficient fleet available for channel service ? The stations of our fleet, which may be learnt from the Navy List and public journals, do not admit of any doubt as to the negative answer which this question must receive. We scarcely at any moment, unless accidentally, in consequence of reliefs, have a line-of-battle ship in our seas ; nor could we at any moment command the services of half a dozen frigates and as many war-steamers. It is not that we do not possess these ships, but our policy is to disperse them in foreign stations in small numbers.

The consequence is, that our officers from rarely seeing large fleets assembled, lose the power of handling and manœuvring such forces. It would appear, on looking at the appointed stations of our navy, that it was considered necessary to have a vessel of some strength, it matters not much what, in every port to which British commerce extends. Surely it must be thought that there is some charm in a British pendant, if it is imagined that these vessels, many of them of very inferior class, can effect much, while detached by themselves, for the protection of our commerce.

In former times, when steam had not shortened distances and rendered the communication between all parts of the world so quick and certain as it now is, there might have been some utility in maintaining vessels for the protection of our mercantile marine in all seas ; but even then, it was not that they were so useful for their defence as for the means they afforded of obtaining and transmitting information, and the power which they possessed of assembling forces for their support in case of need, and to repress any attempted act of injustice or oppression.

Thanks to increased civilization and the astounding increase of international intercourse of late years, there can now be no occasion for this species of continual vigilance on the part of our navy, which would assume a far more formidable and respectable appearance if concentrated in some centre of civilization or information, ready to proceed at any given moment upon any sudden emergency to any point where necessity for its services may arise.

Let any impartial person cast their eyes over the chart of the Northern hemisphere, and considering its political and physical features, point to the great centre, in which the information of the world is

gathered, and what will be the result ? London at once suggests itself as this centre, including the Atlantic and Mediterranean within its sphere. A fleet stationed in the Channel within reach of London, would be always accessible by small steamers from the ports on the coast, to all information which may arrive in England from every part of these seas, and would moreover be in an excellent position for the formation of good seamen.

If, however, it be still desired that British ships of war should be constantly visiting foreign ports, large and powerful steamers could be detached and make the tour of these ports once a month, if necessary, or as often as advisable, still forming part of a Channel fleet, and returning to it to report results, just as efficiently as under the present system.

There does not appear any reason why every single man-of-war in the Atlantic, if not in the Mediterranean also should not be stationed near this centre of information ; and it is believed that it would then be more available for active service, and would, from its position, inspire more awe in every foreign station to which the fleet is now scattered for the protection of commerce and the nation's interests, than at present ; and would certainly be the means of training officers and seamen in a more efficient manner. The smaller vessels might also be condensed into larger ones of more formidable dimensions and greater power.

In case of any disturbance now taking place, which may require a display of physical force, if a ship of war be present, which is a perfect chance, and may or may not be the case, the naval officer in command, if he has sufficient force under his orders, must in most cases, wait for instructions before acting, sending

first to his Admiral, who may perchance be on a cruise, who sends home for instructions, which after all this delay will generally be received on the foreign station long before the fleet could be assembled to act; and when it is assembled, the system of diffusion is such and carried to such an extent, that half of the vessels would be almost valueless, on account of their very limited size, to meet a powerful enemy.

Contrast this with what would be the case if the fleet were collected in some known and limited cruising ground near home. Information of some misunderstanding arrives by steamer—it may be from South America or from the Mediterranean—and in a few hours, any required force is on its way, and if every ship were provided with auxiliary screws, would in a few days, or at the utmost, weeks, arrive at the scene, where the display of such a force would generally be sufficient to produce the required results. How different from the solitary little cruiser looking for her Admiral, and then homeward bound for orders, while all the other vessels, which should constitute a fleet, and their fleetless admiral, are hunting up and down the coast of America, from Cape Horn to Newfoundland, or all around the shores of the Mediterranean, in search of each other, and which, when assembled, will form a fleet comprising certainly not more than one first-rate ship-of-war—and probably not that,—with a host of smaller vessels.

In the present state of affairs, moreover, power is either delegated to Admirals abroad, who may involve the country in wars and difficulties, or a force may be used for a hostile demonstration by subordinate authorities, called on to act in cases of emergency, and not sufficiently near to receive advice from the

more responsible government at home ; and that salutary check possessed by the country of raising its voice, either through the legislature or the press, may not come into operation until too late to curb the movements initiated abroad.

In making this remark, it is not intended to reflect in any degree on the discretion of Commanders of the British naval forces ; but it certainly does seem hardly a fair position to place a man in, away from advice and from more responsible authority.

Again, that unity is strength, holds good with nations and communities on a larger scale, as well as with individuals ; and by maintaining our forces in hand, and well together near the centre of action, we obtain unity of action in our intercourse with foreign nations, and all power is concentrated immediately in the government at home, reducing foreign stations to such a condition, that it would be merely necessary to have a faithful, trustworthy agent to collect and transmit information for the consideration of the government at home, and if necessary, to be used by them as a medium of communication with the state or court at which he resides.

By this centralization, and by maintaining a regularly enrolled and well-trained force, who are thoroughly practised in the arms which they have to use, and by keeping up to the improvements of the day in equipment, the nation, it is believed, might and would maintain its present proud position, without any increase on its present annual expenditure in any future as well as it has done in its past contests, and would cause a foreign foe to hesitate before placing the sea between his forces and their supports, for invasion of our shores, or for any hostile purpose, notwithstanding that the system of yard-arm-to-

yard-arm conflict, which has gained us our exalted position as a naval power, has entirely passed away, and a more scientific system requiring more perfect gunners with improved equipment, has taken its place, and that seamanship has in a measure given way to mechanical and engineering skill.

Although the fleet cannot be everywhere to prevent invasion, it is considered that the Thames with its arsenal, dockyards, and shipping, and our principal harbours may be in a measure protected through the instrumentality, so to speak, of the dead weight of the navy. It is believed that by late improvements in the manufacture of wrought-iron, the time has now arrived when guns of heavy calibre may be introduced into the service, of manageable dimensions capable of projecting shot *with effect* to much greater distances than has hitherto been achieved. If this be so, and that corresponding alterations and improvements can be made in the projectile and in the details of the equipment of the guns, it is suggested that the ships in ordinary and old hulks may be made available for defence of rivers and harbours, with a very small outlay, and with a very limited number of men to serve them; and the service might be so regulated, that these men would form a dépôt for the enrolled force at sea so as to give them a tour of home service. Let a series of such vessels be moored in a fixed and permanent manner so as not to change their positions, and so placed, that they may command the channels of approach up a river, or into a harbour; and that they may present a succession of batteries to oppose the advance of a hostile force. In order to make them efficient in this respect, let each be armed with a number, ten or a dozen or more, if she can carry them of the heaviest guns, prepared in every respect

as on shore, with furnaces for heating shot, and provided also with shells, and having constantly on board a force of gunners in the proportion of six or eight, including Warrant or Non-commissioned Officers to each gun, and an Officer to command the whole. These numbers may appear small, but the vessel being moored, and not in a situation exposed to a heavy sea, appliances could be contrived which may much facilitate the process of loading; such as for instance keeping the shot or shells always stored on a higher level than the gun, and supplying them at the muzzle as required through an iron pipe fixed to the vessel, and descending at a moderate inclination, and so elevated that there shall always be a shot ready close to the muzzle for insertion into the bore of the gun after each discharge.

The appliances in use on shore for altering the direction of guns, to suit a moving object, such as traversing platforms, may also be applied in a modified form in such ships so situated; and if thus equipped, it cannot be doubted that they would have a great advantage over, and be most efficient against, a moving battery, such as an advancing ship.

The fixed battery, moreover, would have the advantage, by properly placed buoys, of having its guns fired at known ranges, and by having marked points in the curb of the traversing platforms, it would not be requisite that the guns should be laid by the eye for each discharge, but their direction might have been mathematically determined beforehand.

The ships might be prepared to resist a boat-attack by closing the lower deck-ports, and fortifying them with chevaux-de-frize around their sides, and by projecting iron mantlets for small irons, as adopted in the Bank of England: and they might further be

prepared with chains fixed round and under them, so that they might be scuttled if necessary, and the means be thus provided for raising them immediately upon the withdrawal of the enemy; the scuttles to be made with screws, so that they may be closed from above, when it was desired to raise the ship.

These are mere suggestions, and are dependent in a great measure on the introduction of guns of larger calibre, and which, it is presumed, might be heavier, and therefore capable of firing *with effect* at longer ranges in a stationary, than in a moving, battery.

Having thus dealt with the naval part of the system of defence of Great Britain, the contingency to be next considered is, that in which it is to be supposed that an enemy, by the aid of steam and favoured by fortuitous circumstances, has successfully effected a landing upon our coasts. His first object is to secure himself in some strong position with a safe anchorage, and well situated for the debarkation of his arriving subsidies, whence he may command the surrounding country, and, in case of disaster, find a comparatively safe point to fall back upon to recruit his forces or to obtain terms. Such a position possessed of great capabilities could be selected with facility by consulting our ordnance maps; and it would be found that the coasts of Kent and Sussex, as also Suffolk, afford several such positions.

Dover, in its present unarmed, unmanned, and imperfect state, offers, perhaps, one of the most favourable of these positions; its proximity to the Continent giving to it a very great advantage for this purpose. A handful of men landed near to it, and making a bold push, would find themselves in a ready-made citadel, with respectable scarps, with guns provided for their use, only requiring carriages and platforms, and

where they have entire command of the anchorage, and might in a few hours be in a position to defy attack, except by regular means requiring siege trains and preparations on a large scale. It would appear that the works at Dover should be either razed to the ground or they should be completed, equipped, and manned, with such a garrison as would command respect, and as might effect a diversion on an enemy's flank or in his rear. The manning of such a place could not be left to militia forces, and as the country have determined not to maintain a very large standing army, and we shall, therefore, never have any great body of regular troops or pensioners to spare for such a garrison, it may be questionable whether it would not be better to dismantle and raze it at once instead of maintaining it on its present footing, keeping only a good battery on its mole-head to cover its roadstead.

There are other positions which might be selected, offering greater advantages to an enemy than Dover, excepting as respects their distance from the French coast and its ready constructed defences, affording excellent and secure landing places, and possessed of great capabilities for defence, such, that an army might in a few hours render them quite secure from every land attack, unless made by a large and well equipped force.

Having effected a landing, an enemy would, undoubtedly, make a dash for the Metropolis ; and in the time occupied by his march, which might possibly be but very limited (less than a week from the period of his leaving his own shores), the country would require to have its forces in the field to arrest his progress and prevent his entry into the capital.

The notice being so short, it would be useless to expect to do this at any great distance from the

capital ; and, moreover, not being forewarned as to the side of attack, to prevent surprise, the defending force must be in and near the centre of attack. The question, then, to be decided is, taking into consideration our national antipathy, in a political point of view, to a large standing army, the great objection there most properly is, to an increased expenditure on the part of the nation, the utter impossibility of attempting to fortify London in all its approaches and on all sides, as has been done at Paris, how is the nation to organize a force adequate to meet this possible emergency ? Not that it is believed that if the force existed it would ever be called into active operation for the purpose of defence, but its mere existence in a state of preparation would be an effectual preventive to the attempt being made, and the more so, if backed by a powerful fleet in the manner before described.

In addition to the force necessary for the defence of the Metropolis, each dockyard and principal arsenal requires the means of defence, the forces within them would be of no avail for the protection of London, as an enemy would of course avoid them and advance direct upon London, leaving these places for subsequent reduction.

The extension of the range and power of artillery would do much to reduce the forces necessary for the defence of these places, but it appears exceedingly questionable how far it is judicious to keep up so many different establishments, each affording a point of attack, and of course causing anxiety for its safety and expense for its protection, when one, or, perhaps, two of them at the utmost, might, by enlargement, of which they are fully capable, be sufficient for the full requirements of the service, with the occasional assistance of private dockyards for building and repairs,

as has been frequently called in under existing arrangements.

If the whole work of the navy could be done, and the stores for it kept, at Portsmouth, instead of being distributed at Plymouth, Milford, Cork, Portsmouth, Sheerness, Chatham, Woolwich, and Deptford, with the addition, perhaps, of a small dockyard for repairs for any fleet stationed in the German Ocean, in the North, probably at Hull, the number of men required for its defence would not exceed about 10,000, instead of about 45,000 as stated by the Duke of Wellington to be necessary for their defence in their present dispersed condition; and even this force of 10,000 need not be taken entirely from the ranks of the army, as the crews of the men-of-war constantly in port, if enrolled and disciplined as gunners, together with the marines and dockyard men concentrated from the present establishments, would amply suffice for its garrison.

A small work with a garrison for the defence of the dockyard established on the East coast, would probably be necessary, say 3000 men, of whom the greater number might be militia, as described hereafter. It is questionable whether a dockyard on this coast would be requisite, or whether, if the Humber were secured by works of defence, the private yards already established would not be sufficient for the requirements of any fleet which may be stationed in the German Ocean.

The necessity for a number of dockyards does not exist now as during the last war. Steam power, as an auxiliary to all vessels of war, and, at any rate, available in the shape of towing-vessels, will enable them at all times to make their destination with certainty, so far as regards the wind and weather; and they can no longer require so many ports for

refitting and repairs as formerly, when vessels of war were subject to be wind-bound, possibly in a crippled condition, for weeks in working up Channel.

This concentration of the dockyard establishments ought, moreover, to be productive of increased economy and greater efficiency at all times, both during peace and war. The place to be adopted for this purpose should be selected purely with reference to its capabilities as a harbour and for defence; and it might, as the citadel of the country, to the defence of which its energies and science would be devoted, be made very properly to contain the military as well as naval stores and equipments of the country, and any other of its valuables which might be in danger of falling into an enemy's hands; and under the disagreeable contingent of the Sovereign being obliged to abandon the capital, supposed by Sir F. Head, it might well receive her and be the nucleus round which the nation would rally for her defence and for the expulsion of its invaders.

Portsmouth appears to offer many advantages for this purpose. Its proximity to the capital, the size of its harbour, with the capabilities for making docks in its upper parts, secure from the attacks of an enemy, the natural difficulties in approaching it on the land side, and it may be added, on the sea side, and the power of taking advantage of those difficulties, and by the erection of works comparatively inexpensive to render the place almost absolutely secure against capture, the advantage of two lines of railway between it and the Metropolis and also of coast lines East and West, extending nearly from Weymouth to Dover, with their corresponding system of electric telegraph; all these peculiarities point to Portsmouth as the most desirable position for a fortified dockyard.

A subsidiary establishment in the South-West

corner of Ireland, likewise fortified, and in which some of the forces required for the protection of that island might be quartered, would probably be of great advantage, serving as a calling station for our foreign packets, as a point of embarkation for our troops, and likewise as a safe port which could always be reached by a vessel windbound or crippled in the Channel, and also as being several hundred miles advanced towards some of the most important long sea voyages, and, therefore, requiring a correspondingly reduced tonnage and dead weight of coals for the performance of those voyages by steamers. A port so situated would also present this advantage, that any vessel leaving it would at once take its departure in open wide seas, instead of having before it a cruise of some length in a channel infested with men-of-war and privateers.

A naval establishment in such a situation, if properly protected, would afford the means of obtaining a secure harbour in war-time for mercantile and packet services.

If it should be asked what is to become of the dockyards which would no longer be required, it is suggested that the sale of Woolwich and Deptford yards alone would go far to realize the funds necessary for the enlargement of the one to be retained ; and it is not doubted that in such superior commercial situations, with railway accommodation at hand, ready purchasers would be found.

Having thus disposed of the dockyards, and arsenals, the means for the protection of the Metropolis remain to be considered. The military force in Great Britain, independent of the Channel Islands and Ireland, is about 40,000 men, including all arms, besides which, there are about 10,000 enrolled pensioners, and 13,000 yeomanry cavalry.

The 40,000 men of the regular army may be considered to be composed of about 29,000 infantry, 5,000 cavalry, and 6,000 artillery and sappers, of whom 10,000 infantry, 3,000 cavalry, and 4,500 artillery, are stationed in and around the Metropolis within a reasonable distance from it, and accessible by railway. This latter force might be collected in a very short time within the Metropolis; the remainder of the standing army in Great Britain are distributed throughout the country in small detachments, valueless for defence, but chiefly useful as subsidiaries to the police. The object being to have a force capable of being concentrated in the Metropolis, it is questionable whether the whole of this force, with the exception perhaps of a couple of thousand men in Scotland, would not be equally efficient for police purposes if assembled in some convenient situation, whence there is abundant railway communication to all parts of the country, and at the same time not too distant from the Metropolis. Rugby and Peterborough suggest themselves as most desirable positions for central depôts of this nature, from the number of railways radiating towards and concentrating in them.

The troops stationed there would be removed from the influence of the localities in which they may have to act; a healthy situation might be selected, and the troops would be capable of being transported speedily to any part of the country where their services may be required, being almost, if not altogether, as available and certainly more formidable, than in their present dispersed condition. A very great desideratum in the British service as constituted at present, and which would be obtained by the concentration of the forces at home, would be the superior discipline and better instruction and consequent higher efficiency which would be ob-

tained by brigading and manœuvring troops in larger numbers than are ever now seen by British officers, who, after so long an European peace, unless they have been in India, know nothing of the movements of armies in the field.

Another point gained by such a concentration as that contemplated would be the reduction in the expense consequent on the numerous small establishments required for quartering and supplying the various detachments dispersed at present throughout the country. The sale of the present barracks and their sites would go far towards defraying the cost of this change. By this means it is considered it would be possible within a limited time to assemble 25,000 infantry, with 5,000 cavalry, and 6,000 artillery of the regular army near the Metropolis, for the purpose of repelling an invading foe.

This would, however, be a small army in itself, and being composed in a great measure of raw troops, and recruits for regiments abroad, would require all the assistance that knowledge of the country, good generalship, science and art could render, to enable it to withstand a powerful and well-disciplined opposing force. In considering the question, it is necessary to bear in mind the probable nature of this latter force. It would consist chiefly of infantry, without cavalry, and with but a small force of artillery.

To perform a *razzia* such as that supposed, it can hardly be imagined that an enemy could in so short a time embark and transport across the sea, any large number of horses, so that he would not be possessed of either of these arms in any great force; although if he met with success, or had but a few days allowed him, he would soon collect, free of expense, horses enough of our own breeding to mount his troopers,

and drag his guns, without the trouble of transporting them from his own country. Calculating, therefore, which may, it would appear, fairly be done, upon having the advantage in this respect in consequence of being the party attacked, and of having the command of the resources of the country, we ought to take care that the resisting force should be well supplied with that most powerful auxiliary to an army in the field, artillery. A powerful and superior artillery, although it can never win a battle, which must be left as to its final issue in the hands of the infantry battalions, is of all things most calculated to maintain the *morale* of a young army. It may break and disorder advancing troops, be they ever so good and well-disciplined, and be the means of giving an easy victory to an army less numerous and strong than another army unprovided with it.

We do, or we ought at any rate, to excel in this arm, for it is that in which our national genius ought more than any other to find most scope for its display. England is the most mechanical country in the world ; and probably that where the management and breeding of horses is best understood ; and is possessed of magnificent roads for the movement of these heavy guns ; and it is submitted that it ought, if possessed of the *materiel*, to be able to produce any required force of artillery, however numerous. Such men as those employed in the construction of the Menai Bridge, or of the Crystal Palace, or of any of our railway works, would, with small training, form a superb artillery force ; and horses and drivers to move almost any number of guns might be soon found in our streets. Some sort of organization would, however, be required to bring them together in a limited time, and also some little instruction in the use of

their weapon. There cannot be the same political objection to the organization of a force of this nature, as there is to a general arming of the populace in militia. They would not be the same dangerous force that the garde nationale in France have proved themselves; but being limited in numbers, might, like our yeomanry, be selected from a class of the population having some stake in the country, and some interest in maintaining order, and the supremacy of the laws. Such a force might also be so organized, that instead of being a compulsory service, it might give a man a certain position, and confer respectability upon its members, and become a popular volunteer corps. To aid in its organization, a standing artillery would be required of a very superior class, the officers and men of which being well educated in their profession, might be distributed amongst the "local" artillery, if they may be so called, to assist them in the performance of their duties. By such a system, and by maintaining a powerful "*materiel*" for the use of such a force, it is conceived that the position of an army for the defence of London might be most effectually strengthened.

It would require, however, good generals and a thorough knowledge of the country. These may possibly be absent at the moment when required, and therefore the propriety arises of the subject being well considered under every possible contingency, and well devised plans being made with reference to each possible field of battle. Each of these, upon which the advance from any direction must be stopped, should be known and well studied by the general in command, and every circumstance of country well considered.

Were this done, it might be found advisable to mark

some of the leading positions of the artillery, and to erect powerful works, mounted with numerous artillery with high scarps secure from escalade, which need not be of a very expensive nature, not having to resist heavy artillery and a regular siege. They might be so placed as to secure prominent positions for the support of an army on the selected battle-fields.

The maintenance of these works might be made quite inexpensive. They would form barracks for our troops, or pensioners might be placed in them.

The "*materiel*" within them, not being of a perishable nature, would cost almost nothing to keep it in an efficient condition, and their expense would be reduced to their first cost. If to these works, each mounting forty or fifty guns, we add the moveable heavy artillery, organized as above, and the small force of "flying" or "horse" artillery which we maintain (scattered however throughout England, small as it is, instead of being concentrated), we might, it is conceived, begin to feel that there is no occasion for an increase to the standing army of Great Britain.

Another force which might be added to that of the regular army for the defence of London, consists in the 4,000 enrolled pensioners and about 5,000 yeomanry cavalry, who are accessible either by railway, or within the distance of a short march from it, and the Metropolitan and city police, which, if organized, would together amount to at least 6,000 effective men. Should an objection be taken politically to the withdrawal of the regular troops from the provincial districts, and the concentration of them as proposed, it must be borne in mind that there are altogether 10,000 enrolled pensioners and 13,000 yeomanry volunteer corps in the country, in addition to the various police forces throughout the country, capable of being

called upon at any moment to maintain the supremacy of the laws, besides which the regular troops would be always accessible by railway. The total force which by this means might be rendered available, would consist of

Infantry of the line and guards	25,000
Enrolled pensioners	4,000
Metropolitan police	6,000
	Total infantry
	35,000
Cavalry regular	5,000
yeomanry	5,000
	Total cavalry
	10,000
Artillery regular, ready mounted	1,500
dismounted, requiring horses	4,500
	6,000

Artillery, militia, for guns of position unlimited.

The above force might be increased by extending the principle of training the police forces, by calling up to London the various police forces in the towns readily accessible from London; as it is considered that in the supposed contingency, notwithstanding that it might be feared that the lawless part of the population might attempt to take advantage of it to break loose and plunder, it would not be too much to expect that in defence of their *penates*, every man of respectability, if not in arms against the common foe, might be legitimately called on to maintain the laws against internal foes.

The whole of these propositions have been made with the intention of making the most of our existing military establishment, merely altering their present distribution, and claiming aid where it may be ob-

tained inexpensively, and it is conceived, legitimately; but it may well be questioned, whether without making any additions to the expenditure of the country, a still more efficient system might not be introduced.

The subject, however, has already been extended to such a length, that the writer does not propose at present to enter upon this other question, which would necessarily require much detail and calculation; but proposes, should he have time on some future occasion, to bring forward suggestions upon it, which if not adopted, he trusts may nevertheless be of some benefit to the country by any discussion that may emanate from them.

THE END.

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