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Contributors

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Royal College of Surgeons of England

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THE BRITISH ARMY

AND

MISS NIGHTINGALE.



THE CRIMINAL WAR

THE BRITISH ARMY

MISS NIGHTINGALE

THE BRITISH ARMY

It is necessary to state that this short Treatise was originally written in French: this will account for many details and observations on French Hospitals, etc., which may however be applied with equal justice to those of other countries.

MISS NIGHTINGALE



NEW YORK

THE CRIMEAN WAR.

THE BRITISH ARMY

AND

MISS NIGHTINGALE

BY

CHARLES SHRIMPTON, M.D.

LATE SURGEON MAJOR (FRENCH ARMY),

Late Surgeon in Chief of Field Hospitals and of the Military Hospital, Sétif, Algeria.

Knight of the Legion of Honour, etc.



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THE CRIMEAN WAR.

THE BRITISH ARMY

AND

MISS NIGHTINGALE.



“When pain and anguish wring the brow,
A ministering angel thou!”

“*Marmion.*”

Now that the rapid course of time appears to be accelerated by a succession of serious events, which crowd one upon another so quickly that the interests and emotions of one moment have scarcely time to make their impression before they are effaced by others, it may be thought almost out of season to revive the distress and anxieties incident to the Crimean War.

So many remarkable men, moreover, have written on this war—some, as historians, to celebrate and transmit to future ages the success and glorious “*faits d’armes*” of the allied armies—others, as scientific men, to obtain all the important instruction that could be derived for the advancement of Medical Science, or for the perfection of the art of War—that it may be asked whether our undertaking, at the present day, may not be the

simple repetition of a subject already exhausted? But we would reply, that although so much has been done, the subject we have before us is of such a nature, that it can never lose anything of its novelty—that it must always command attention and excite real interest. And although we by no means pretend to the discovery of anything new, still we think that our efforts will not be misemployed, if we submit the circumstances of this most eventful period to a fresh examination, so as to recall attention to the serious instruction they convey with regard to the future.

The present enquiry, indeed, could not have been undertaken, until the very eminent men, particularly those of the Medical Profession, who by their high military position are best able to give us the most complete information, had written on this subject. It is principally to their labours that we shall have to refer, and we have great reason to fear that the intrinsic value of their instruction has not been appreciated as it should have been.

May we, then, be permitted, in the cause of humanity, to apply ourselves, to the extent of our power, to reproducing the fatal consequences of errors now almost effaced from the public mind, since, by so doing, we hope to prevent the return of misfortunes much more disastrous even than those of actual warfare!

It is one of the greatest characteristics of the present age, that the cause of humanity is become identified with the strength of armies. The history, then, of a war can no longer be confined to bare details of the plans of battles, and of the manœuvres of armies: we must refer to other elements, and principally to the sanitary condition of troops, as the causes of our victories, or the reasons for our disasters. The historian, in following soldiers in their campaigns, should note

everything that may be favourable or unfavourable to their sanitary condition; and consequently he should not neglect any opportunity of exposing every error that may be committed on this important point, from whatsoever source it may spring. There are, particularly, two important results to be obtained from this scrupulous care in compiling the history of a war. The first is, that of reducing to less than half the mortality of those brave soldiers who so generously shed their blood for their country; the second, merely a corollary of the first, that by reducing the mortality of soldiers, the strength of armies will be proportionably increased, and thus very often the fortune of war decided.

We must give a just tribute of praise to the English Press, which has established the precedent of a philanthropic measure unknown, we believe, till the present day, but to be renewed, we hope, in all analogous circumstances. The English Press, in sending its correspondents to the British army in the Crimea, was in a position to know and point out all the disorder that existed therein from the very beginning of the campaign. We were thus warned of the misfortunes that were to assail us, and which would have been much greater but for this salutary information. Though the presence of the correspondents of the Press in the army may appear somewhat at variance with military feeling, we are persuaded that the judgment and discretion of these gentlemen, far from compromising the success of campaigns, would serve only to strengthen the army, by making the soldier feel that he is supported by all the resources and sympathy of his country. Who can estimate or sufficiently appreciate the services of Mr. W. H. Russell, the correspondent of the *Times*? By his correspondence, the authorities were somewhat embarrassed, it is true—they were obliged to see and know

things as they really were. This was the great step towards the remedy. The army was, most probably, saved by this means. We are not at all aware that his correspondence, whilst rendering this essential service, gave any advantage to the enemy by its contents. In undertaking this delicate mission, not only did he devote his rare talents to his country, but, with the highest spirit of self-denial and patriotism, this talented writer accompanied the army in all its movements, and frequently exposed himself to the dangers of the war, so that he might see and observe everything with his own eyes. Whilst he was writing those admirable letters which were read with such thrilling interest, he could in truth apply to himself the words which the Roman poet puts in the mouth of his hero,

. Quæque ipse miserrima vidi,
Et quorum pars magna fui.

After these necessary preliminaries, we will enquire, first, why the fine troops, which left England in such admirable condition that the highest hopes were legitimately formed of their success, should have been exposed to such difficulties and privations from the very beginning of the expedition, that they were almost swept away by disease and death, even before they came in presence of the enemy.

Secondly, we shall enquire, how the presence of Miss Nightingale in the Hospitals of the British army could so promptly assuage so much suffering, and so effectually stop the ravages of those frightful diseases, the focus of which was in the Hospitals, carrying off all the inmates.

We shall endeavour, thirdly, to point out the causes to which we must attribute the happy change that took place in the sanitary condition of the English troops

towards the end of the war—a change so vital as to insure their complete immunity from Typhus fever, at the very time that this dire disease raged with the utmost violence amongst the French and Sardinian troops encamped in their immediate vicinity.

With regard to the duration of the Crimean War, we shall have occasion to show, that the prolongation of this war, with its enormous sacrifice of money and men, was the result of sickness, quite independent of the effects of the war itself : and that as regards the British army in particular, its soldiers would have been almost entirely exempt from those diseases to which they became a prey, if, from the beginning of the campaign, they had been accompanied by a good military administration (1).

The British troops left England in the most promising condition, and reached Malta on March 7th, 1854, in the highest possible sanitary state, after a most prosperous voyage. But immediately on their arrival they had to encounter difficulties and embarrassments of all kinds, in some cases even privations, for many things were absolutely wanting, others were not to be found when required, and there was not even a sufficient quantity of meat for the troops. Demands and loud complaints were consequently raised on all sides.

(1) As we shall often have to refer to the Military Administration of the Army, it may be advisable to explain as briefly as possible what is here meant by this expression. We would convey the idea of a regularly organized Military Service of all the different branches of the Administration : Victualling, Clothing, Forage, Hospitals, Campment, Transport Service, and a Corps of Workmen. All and each of these branches having their own officers, non-commissioned officers and men, should be trained and accustomed to their duties, like the different corps of the army, with one special chief to command them all and make them work together as the service may require.

Whence arose this sad disorder, so unfavourable an omen for the beginning of an expedition? From the Military Administration, whose duty it is to provide for all the wants of an army. The absence of centralisation of the different branches of this most important service, and consequently their not working together, rendered it impossible to satisfy all demands. The Commissariat was, however, most active, and anxious in its endeavours to do its duty, but there was not a sufficient staff for this service.

This should have been known before—it was not *then* the proper time to discover the fundamental defects of the administration. It was, however, urgent that the staff should be increased, and clerks were immediately recruited amongst the Maltese. But even this effort was made in vain, for these new clerks were so unfit for the service, that, with all the good will in the world, they could not fulfil the duties of their mission, and often occasioned embarrassments instead of rendering assistance. The functionaries of an administration, particularly of a Military Administration, and in time of war, cannot be created at will in this way.

The administration of an army in campaign must be complete in all its departments, and must be organized so as to satisfy all the requirements of the service with ease and promptitude. It must have all its stores prepared beforehand, and have them placed in the best situations for the convenience of the service. When troops are once on the march, they should want for nothing, their movements should not be embarrassed in any way. Everything, on the contrary, should be done to facilitate their action, and to provide immediately for all their necessities. This may always be the case in an army provided with such an administration as we have described—always ready to march with the army, or

with any fraction of the army, and prepared to meet all difficulties as they may arise.

It is impossible that a General in Chief, who is absorbed by his meditations on plans of battle and by the multitude of duties inseparable from the position of a Commander in Chief, can enter into the details of Military Administration. He can never give anything more than a general order, confiding the measures to be taken, and all the administrative duties, to a special chief, who alone must be answerable for the service of the whole Administration.

Thence the necessity of a special chief, armed with full authority over the whole service of Administration, such as we see in the French army, under the title of "*Intendant Général.*" In the French army, every branch of the Military Administration—Provisions, Forage, Transports, Hospital, Encampment—has its own separate and independent organization, but all these different branches are concentrated under the authority and direction of the special chief just named, who is responsible for the whole service of the Administration, and who makes all work together according to the requirements of the army and the directions of the Commander in Chief.

At the beginning of the Crimean War, the British army, prepared only for the requirements of a garrison life, was far from being as well organized as the French with regard to its Military Administration. We are obliged to make this comparison, to be enabled to point out the absence, in the British army, of centralisation and of the working together of all the different branches of this administration, as the causes of its inefficiency from the very beginning. If we have laid so much stress on these explanations, and if we return to them again, it is because the British army must attribute to the de-

fective state of its Military Administration, not only the first difficulties and embarrassments it had to encounter at Malta, but almost all the other difficulties which occurred, and all the misfortunes by which it was afterwards overtaken. Yes, to this radical defect we must attribute by far the greater part of the troubles and afflictions by which it was overwhelmed—even the frightful mortality which decimated it from the very beginning of the campaign. The improvidence—the inevitable consequence of such a defective organization of Military Administration—surpasses all conception. Could it be believed that the British army could reach its destination without having been preceded by any officers to make preparations for its arrival? Even Malta, a British colony, was taken by surprise by the arrival of English troops, and at Gallipoli the same neglect was repeated—the British consul there was not officially informed that English troops were to arrive!

Before we proceed farther, we must make an important observation on another branch of the Military Service. We have just said that almost all the sufferings the British army had to endure, from the very commencement of the war, were the consequences of the very defective organization of the Military Administration. We must here add, that the organization of the Medical Department was so imperfect at the beginning of the war, that this branch of the service suffered also very considerably. Dr. A. Smith, the Director General of the army Medical Department, most nobly admits the imperfect state of this service in his admirable work, “Medical and Surgical History of the Crimean War.”

“When it was determined in 1854,” says Dr. A. Smith, “that a military force should leave this country and proceed up the Mediterranean, to aid the Turks, should it be necessary, in resisting the advance of a

Russian army then threatening Bulgaria, I was required to immediately provide an adequate medical staff, and the amount of stores likely to be wanted for Hospital purposes. If I had been given to understand, when I received this intimation, that the troops were to be employed on the duties which are usually exacted of soldiers in times of peace, I should have had no difficulty in deciding what I ought to furnish, but the having been on the contrary led to expect that they would probably soon be engaged in the field, in conflict with an enemy, caused me both much consideration and anxiety, the more especially as neither myself, nor any of the officers of the Department, had from personal experience, a knowledge of all that would probably be found necessary for the wants of the sick and wounded during a European war."

This remarkable statement is contained in the first paragraph of the Preface to the "Medical and Surgical History of the Crimean War," a work evidently undertaken for the express purpose of preventing the recurrence of anything of the kind in the British army, and as such, it will always remain a monument of science for the guide and assistance of Medical Men in all future wars.

Returning now to the observations we were making on the Military Administration, we will endeavour to show the advantages of a good Administration by the very opposite results obtained in the allied armies.

The French army landed in a few hours, and was quickly established with great regularity and order at Gallipoli. The English troops employed three days in landing, and when they did land they were most miserably situated, they had neither mattresses nor blankets for the men, nor medicines for the sick—all this had been left at Malta! Mr. Russell, whom we

shall often have occasion to quote, tells us that “ Mr. Alexander, the senior staff-surgeon, with commendable activity, succeeded in getting hold of some hundreds of blankets by taking on himself the responsibility of giving a receipt for them, and taking them off the hands of the commanding officer of one of the regiments at Malta.” There was no shelter or comfort of any kind for the sick, which had been foreseen by Mr. Alexander, but what could the efforts of an isolated medical officer avail in an army? It must not be supposed that this painful disorder existed only on the first landing of the troops. Difficulties and privations of all kinds increased, on the contrary, in the British army, as the troops landed, whilst the French had no difficulty nor any kind of privation to meet, because everything had been provided and settled for them by their “ Intendant Général.” The “ Train des Équipages Militaires ” took charge of their baggage and all the stores they required. As there was no special service of this kind in the British army, they had to wait until “ Arabas,” a miserable kind of cart, could be procured at great expense and with much difficulty. After all this delay and trouble, there was nothing but confusion and disorder. The distribution of provisions was so irregular and so difficult that often the men could not get any meat at all. The soldiers of the 93rd were obliged to kill the oxen which had brought their baggage on the “ Arabas ” to procure meat for themselves !

How can we account for such want of care and provision? There was not a thought bestowed even on the most urgent necessities—no arrangement was made for the purchase even of things which the army was obliged to procure for themselves every day. The “ French Commandant de Place ” had agreed with the Turkish Authorities on a moderate tariff at which the natives

should sell their provisions. “The French Commandant de Place,” says Mr. Russell, “posted a tariff of all articles which the men were likely to want on the walls of the town, and regulated the exchanges like a local Rothschild. A Zouave wanted a fowl; he saw one in the hand of an itinerant poultry-merchant, and he at once seized the bird, and, giving the proprietor a franc—the tariff price—walked off with the prize. The Englishman, on the contrary, more considerate and less protected, was left to make hard bargains, and generally paid 20 or 25 per cent. more than his ally.”

When at Varna, the allied armies were obliged to give up a most important expedition on the Danube, because they could not procure sufficient means of transport. They required at least 4,000 “Arabas” for the transport of the victualling alone of 100,000 men, for four days only, and besides this a great number more would have been required for the transport of tents and all Hospital requirements. The British army had procured a great number of beasts of burden for this abortive expedition, and as there was no one whose special duty it was to command and regulate these matters, all these cattle were left to die of hunger at Varna, at the very time that the army itself was nearly perishing through the absence of these animals, which would have supplied their wants by the transport of provisions between Balaclava and the camp before Sebastopol.

The frightful mortality that took place in the allied armies was one of the great causes which hastened the departure from Varna. This beautiful and fertile country was known to be excessively unhealthy, particularly those spots which were so imprudently chosen for the camps. The air there is so pestilential that the country bears the significant name of “The Valley of

Death." Everything seemed to be combined here to produce the most deleterious effect on the soldiers, who could not be protected by their tents either from the burning heat of day or from the pernicious atmosphere of night. As soon as the sun set, during the hot season, pestiferous vapours rose from the earth, rapidly covering the whole country, and enveloping the soldier in his tent as with a mantle of death.

In the morning, shortly after sunrise, as soon as the atmosphere became sufficiently heated, this pestiferous vapour gradually rose in the atmosphere, assuming the form of a thick dense cloud, and it was but too easy to judge of its effects upon the soldiers, who, wrapped in their blankets saturated with this slimy vapour, shivered with the cold, and with their aching limbs sighed for the rays of the sun to recover from their state of prostration. Such was the position of the soldier, who had no means of escaping the alternation of the burning heat of day and the pestiferous atmosphere of night, during upwards of sixty days. Add to this the enormous quantity of fruit, which the soldiers so easily procured and rapidly devoured. Was it astonishing that, under such circumstances, the cortege of malarious fevers was so soon to be completed by the apparition of Cholera? This dreadful disease first attacked the French troops, but it soon appeared amongst the English soldiers exercising its fearful ravages. The number of sick increased rapidly every day. From 566 in June, it rose to 4,099 in July, and reached 2,558 in August. The mortality increased of course in the same proportion, and as it was impossible to shut men's eyes to this frightful state of things, it was decided that the allied armies should fly from this deadly spot. The order for departure was received on September 4th with great joy by the troops, who were suffering as much from moral depression as from

disease. There was no time to be lost, for, on landing at Eupatoria, they were obliged to leave a great number of sick on board, though the sanitary state of the army had improved considerably during the voyage, and many cases of Cholera continued to appear amongst the troops after the landing.

It is painful to state that the English soldier was not in any way prepared for landing when he reached Eupatoria, and he had again to undergo a great deal of the suffering he had endured at Malta and Gallipoli. The rain commenced soon after the landing, and continued in torrents during the whole of the night. The soldiers had no shelter, nor could they make any fire. The suffering was very great, sending 4,500 more sick on board the vessels they had left the day before. It is useful here to remark that the French army suffered but very little in comparison with the English troops, for they were protected by the small tents they carry everywhere with them on their knapsacks.

The distress and misery which our troops had to undergo during this terrible night are so well described by the graphic pen of Mr. Russell that we must quote himself : “ Few of those who were with the expedition will forget the night of the 14th of September. Seldom or never were 27,000 Englishmen more miserable. No tents had been sent on shore, partly because there had been no time to land them, partly because there was no certainty of our being able to find carriage for them in case of a move. Towards night the sky looked very black and lowering, the wind rose, and the rain fell in torrents. The showers increased in violence about midnight, and early in the morning fell in drenching sheets which pierced through the blankets and great coats of the houseless and tentless soldiers. It was their first bivouac—a hard trial enough in all conscience, worse

than all their experiences of Bulgaria, or Gallipoli, for there they had their tents, and now they learned to value their canvass coverings at their true worth. Let the reader imagine some of these old Generals, and young Lords and gentlemen, exposed hour after hour to the violence of the pitiless storms, with no bed but the reeking puddle under the saturated blankets, or bits of useless water-proof wrappers, and the twenty odd thousand poor fellows who could not get 'dry bits' of ground, and had to sleep, or try to sleep, in little locks and water courses—no fire to cheer them, no hot grog, and the prospect of no breakfast—let him imagine this, and add to it, that the 'nice change of linen' had become a wet abomination which weighed the poor men's kits down, and he will admit that this 'seasoning' was of rather a violent character—particularly as it came after all the luxuries of dry ship-stowage."

The battle of the Alma was soon to follow upon this; the valour of our troops was roused to the highest pitch, and the enemy was quickly routed. Why was the victory not complete? *It was not*, and this is one of the principal observations we wish to make. If the great exhaustion of the soldier and the thinning of the ranks of the army by so much disease—the Cholera still continued its ravages—did not prevent the allied armies from fighting with their accustomed valour, and from gaining a great victory, it is also true that they were unable to pursue their advantage from their utter inability to move. We have the proof of this in Mr. Russell's correspondence. He says, "All the Russian officers with whom I have conversed, all the testimony I have heard or read, coincide on these two points—first, that if on the 25th we had moved to Backschiserai in pursuit of the Russians, we should have found their

army in a state of the most complete demoralisation, and might have forced the greater majority of them to surrender as prisoners of war, in a sort of *cul-de-sac*, from which but few could have escaped. Secondly, that had we advanced directly against Sebastopol, the town would have surrendered after some slight show of resistance in order to save the honour of the officers. The deduction from these propositions is, that the flank march was the certain precursor of a long siege, of bloody battles, and of great losses." The correspondent of the *Times* says again, "Had our army marched upon the place on the 25th September, it would have fallen almost without resistance. A Russian officer who was taken prisoner some little time before, and who knew the state of the city well, declared that he could not account for our 'infatuation,' in allowing the Russians to throw up works and regain heart, when we could have walked into the place; unless under the supposition that the hand of the Almighty was in it, and that he had blinded the vision and perverted the judgment of our Generals. 'And now,' said he, 'He has saved Sebastopol, and we, with His help, will maintain it inviolate.'"

It is evident then that the allied armies did not obtain the advantages they ought to have reaped after the victory of the Alma. And why was this? The enemy certainly did not prevent them from doing everything they could. The defeat was so complete that even several days after the battle the Russians could not rally sufficiently to offer the least resistance to the English and French troops, whilst they were marching on Sebastopol through woods and the most uneven ground. The vanquished had every opportunity and shelter offered them, from whence they might have harassed their foe almost with impunity, and if they did

not profit by such advantages, it could only be because they could not make the least effort.

Since, then, the allied armies met with no resistance, and yet did not pursue the Russians and take Sebastopol after the victory, there must have been some insuperable difficulty to account for their inaction.

The reason for this inaction was variously assigned—every one accounted for it according to his own ideas, views, and prejudices, as is always the case when the true reason is not given. The true reason, and there is none other, is that the exhaustion of the soldiers and the diminution of their ranks, much more by disease than by battle—the Cholera was still raging—arrested them in their career of victory. How is it possible otherwise to account for the facility with which the allies allowed the Russians to retire and to fortify themselves in Sebastopol? To suppose that the commanding officers could have been in fault at this particular juncture would simply be an absurdity.

Thus we see that the British camp, having been so considerably weakened by exhaustion, diseases, and deaths, which in themselves required all the energy and self-reliance of the soldier to sustain his national valour, was arrested in its course of victory, and the war was to continue eighteen months longer, at an enormous cost, and with an immense sacrifice of life! Is it not awful to think that all this was the consequence of errors committed at the beginning of the campaign, when the troops should have been inured to the hardships of war, instead of being exhausted before they were brought to face the enemy?

Can there be any excuse for such want of foresight in allowing an army to go forth without being supplied with all that the emergencies of war might require? We do not and we cannot lay

the blame on the Commissariat, which, from its defective organization, was the cause of so much disappointment and disaster. The Commissariat was the victim, and had all the burden to bear; the blame lies at the door of the House of Commons for having allowed itself to be governed by the miserable calculations of a false and ruinous economy which imposed this defective Administration on the army. The Commissariat was absolutely powerless. We have only to remember what took place at Balaclava, whither all the supplies of the army were brought. Everything was taken there in abundance, but there was no one there officially appointed to receive them, or to whom they could be addressed. The consequence was, that vast quantities of stores were lost, or destroyed, by having been abandoned on the Quay. Frequently they were carried away again, after long delays, as no person could be found who was authorised to relieve the vessels of their cargoes.

All the consequences of this defective state of the Administration were well known to Lord Raglan, who had struggled with all his might against these false notions of economy. In accepting the command of the British army, he made every effort to repair the disastrous consequences of a system he disapproved of. He undertook a most arduous and painful duty, but the task was too great, and overpowered by the labour, he became the victim of his heroic patriotism.

The Ministers could in no wise be answerable for the misfortunes which overtook the British army. The fault is easily traced to the principle itself of a Constitutional Government. Every one knows that the House of Commons governs the whole country, and that when it has pronounced its opinion by the majority of votes, the Ministers are expected faithfully to execute its resolu-

tions. As the House of Commons had not before it the painful lessons of experience, it was swayed by the calculations of economy, and this was especially the case in all matters concerning Military Administration. The deplorable consequences were irretrievable. We say irretrievable, because there is no time for reforms and improvements in time of war. When the troops are actually fighting, everything must be made the best use of as it is. It was impossible, and even had it been possible it would have been most imprudent, to attempt any kind of reform when the war had once begun; but everything that could be done, was done promptly and generously, as soon as the sufferings of the British army were known in England. The Government and the whole nation vied with each other in making every effort to come to the relief of the soldier. Even the economists were not behind in their endeavours to repair the mischief they themselves had occasioned.

Everything was supplied in abundance, and it will appear strange to a person unacquainted with what an Administration should be, that the army should still have been in want of everything. Things were not within reach when required, and when they were within reach, so many formalities were required that the army had to suffer the torture of Tantalus. The Administration had no initiative power, it was nothing more than a dispensing instrument. Such as it was, however, it was allowed to do its best. The functionaries, with all their zeal and activity, could not overcome the radical defect of their organization, but every kind of assistance possible was given them. This was not sufficient, for we were soon to see another administrative power rise, which, without interfering at all with the original Administration, aided and assisted in supplying many great deficiencies which the regulations had not pro-

vided for. This was the mission of Miss Nightingale, who came, in her sublime vocation, to work out the most wonderful reforms in the British Hospitals in the East.

Before we proceed farther, we must make an observation on the peculiar causes which rendered it extremely difficult for the Government to know the true state of things in the army. This was hidden as much as possible from Lord Raglan, and kept from the Government altogether. The Government could not believe the reports, as they were not confirmed by the military authorities, stating that the army was threatened with entire annihilation. How was it that this truth did reach the Government at last? Through the Press. Yes! thanks to the faithful perseverance of the correspondents of the public papers, the Government was at length obliged to believe that the sufferings of the army were but too real, and earnestly sought to remedy the evil. Thus are we not only justified in the praises we have given to the English Press for their initiative in sending their correspondents to the army; but this is a noble proof of the advantages of the liberty of the Press—not one of the least blessings of a Constitutional Government.

Our subject has confined us, hitherto, to the relation of the sufferings of the British army, on landing and in camp, from the effects of the defective state of the organization of the Military Administration. We have now to speak of the painful and disastrous state of the sick in the Hospitals.

From the 1st December, 1854, to the 20th January, 1855, eight thousand sick were carried on “Litières” and “Cacolets,” lent by the French Administration, from the camp before Sebastopol to Balaclava, where they were embarked for Scutari, and arrived after a

most fatiguing voyage of seven or eight days. These unfortunate men were crowded together to such a degree that it was often impossible to get near them to attend to their wants. A great number died on their passage and were thrown overboard, of whom no account could be taken, and when those who survived the passage arrived, they were without their kits, and almost without clothing. A great number were dying, and could not tell either their names or the Regiments to which they belonged!

The Hospitals were crowded—in the Barrack Hospital the sick were laid side by side on straw mattresses which touched each other, leaving room for two persons only to pass each other between the ends of the mattresses. Seventy-two patients were put in a ward where scarcely thirty beds could be placed. During six weeks 2,000 sick were crowded in a space scarcely sufficient for 1,220. Such a crowding together of patients was inevitably the cause of great mortality. But the evil was still further increased by the complete neglect of all hygienic care. There was no possibility of changing the air of the wards but by opening the windows, and this they were afraid to do. It is impossible to describe the state of the atmosphere in the wards, particularly during the night. The air was vitiated in the highest degree—there was no drainage for the water and filth—no possibility of escaping the horrid smell from the privies, which filled the passages and entered the wards. The floors were always wet and saturated with filth—the walls and ceilings were also saturated with putrid animal matter; rats and vermin swarmed everywhere, and, as there were no night-vessels, large tubs were placed in the wards to supply their deficiency! After such an account of the interior, it is scarcely worth while to speak of the exterior of the Hospital. The same

want of care reigned everywhere. Dead dogs, in a state of putrefaction, were to be seen under the windows of one Hospital, and the carcass of a horse was found in the aqueduct of another.

A frightful mortality was the natural consequence of this state of things. And if the same rate of mortality had continued during the whole year, as in the month of February, the whole Hospital population would have been swept off more than four times in the course of the year. The proportion of deaths to the whole army was 60 per cent., from disease alone; “a rate of mortality,” says Miss Nightingale, “which exceeds that of the great plague in the population of London, and a higher ratio than the mortality in Cholera to the attacks; that is to say, that there died out of the army in the Crimea an annual rate greater than ordinarily die in time of pestilence out of sick.”

Such an agglomeration of patients, and such a fearful state of things, required the incessant care of a vast number of Medical Men. In fact, no number could have sufficed, shackled as they were, and we believe still are, by a multitude of duties quite foreign to those of their profession. They had to see to all Hospital arrangements—the enregistering of the patients—the care and cleanliness of the wards—the superintendence and responsibility attendant on the victualling—the furniture of the Hospital, etc., etc. All these duties and responsibilities are the natural attributions of the Military Administration, with which the medical officer should not be obliged to interfere.

At all times, particularly in time of war or epidemic influence, a medical man cannot bestow a moment or a thought on anything but his professional duties. All the charges that we have just mentioned are inseparable from questions of detail, discussions, and struggles of

interest, which must withdraw him from the anxious and unremitting labours which his vocation incessantly demands.

In the French army everything connected with Hospital management belongs to the Department of the Administration. The medical officer has nothing to do with anything but his professional duties, transmitting his prescriptions to the "*officier d'administration comptable*." Thus the French medical officer is enabled to attend to 300 patients, more promptly and efficiently than the medical officer of the British army can attend to 30.

We have seen the consequences of the unhappy concurrence in the British army of so many disastrous influences. The whole country was suddenly roused from its confidence and repose to a sad state of anxiety. Miss Nightingale, on inquiring into the extent of the sufferings of the British army, saw at once the source from which it all sprang, and, animated by the spirit of her vocation, wrote immediately to the Honorable Sidney Herbert, Secretary of State of the War Department, offering her services. By a very curious coincidence, Miss Nightingale received a letter from Mr. Sidney Herbert, which must have crossed her own, partaking entirely of her own views, and asking her to undertake the noble mission for which she had offered herself. From this letter of Mr. Sidney Herbert, which, through the indiscretion of a friend, appeared in the public papers at the time, and has since been published by Dr. Pincoff in his interesting work on Eastern Military Hospitals, we are enabled to give some extracts, showing at the same time the solicitude of the Government, and the legitimate hopes that were founded on Miss Nightingale's administrative power.

“You will have seen in the papers that there is a great deficiency of nurses at the Hospital at Scutari.

“But the deficiency of female nurses is undoubted, none but male nurses having ever been admitted to Military Hospitals. It would be impossible to carry about a large staff of female nurses with our army into the field. But at Scutari, having now a fixed Hospital, no military reason exists against the introduction, and I am confident they may be introduced with great benefit, for Hospital orderlies must be very rough hands, and most of them, on such an occasion as this, most inexperienced ones.

“There is but one person in England, that I know of, who would be capable of organizing and superintending such a scheme, and I have been several times on the point of asking you hypothetically, if, supposing the attempt were made, you would undertake to direct it. The selection of the rank and file of nurses will be very difficult; no one knows that better than yourself. The difficulty of finding women equal to the task, after all, full of horror, and requiring, besides good will, great knowledge and great courage, will be great; the task of ruling them, and introducing system among them, great; and not the least will be the difficulty of making the whole work smoothly with the medical and military authorities out there. This is what makes it so important that the experiment should be carried out by one with administrative capacity and experience. A number of sentimental, enthusiastic ladies, turned loose into the Hospital at Scutari, would probably, after a few days, be ‘*mises à la porte*,’ by those whose business they would interrupt, and whose authority they would dispute. My question simply is, would you listen to the request to go out and supervise the whole thing? You would of course have plenary authority over all

the nurses, and I think I could secure you the fullest assistance and co-operation from the Medical Staff, and you would also have an unlimited power of drawing on the Government for whatever you think requisite for the success of your mission. On this part of the subject the details are too many for a letter, and I reserve it for our meeting, for, whatever decision you take, I know you will give me every assistance and advice. I do not say one word to press you; but I think I must not conceal from you that upon your decision will depend the ultimate success or failure of the plan. Your own personal qualities, your knowledge, and your power of administration, and, among greater things, your rank and position in society, give you advantages in such a work which no other person possesses. If this succeeds, an enormous amount of good will be done now, and to persons deserving everything at our hands, and which will multiply the good to all time.

“Deriving your authority from the Government, your position would ensure the respect and consideration of every one, especially in a service where official rank carries so much weight. This would secure you any attention or comfort on your way out there, together with a complete submission to your orders. I know these things are a matter of indifference to you, except as far as they may further the great object you would have in view, but they are of importance in themselves, and of every importance to those who have a right to take an interest in your personal position and comfort. I know you will come to a right and wise decision. God grant it may be one in accordance with my hopes.”

It would appear by this letter that Mr. Sidney Herbert was not aware of the full extent of the suffering of the army. He saw, however, the urgent necessity of taking

the most active measures, and, in addressing Miss Nightingale, he knew that he would find her ready to meet all difficulties.

But how could the Minister have formed such a high opinion of Miss Nightingale's administrative power as to make a special choice of her in such an emergency—offering her Government authority to act in an army, and this during actual warfare?

How also could Miss Nightingale be prepared to undertake a mission of a nature so delicate and so extremely difficult?

To answer these questions satisfactorily, it will be necessary to discover the source from which so much power and genius sprang, to watch its development, and to see how irresistibly her course was directed. We feel ourselves under the restraint of our respectful submission to Miss Nightingale's constant desire to avoid publicity, and must therefore confine ourselves to such details as have already been published, and such general information as we have been able to gather.

From an interesting publication written by the Rev. T. G. Gifford, we learn that Miss Nightingale was born in the paternal mansion situated on the confines of Hampshire and Wiltshire, near the New Forest, and that she was brought up there with the greatest care. Though she had all the sprightliness of the happy age of childhood, she was remarked as a peculiarly thoughtful child even from a very early age. The predominant feature of her character was to be kind to every one, and to make herself beloved by all who approached her. This happy disposition found ample means of development in the village school, and amongst the country people who lived on the estate. Miss Florence was looked for on all occasions, and was applied to in all cases of suffering, difficulty, and distress. Her lessons

were diligently imparted to the children, her assistance offered with a sympathising hand to the sufferer, and her prudent advice to all who were in trouble. All this is treasured in the hearts of the grateful inhabitants of her birth place, who pride themselves in talking of “Miss Florence.”

These good qualities and this happy disposition were a bright presage of future development. Here we have a good example of the immense advantage of having been brought up under the influence, and surrounded by the ties, of family affection. Without doubt it is a great privilege to be endowed with all the gifts of nature, we cannot also appreciate too highly the advantages of a well-directed education, but we believe that however highly endowed a child may be, and however perfect the education, a high degree of attainment can scarcely be hoped for, unless the natural gifts and the education are directed by the watchful care and affection which can be expected only from family ties. All these elements, so admirably combined in Miss Nightingale's favour, contributed to the perfect development of both heart and mind.

For the accomplishment of this promising young lady's education, and in accordance with her own desire to perfect herself as much as possible, she travelled in France, Germany, Italy, everywhere, in fact, where the different elements of her education could be best found.

It is most remarkable that though this young lady made the most wonderful and rapid progress in every branch of her studies, she was always instinctively led to bring all her powers to bear on her secret vocation—her sympathy with suffering of all kinds, and the care which the sick required. Her family had long struggled against this inclination, which was, without doubt, not

thought quite suitable to the usual habits and disposition of young ladies ; but Miss Nightingale was so naturally and so irresistibly attracted, that her family soon gave up all opposition, and allowed her full liberty to follow the bent of her inclinations.

From this moment we find Miss Nightingale concentrating all the faculties of her powerful intellect on the study of the sufferings to which human nature is heir. In the first answers given to questions put to this lady by the Commissioners appointed by Government to inquire into the Regulations affecting the sanitary condition of the army, we find that she had devoted herself to the study of this important subject for thirteen years, and she continues : “I have visited all the Hospitals in London, Dublin, and Edinburgh, many Country Hospitals, some of the Naval and Military Hospitals in England ; all the Hospitals in Paris, and studied with the *Sœurs de Charité* ; the Institution of Protestant Deaconesses at Kaiserwerth, on the Rhine, where I was twice in training as a nurse ; the Hospitals at Berlin, and many others in Germany ; at Lyons, Rome, Alexandria, Constantinople, Brussels ; also the War Hospitals of the French and Sardinians.”

Thus we see how Miss Nightingale acquired such vast superiority, both in the theory and practical experience of Hospital duties, that her knowledge surpasses that of the most eminently scientific men of our day.

This rare knowledge and practical experience were too long unknown, and would have remained so much longer, had not the threatened ruin of the establishment for the reception of poor gentlewomen, in Harley Street, called forth her powerful administrative faculties and her noble generosity. This establishment, for the reception of poor gentlewomen who are obliged to go to London for the best surgical and medical ad-

vice, was in an almost hopeless state when Miss Nightingale, by placing herself at the head of the establishment, and most generously meeting the first difficulties and pecuniary embarrassments, rapidly raised it from its impending ruin to great prosperity and development.

The difficulty of satisfying all demands in cases of embarrassment of this kind—the efforts required to establish order in the midst of confusion—the impulse to be given to the well working of an establishment, in which the medical and surgical assistance had to be secured, as well as all the attendance patients require in illness, and after the most serious operations—all this was done at once, and the establishment was brought to render all the services that could be required of it, thus re-establishing its reputation, and the sources of revenue for its future existence.

Miss Nightingale's success was complete in every way, but the immense fatigue both of body and mind that it occasioned so completely exhausted her already weak state of health, that she was obliged after a time to relinquish the direction of the establishment to other hands, still protecting it by her powerful influence and advice.

Thus Miss Nightingale's name and great administrative power became known throughout England, and, shortly after her retreat, almost before she had time to feel the benefit of the repose she so much required, the news of the disastrous state of the army in the East roused all her patriotism, and called her from her retreat to the noble mission for which she seems secretly to have been prepared by the hand of Providence, to save the honour of her country by coming so opportunely to the assistance of our gallant soldiers.

The delicate state of her health seemed an insuperable obstacle to the immense undertaking she had before

her, but her zeal and the ardent character of her spirit would not allow her to think one moment of herself. She felt that her energetic will would always give her strength, and bear her through all trials and dangers. She assented then to Mr. Sidney Herbert's desire to see her, and after several conferences with the Minister she was prepared for her departure.

Unhampered by any vain theories or any fixed plans, but imbued with pure, unalloyed science, and animated by the true spirit of philanthropy, Miss Nightingale quitted the English shores on the 24th of October, 1854, accompanied by about forty persons who had solicited the honour of being her companions.

We shall soon see her at the height of her vocation, and on an immense field worthy of all her powerful action. Mr. Sidney Herbert, who had not a full knowledge of the extent of the disasters of the British army, could not have a full conception of the duties Miss Nightingale would be called on to undertake, nor of her power, which seemed to develop itself as new emergencies called it forth.

The delicate state of Miss Nightingale's health, when she was going so far from home, and on such a perilous expedition, became a source of very serious anxiety amongst her numerous friends, who obliged her to accept the kind offices of her true and tried friend, Mrs. Bracebridge. This kind lady, who enjoyed her confidence during the whole of the Crimean War, was enabled to attend her with the maternal care and solicitude that she so often needed, when harassed and fatigued beyond what human nature could apparently bear.

The preparation and departure of Miss Nightingale were noised abroad, and, on her arrival at Boulogne-sur-Mer, her little band was surprised by the most

enthusiastic reception. The fish-women, who act as porters in that town, seized their luggage and carried it off, and, with our travellers, were escorted by the population to the Hôtel des Bains, where a most sumptuous repast was prepared. No one would receive any money from those ladies, and they were greatly embarrassed, not being able to express their thanks for such an unexpected reception. Miss Nightingale must, without doubt, have been confused and somewhat vexed, for we find that, after this, every precaution was taken to prevent the repetition of a like ovation. Our interesting travellers, continuing their journey, unperceived and unknown, reached Constantinople on the 4th of November, 1854, and were immediately established in a dependence of the Barrack Hospital.

The presence of Miss Nightingale and her companions had, in some measure, the appearance of a reproach to the way things were going on in the Hospitals, so that they were looked on at first with a certain degree of uneasiness and distrust. Mr. Sidney Herbert had foreseen, as appears from his letter to Miss Nightingale, that the position of the new comers would be extremely delicate and difficult. It required, in fact, the greatest tact and prudence on their part to obtain the confidence, and gradually to conciliate the good will, of every one. With this feeling, they had to set to work immediately, carefully avoiding any interference with other functionaries. Miss Nightingale, too much experienced in such matters to find herself at all embarrassed, saw her way immediately through these first difficulties. There was plenty to be done without interfering with any one. She decided, then, on acting alone, preserving the independence of her own authority, and supplying things, as they might be required, from her own private resources.

Miss Nightingale's attention was first drawn to the urgent necessity of providing light and delicate food for the patients who were extremely ill, and of procuring changes of clean linen for all the sick in the Hospital. This could not be considered by any means an interference: it was merely the supplying of deficiencies—namely by the construction of a private kitchen, “*Miss Nightingale's extra diet kitchen (1)*,” and a washing-house with its dependencies, Miss Nightingale providing the greater part of the food which issued from her kitchen, and all that was necessary for the washing establishment. The dirty linen was collected, washed, and carefully put by, so that each patient might always be furnished with all the clean linen he could require. The food from the extra diet kitchen was delivered on a simple order from the Medical Men. All this was effected without in any degree interfering with the pre-existing officials and their subordinates, whilst strict injunctions were given that nothing should be done for any patient without the positive instructions of the Medical

(1) Average daily issue of extra diets supplied from Miss Nightingale's kitchens to extra diets rolls of the Medical Officers, Barrack Hospital, Scutari, from 13th January to 13th February, 1855.

No. SUPPLIED.	—	FROM PUBLIC STORES.	FROM PRIVATE SOURCES.
25 gallons	Beef tea	80lbs. beef	.....
15 —	Chicken broth	28 chickens	12 chickens
40 —	Arrowroot	.....	Arrowroot
15 —	Sago	.....	Sago
240 quarts	Barley water	Barley	.....
10 —	Rice water	Rice	.....
8 —	Lemonade	.....	Lemons
30 —	Milk	.....	Milk
275 portions	Rice puddings	Rice	.....
15 bottles	Port wine	.....	Port wine
3 —	Marsala	.....	Marsala
3 —	Brandy	.....	Brandy
15 hgs.	Jelly	.....	Isinglass
4 dozen	Eggs	.....	Eggs
40	Chickens	28 chickens	12 chickens

Men. All susceptibilities and jealousies were thus silenced, whilst the most active measures were being taken to supply the most glaring defects of the Hospital.

But everything was confusion in the Hospital. The orderlies were always running to and fro without doing anything. The distributions were most irregular, beginning sometimes as early as four o'clock, and scarcely finishing at seven, for the morning; and the dinner, which should have been served at twelve, was frequently not finished before five or six, and even then, many of the patients did not receive the diet which had been prescribed for them. Many others, particularly those who were the most dangerously ill, were altogether forgotten, or they could not eat the cold coarse food, even if they did get it.

All this disorder disappeared under Miss Nightingale's influence. Her merit was soon felt and appreciated by every one. It was impossible to be the daily witness of the immense services she rendered so quietly and so perseveringly, without paying due homage to her great superiority. All prejudices immediately vanished,—her great prudence and exquisite tact were the subject of universal admiration, and all hearts were gained by her kind attention to every one. The heads of the different departments, instead of any longer taking umbrage at her authority, were but too happy to lend themselves and all their influence to anticipate her wishes, and esteemed themselves highly honoured when they received a word of encouragement and approbation. From this moment, all difficulties were overcome; and Miss Nightingale gained an immense ascendancy, which allowed her the free exercise of her powerful mind in carrying out the most important measures for the health and comfort of the sick.

The British Ambassador at Constantinople, the

General commanding at Scutari, in fact all the authorities had received orders to enquire into and to provide for all the deficiencies of the Hospitals. But with all their zeal and efforts they could accomplish nothing. Everything bore a different aspect as soon as Miss Nightingale appeared on this scene of misery and suffering. With her skilful cooperation, the immense resources of the Government and the large sums of money which had been raised by public subscription, were advantageously employed.

A vast quantity of clothing, comestibles, wines, etc., was addressed to Miss Nightingale from England by the generous donors. All these things were of the greatest possible value, for they could not have been procured for money in that part of the world. But, in a very short time, the accumulation was so great, that Miss Nightingale, after having repeatedly thanked the donors for their patriotic gifts, was obliged to announce by the public Press that her stores were so full that she could not receive anything more (1).

(1) Abstract of some of the principal articles supplied from Miss Nightingale's stores to the Hospitals and at Scutari, on requisition from medical officers:—

Shirts (flannel and cotton)..	50.000	Air beds and pillows.....	232
Pairs of socks and stockings.....	23.743	Thread and tape (packages)..	74
Pairs of drawers.....	6.843	Lanterns, candle lamps, and lamps	168
Towels'.....	5.826	Preserved meats..... cases.	253
Handkerchiefs	10.044	Meat biscuit	barrels. 2
Comforters	9.638	Isinglass and gelatine... lbs.	148 1/2
Flannel..... yards.	1.384	India rubber sheeting—pieces	
Pairs of slippers.....	3.626	235 yards.....	26
Knives and forks.....	856	Camp kitchens, cooking stoves	
Spoons	2.630	and canteens	55
Night caps.....	4.524	Boilers and stew pans.....	68
Gloves and mits..... pairs.	4.545	Tables and forms.	
Drinking cups.....	5.477	Baths, soap.	
Tin plates	2.086	Games.	
Basins, zinc, etc.....	624	Brooms, scrubbers, bed pans, tin	
Dressing gowns.	1.004	pails, combs, scissors, etc., etc.	

It must not be supposed that Miss Nightingale's influence was confined to the Barrack Hospital. Some of the ladies, who had accompanied her to Scutari, were, after a time, sent on to the Crimea, with full instructions, and the necessary means of carrying out the sanitary measures which she had so judiciously established, to the astonishment and admiration of every one.

We have already spoken of the impulse and direction given by Miss Nightingale to the attendance on the sick, and to the supplying their immediate wants. We must now more particularly mention the sanitary measures to which we have just alluded. In the interior of the Hospital, new flooring, white-washing, everything which could contribute to general cleanliness, was executed as quickly as possible. Sewers were made, and the neighbourhood of the Hospital was kept free from all nuisances. One great cause of mortality still remained—the crowding together of the patients. The number could not be limited, for all had an equal claim to admission, and therefore all had to suffer. New wards were built and added to the Hospital as quickly as possible. By this means, Typhus fever, Hospital gangrene, and Purulent infection, fatal diseases, which owe their origin to the crowding together of patients and to the other defective hygienic measures, were suddenly extinguished.

Since the Crimean War, we have had the Italian War, during which we find no trace whatever of these terrible diseases in the French army; and this is entirely due to the care of the (1) “ ‘Intendant Général,’ under the instruction of the Baron Larrey, Physician in Chief of the army. Instead of crowding the patients together in a

(1) *Gazette Médicale de Paris*, 1862.

large Hospital, as had hitherto been the fatal habit in the French army, the sick and wounded were dispersed in a great number of small Hospitals. There were as many as thirty-eight Hospitals in the town of Brescia.”

(1) “The Physician in Chief of an army should meet with no obstacle to the prompt execution of his duty; the administrative authority of the ‘Intendance’ should aid and assist him with all the means of which it disposes.” The truth and importance of this observation are sufficiently demonstrated by the absence of all Hospital diseases in the French army during the Italian campaign; and “this, we believe, is the first time that the Physician in Chief was ever invested with so much power and authority by the Commander in Chief of an army, so that all the resources of science could be called into action in this memorable campaign.”

In resuming our relation of the Crimean War, we must draw attention to the following important observation — a vast number of men were sacrificed by the allied armies. The French lost seventy-five thousand from their total number, three hundred and nine thousand five hundred and seventy; and the English, twenty-two thousand, from a total of seventy thousand!! We are enabled to affirm that this enormous sacrifice in both armies was occasioned by Hospital diseases, Typhus fever, Hospital gangrene, and Purulent infection, all of which could have been prevented, as was the case in the Italian campaign. We must confine ourselves to the relation of the campaign of the British army, and let us ask what would have become of this army, if the sanitary measures we have spoken of had not been taken, and if death had been allowed to continue its ravages in the same degree during the whole of the

(1) *Gazette Médicale de Paris*, 1862.

Crimean War? Let us hope that this cruel experiment may never be repeated, but it must not be forgotten that the sacrifice of such noble soldiers is a severe lesson, which should be ever present with us. What could be more painful than to see such fine gallant soldiers fearfully swept away, not on the field of battle, nor by the ordinary chances of war, but in their camps and their Hospitals, from the absolute want of foresight and care? Horrors stared one in the face in every quarter. One shudders at the thought of such crowding together of sick and wounded, that, by their being packed together in so small a space, they brought death on themselves and all who approached them, so that no one could come to their assistance without being exposed to the fatal influence. An Hospital in such a condition is like an open crater, which, to a certainty, will engulf all who approach too near. Such was the gulf into which Miss Nightingale and her heroic little band dared to venture, and by their heroism not only did they rescue many from certain death, but they succeeded in closing the horrid gulf for ever.

We are naturally engrossed by the causes which produce such frightful mortality in time of war, but a feeling of humanity obliges us to assert, that in time of peace the same causes are allowed to exist, with of course the same fatal consequences. We have endeavoured to point out the causes, to which at least half of the mortality in camps and in Military Hospitals must be attributed, we must also assign three-fourths of the mortality in the Civil Hospitals to the same causes. (1) “There are many wards in the great Hospitals, where the sun has never penetrated, where the air has never been completely renewed, and where all kinds of filthy

(1) *Gazette Médicale de Paris*, 1862.

emanations accumulate. Are these the conditions proper for the re-establishment of health amongst the poor and miserable, whose illness can often be traced to filthy habits, and to the bad hygiene by which they live surrounded?"

We are naturally distressed and afflicted, on contemplating the disasters which overwhelm an army in a campaign, but however terrible these disasters may be, the affliction is only partial and temporary, whilst in the Civil Hospitals it is general and permanent.

(1) "Can any one calculate the thousands of victims that have been and still continue to be sacrificed, notwithstanding all the care and the efforts of the best Physicians and most skilful Surgeons, in that horrid den of death 'l'Hôtel-Dieu de Paris?' It has long been acknowledged that this Hospital is in the worst possible state of hygienic conditions, and it has long since been condemned to disappear, but it still continues to exist."

It is useless to enter into any details respecting the Civil Hospitals, since the most able and zealous Physicians have for some time past made this their most serious study. The sanitary condition of the Hospitals is indeed become one of the most important and prominent questions of our day. The "Académie Impériale de Médecine" concentrates all its attention on this subject. After long and most interesting discussions during a great number of sittings, the "Académie" has deputed a Commission, composed of its most eminent members, to complete the study of this question, and to carry out, we doubt not, one of the greatest and most useful reforms of our time.

But it is not an easy thing to bring about these reforms.

(1) *Gazette Médicale de Paris*, 1862.

We have only to look back to the history of “l’Hôtel-Dieu de Paris,” which the good King Louis XVI visited. And on finding four persons, afflicted with different diseases, lying in the same bed, this benevolent and martyr king, horrified at such a spectacle of human misery, issued a decree for its immediate reform. But all the influence and power even of a sovereign could not avail against the stubbornness of stolid routine. This state of things was still to continue for a long time, requiring nothing less than the violent hand of a furious Revolution finally to overcome it. From this one example we may judge of the difficulties which reforms are destined to meet at all times, now as in time past!!

Is it not an inevitable consequence, that, as the Hospitals are specially destined for the reception and treatment of sick people, they should be under the direction and responsibility of the medical men? Such is the natural conviction of public opinion. But is not this direction practically a fiction and this responsibility an injustice? Can nothing be done to remedy this state of things? Should not the medical men of the Hospitals possess all *power* and *possible authority* to carry out the measures which their patients may require? It is a deplorable evil that, by the rules and regulations of the Hospitals, the medical men should be deprived of this authority, or that their power should be in any degree weakened by the control of a non-scientific power. Medical men should have an hierarchy of their own in every Hospital, to which alone they should be subject.

This digression is quite accessory to our subject, as it leads us to another feature of Miss Nightingale’s powerful mind. All the reforms we mention are either directly or indirectly claimed by her, in her remarkable work, “Notes on Hospitals.” This is a most practical, scientific, work on the construction, management, and admi-

nistration of Hospitals—indispensable to all persons who require information on this subject. Another book, "Notes on Nursing," is one of the most useful books that could have been published. It was absolutely required, for no one can tell how much patients suffer, and how often lives are sacrificed, even amongst the most wealthy classes of society, from the want of that special knowledge of nursing which can be acquired only by the most thoughtful application and training. *The Lancet* (Medical Journal) announced this little book as a remarkable publication, an interesting study for Physicians and Surgeons, a homily for women, and a guide for nurses. *The Medical Times* said, "No one but Miss Nightingale could have written such a book as the one we have before us on nursing."

But to return to the Barrack Hospital where Miss Nightingale was apparently overwhelmed by the additional cares, correspondence, etc., necessary for carrying out the sanitary reforms which she had initiated, and where all depended on her own active mind and energy, having to struggle against a host of powerful antagonists, we shall find that all this did not prevent her from taking her share in the fatiguing and painful duties of nurse-tending on the sick and wounded. On her first entering on these functions, the state of the Hospital was frightful. The medical men, the sisters, the nurses, all were swept away around her. Nothing appalled, she gathered more strength and energy in the midst of distress and woe. Miss Nightingale was seen everywhere and at all hours. She was frequently observed silently making her way at night through long ranges of the sick, with a little lamp in her hand, to see to the wants and comforts of those who were most dangerously ill. Often, alas! she was alone at this solemn hour, receiving the last thoughts for absent parents and friends, and offering

the last consolations to the dying soldier, thus uniting in her person all that is held most sacred : Family, Country, and Religion.

We must here pay due homage to all who devoted themselves so nobly, with Miss Nightingale, to these most trying and painful duties. The Sisters of St. John, those of Miséricorde and of Miss Sellon, must be particularly mentioned; for these holy women, accustomed to discipline, and well trained in their duties, rendered incalculable services; they were indefatigable, and their courage knew no bounds, for in their devotion and self sacrifice, they looked forward with joy to the glorious recompense of eternal bliss.

In following things in their natural order, we have been obliged to pass from camp life, to enter more particularly on the soldier's condition in the Hospitals. We must now return to our first researches, enquiring into the origin and causes of so much distress and suffering of the British army in camp. Without recapitulating the disastrous consequences, occasioned by the defective organisation of the Military Administration, at Malta, Gallipoli, Varna, and Eupatoria, we are obliged to refer to them again, since all the misfortunes which overtook the army owed their origin to the same want of provision and absence of administrative power, till almost the end of the war.

We have first to speak of the nature of the soil on which the army was encamped before Sebastopol. The ground was rock with clay, covered by a very thin layer of vegetable mould. The water, after the rains, could not penetrate the soil, but remained everywhere stagnant, converting the whole camp into a vast marsh. The roads became impassable, and the trenches were filled with thick muddy water. Secondly, the soldiers were not protected from the rain which filtered through

their ill-conditioned tents, so that the twelve or fourteen men, who huddled together to keep themselves warm, were always wet to the skin, and their clothes saturated with liquid mud. Such was the position of our poor soldiers, who had passed from twelve to twenty-four hours, and sometimes even more, in the trenches, undergoing enormous fatigue, and exposed to great danger. This was not all, for often after returning from their duty in the trenches, they were obliged to wade through clayey mud for a distance of five miles to get their provisions, which were frequently greatly deteriorated, and sometimes deficient in quantity. Nothing can raise the character of the British soldier higher, than the patience with which he bore all these hardships and privations. On no one occasion was there the least sign of insubordination, which so often arises from such disastrous circumstances, and is the utter destruction of armies.

The army had to suffer from the difficulties of procuring its provisions, in addition to all the hardships of its encampment; but the administration, far from being in fault, had proposed the establishment of dépôts of provisions. This was not done, for the simple reason that the beasts of burden of the administration were most imprudently taken by the military authority for the transport of ammunition, and thus, when the bad weather set in, the victualling became almost impossible. Such a misfortune as this could not have happened, if the British army had had an authority like that of the "Intendant Général" in the French army, in whose hands are concentrated all the different branches of the Military Administration, completely separate from, and independent of the service of ammunition.

We already know what were the deplorable consequences of such a state of things. The simple announ-

cement of the number of the sick will be a sufficient comment on the disorder which reigned in the army. There were three thousand five hundred men on the sick list in the camp before Sebastopol, and from seven to eight thousand in the Hospitals of the Bosphorus, out of the effective force of twenty thousand men. Of the remaining nine thousand, not one could be considered efficient. Such were the disastrous consequences of a defective administration! But how came it that the administration was so defective? The immediate consequences of such a state of things must have been evident to the most simple-minded person, and the advantages of a well organized administration were sufficiently demonstrated in the French army, to any one who would take the trouble to study it. The whole blame, as we have already seen, must be laid on the short-sighted calculations of our economists. How grievously they must have reproached themselves, when the state of the army could no longer be disguised, and they saw so many noble soldiers perishing from cold, hunger, and diseases, —the consequences of their rigid economy depriving them of the assistance of the most essential part of the military service—a good administration. Should not the lives of men, who sacrifice themselves for their country, be cared for? Should not the soldier be assured not only of the sympathy, but of the assistance, which all the resources of his country can procure? Can there be a more heart-rending spectacle, than to see these noble soldiers, after having gained a great victory and saved the honour of their country, lying, the dying and the wounded, in the most hideous confusion, abandoned amongst the dead on the field of battle? And this, from the want of the necessary means of immediately carrying off our wounded from this scene of carnage!

What would have become of our soldiers in such a

distressing state, had it not been for the administration of the French army, which so generously came to our assistance? Our men were making every effort to carry off their comrades from the field on stretchers, when the French "Train des Équipages" happily came to assist them in their interminable labour.

We are glad to take this opportunity of saying, that England can never acknowledge with too much gratitude the services which the Military Administration of the French army rendered our soldiers during the Crimean War. Monsieur l'Intendant Général Blanchot was unceasing in his kind assistance, often even anticipating the wants of the army. We cannot also forget the earnest endeavours of Messieurs les Sous-Intendants Pironneau and Le Creurer, who were anxious and zealous on all occasions to assist the army; but we must particularly mention Monsieur Le Creurer, to whom we owe the prompt arrival of five hundred mules, with their "Litières" and "Cacolets," to carry off the wounded after the battle of Inkerman. Many a British soldier owes his life to this timely and active assistance.

If it should be supposed that we have given an exaggerated accounts of the state of the army in camp and in the Hospitals, we would refer to the official documents which employ more powerful language than we do; but, as our principal object is to show the enormous difference there is between the services of a bad and a good administration, it was necessary to confine ourselves to as plain a statement as possible of the exhaustion and almost annihilation of the army, so that we may the more effectually contrast its admirable condition at the end of the war, when the provisions were regularly supplied, and the necessary hygienic measures fully carried out.

We are enabled to establish this contrast in the most

striking manner, by the quotation of the comprehensive and satisfactory answer given by Miss Nightingale, to this question from the Commission appointed to enquire into the Regulations of the sanitary condition of the army :—

“We have more information on the sanitary history of the Crimean campaign than we have of any other. It is a complete example—history does not afford its equal—of an army after a great disaster arising from neglects, having been brought into the highest state of health and efficiency. It is the whole experiment on a colossal scale. In all other examples, the last step has been wanting to complete the solution of the problem.

“We had, in the first seven months of the Crimean campaign, a mortality among the troops at the rate of 60 per cent. per annum from disease alone—a rate of mortality which exceeds that of the great plague in the population of London, and a higher ratio than the mortality in Cholera to the attacks; that is to say, that there died out of the army in the Crimea an annual rate greater than ordinarily die in time of pestilence out of the sick.

“We had, during the last six months of the war, a mortality among our sick not much more than among our HEALTHY Guards at home, and a mortality among our troops in the last five months, two-thirds only of what it is among our troops at home.

“The mortality among troops of the line at home, when corrected as it ought to be, according to the proportion of different ages in the service, has been, on an average of ten years 18.7 per 1,000 per annum; and among the Guards 20.4 per 1,000 per annum. Comparing this with the Crimean mortality for the last six months of our occupation, we find that the deaths to admissions were 24 per 1,000 per annum; and during

five months, viz., January to May, 1856, the mortality among the troops in the Crimea did not exceed 4.5 per annum.

“Is not this the most complete experiment in army hygiene?”

“We cannot try this experiment over again, for the benefit of inquirers at home, like a chemical experiment. It must be brought forward as an historical example.”

Thus Miss Nightingale shows that the army, which had been nearly annihilated by sickness and death, passed almost suddenly to a most healthy and admirable condition, under the influence of proper hygienic measures and an efficient administration, though the circumstances of climate, season, and war remained unchanged.

This rapid decrease of mortality from 60 per cent. per annum, during the first six months, to 4.5 per cent. (“4.5 per 1,000”) during the last five months, was a marvellous result!! Though the whole merit of this wonderful improvement cannot be attributed to Miss Nightingale alone, at all events the surprising success obtained in the Hospitals is entirely due to her powerful mind and direction, whilst the immense improvement in the camp must be attributed to the Sanitary Commission called for by Lord Raglan.

The powerful influence of Miss Nightingale was at first concentrated on the Barrack Hospital, but she was soon called on to give the same impulse and direction to the Hospitals in the Crimea. Typhus fever and Cholera were making the greatest ravages in the army when Miss Nightingale undertook her first voyage to Balaclava. The state of the army at this time was fearful. She hastened the construction of a great number of huts for the reception of the sick, and, assisted by Monsieur

Soyer, she had new kitchens established, and gave a new impuise to all the Hospital services in the Crimea.

It is curious to observe how rapidly Miss Nightingale overcame all the difficulties and embarrassments she had to encounter on her first arrival at Scutari. Her independent authority was preserved from the beginning by the careful avoidance of all discussions, and by the prompt measures which she took to supply all deficiencies without clashing with any other authority. Now that her influence was acknowledged by every one, we find her surrounded by all the homage due to her transcendant merit. She could go nowhere without receiving every mark of gratitude and respect, though she so studiously avoided every occasion for public demonstration. The military authorities, the medical men, the Commissariat officers, etc., hastened always to meet her, and were extremely flattered by her acceptance of their services in any of their special departments, so that her power was greatly increased and extended in every direction. Measures were soon taken to provide for the treatment of patients on the spot. Thus the painful journey to Balaclava and the often fatal voyage to Scutari were suppressed, and the agglomeration of sick, of which we have seen the frightful consequences, ceased.

The necessities of the service obliged Miss Nightingale three times to undertake the voyage to Balaclava. These voyages on the treacherous Black Sea, added to the overpowering fatigue and the deleterious atmosphere to which she so daringly exposed herself, at length exhausted her vital energies, and she lay prostrate, dangerously ill, in the Crimea, from whence she was obliged to allow herself to be carried back to Scutari. Even in this strait, when her physical powers were exhausted, her mental energy was still devoted to the

sanitary state of the army, and her powerful influence was maintained without interruption.

During one of her visits in the Crimea, Monsieur Baudens, who was then inspecting the medical service of the French army, had the good fortune to meet Miss Nightingale. In his "Mission en Orient," he says, "This delicate young lady, who was seen riding through the ambulances, visited the sick of the three allied armies with the same anxious care. When Typhus fever reigned in our camps, she made a present to the French and Sardinian ambulances of a very considerable quantity of Port wine, and preserves of all kinds."

As we have made mention of Monsieur Baudens' name, we will quote some of his observations on the British army in the Crimea, as they will assist us greatly in pointing out the ameliorations which brought about the marvellous change we have already mentioned. "The habits of cleanliness," he says, "are remarkable in the British army; the soldiers wash their linen in warm water, so as to have a change of linen twice a week."..... "The English camps were provided with every kind of comfort, so that the soldiers were preserved, in 1856, from Typhus fever and Scorbutic affections which ravaged the camps of the allies."..... "The British army passed the whole winter of 1856 in well-closed huts. Every morning, the floorings on which the soldiers had lain during the night, were raised, and, after being replaced, were covered with fine sand which was swept away again at night. *A stove well filled with coal was kept constantly burning, so that the ventilation from the roof could always be kept open.* Two huts served as reading rooms, in which were to be found, besides books, benches, tables, pens, ink, and paper."

We must here remark that a great part of the conveniences of these huts was furnished from Miss Night-

ingale's private purse. This was but a very small part of her generosity, which was extended also to the Hospitals where she caused amusing lectures to be given, and the attraction to be increased by magic lanterns, etc.

We continue our quotation. "The English," says Monsieur Baudens, "had very large tents for their Regimental Infirmaries during the summer. Each tent contained twenty-four iron bedsteads, with their night tables. The flooring was moveable and extremely clean. Each patient had a bedside carpet, and a Hospital uniform. The English ambulances were kept extremely clean. Such was not the case with our own."..... "This difference depends in great measure on the more important and independent position of the English medical man who exercises a greater authority in the execution of hygienic measures. The alimentary regimen differed also from that of the French ambulances. Tea, roast meat, and puddings were the principal food. The medical men could prescribe beer, wines of all kinds, rum, brandy, and anything they might think proper, with the precaution of ordering the extras the day before. In the ambulance stores, I saw even Champagne, which was useful in certain cases of vomiting."

From this description it might appear, that we were too lavish in procuring so much comfort for our soldiers in campaign. This would indeed be a great error. It is precisely when our soldiers are exposed to so many privations and sufferings, that they should be attended with every care, and that nothing should be spared to render their position as comfortable as possible under all circumstances. We cannot have a better example of the immense results to be obtained from such solicitude and care, than that which we have just produced of the British army. Not only did Typhus fever disappear from the English camp, but the soldiers remained per-

fectly secure from its infection, whilst the disease continued its ravages, by their side, in the French and Sardinian camps, but all the other diseases, which had till then caused so much mortality, disappeared also. This immunity from disease and economy of life obtained in the British army becomes almost incalculable in its results, when we look back on the enormous sacrifice of life which till then had taken place in the army. Miss Nightingale clearly demonstrates this, in one of her answers to the Commission before mentioned. “*During the ten weeks intervening between May 5th and July 14th, 1855, ninety-six per cent. of all the deaths from disease were of the classes usually considered mitigable and zymotic.* That is to say, that, granting that the four per cent. were not preventable, there might have been saved to the Commander of the Forces a large part of the ninety-six out of every hundred men he lost from disease.

The strength of the army and the success of war require that everything should be ready to preserve the health and contribute to the comforts of the soldier. Too much cannot be done to attain this object, for the greater the sum well spent, the greater the economy in a question of life or death, victory or defeat. When an army goes forth to war, the country should be assured that everything is provided for its success. Troops, that are not *always* prepared for war, are nothing better than an isolated band of soldiers. It is the Military Administration that make them an effective army, this Military Administration should always then, be prepared for war. Are not soldiers formed by discipline and exercise in time of peace? Should not the Military Administration be studied and perfected in all its branches in time of peace also? Our disasters in the Crimea should at least serve us as a proof that an army without

an effective administration is doomed to destruction. But through the medium of a good administration, all the resources of the country would be available, and when our noble soldiers go forth to war we might confidently look forward to their success and glory.

We may perhaps be expected to specify the causes, to which we attribute the happy change which took place in the sanitary state of the British army. First, then, the victualling became more easy, and the supplies more abundant; for this we have only to refer to what has already been said. Secondly, better arrangements were made with regard to hygienic measures. Here some further explanations may be necessary.

Two questions naturally arise from this subject,—the first is, how better arrangements could exercise so great an influence on the sanitary state of the British army. This is easily explained. By draining the camp and carefully carrying off everything from which unwholesome emanations could arise, by providing a more healthy and convenient lodging for the soldier, by preventing the crowding together of the sick, and by the establishment of a good system of ventilation, all causes of evil were removed.

Enough has been said on the quartering of soldiers, and of the crowding together of sick in Hospital, but with regard to ventilation some further observations are required; for we have learnt, from long experience, that the necessity of ventilation either meets with an obstinate resistance, or when the necessity is admitted, artificial and illusory means are often employed to procure it.

Ventilation is the means we employ to obtain the renewal of air in our dwellings. This renewal of air is necessary for our respiration. As respiration is one of the principal functions of life, we might say *the principal*, so ventilation is the first condition of health. All

the functions of organic life receive their impulse from the quality of the air we breathe ; whence arises the necessity of continually renewed pure fresh air for the support of life. If the air we breathe be more or less unfit for the support of life, all the functions of the human frame must be more or less impaired. In all cases of illness, then, pure fresh air must be procured, to reanimate organic life, before any kind of medication can be attempted.

We may be told that there is nothing particularly new in the discovery that we live by the air we breathe. This is true, but it is true also, that though pure fresh air is admitted by every one to be the *pabulum vitæ*, vast numbers of sick, in every class of society, suffer greatly, and very frequently die, from the stupid precautions which are taken to deprive them of the breath of life.

We will now pass on to the second question. By what means were better and more comfortable quarters obtained, putting an end to the crowding together of the men, and procuring good ventilation ? By the construction of huts on good hygienic principles, and in a sufficient number. Monsieur Baudens, in general terms, speaks very highly of these huts, and on examining them more attentively, we shall find that the plan of their construction provided at once for all deficiencies.

The English huts were all formed of wood, after the same plan, the interior being made comfortable for the men, and more particularly so for the sick. They were placed on elevated spots, and isolated from each other, so that the external air circulated freely round them, and they were all provided with moveable boarded floors. Such conditions require no comments. The huts were spacious for the number of men, and even more room was given to the sick. Three hundred and

thirty cubic feet were allowed for each soldier, and five hundred for every patient (1).

Thus the most efficacious measures were taken to prevent any overcrowding, and ventilation was well established. There were six large openings, and sometimes even more, in the roof of each hut. These ventilators were always left open, so that the more the air was heated in the interior, the more it was rapidly renewed by the attraction of pure fresh air from without. There were always three windows, and often more, on each side, according to the length of the hut. There were also two doors, one at each end, and a small window on pivots over each door. The windows and doors were opened every day, so as thoroughly to renew the atmosphere of the whole building. With these explanations, the causes to which the wonderful improvement in the sanitary state of the British army are to be attributed, become sufficiently evident. But this improvement becomes even more remarkable, when we reflect that the British army, which had suffered so much until then, enjoyed an absolute immunity from Typhus and its contagion or infection, at the very time that this terrible disease continued its fearful ravages in the French and Sardinian camps. It is impossible to account for this marvellous improvement by any other means, than the great change and amelioration which had been made in the soldiers' quarters. For whilst the two allied armies remained in the same condition that they were, nothing bettered by the huts they had constructed, the most perfect ventilation was established in the English huts, and the most important hygienic measures were carried out with the greatest energy and promptitude.

(1) Dr. Bryce, *England and France before Sebastopol*. (Cubic space is an illusion unless accompanied with free ventilation.)

Almost all the French and Sardinian huts were built with mud plastered on branches of trees entwined on stakes driven into the ground. There was no flooring but the bare ground, which was always saturated with animal matter and filth of every kind. These were very bad conditions for the soldiers' repose and shelter; for the sick it was much worse. It was impossible to make these huts clean and fresh. They were built by choice on low ground; pits were often dug to receive them. All these precautions were taken from the unreasonable and mistaken fear of the effects of pure fresh air. Could anything be more uncomfortable and more unhealthy?

The overcrowding existed in all the huts; and in the ambulances the men were packed together without any consideration for air and space. As the number of the sick in the French and Sardinian camps increased, they were necessarily more and more crowded together in these miserable ambulances. The number of sick in the French army during the last six months of the occupation rose to 73,422. Is not the agglomeration of this enormous number of sick in the few huts employed as ambulances a frightful example of overcrowding? As for ventilation, there was none; and with regard to ventilators in the roof, there was no idea of anything of the kind. There were three windows on one side of each hut, with a door, and a small window above it, at one end of the building. These doors and windows were always kept closed, and even if they were opened, the vitiated atmosphere could not be completely cleared out from the interior. As there was no means of introducing pure fresh air, it was impossible to renew the atmosphere of these huts, which consequently became more and more saturated with deadly miasmata. Such was the pernicious state of the atmosphere in all the huts; but in the ambulances, where men suffering from Typhus

fever, Dysentery, etc., etc., were crowded together, they were a constant source of infection to each other. Their breath, the emanations from their bodies, their bedding, the ground, and the walls of their huts, were all saturated with putrid animal matter. Could these ambulances be anything but the foci of the most virulent infection?

We can give only a faint idea of this horrid state of things. More than half (73,422) of the French army (142,391 men) were in Hospital; and of the remainder scarcely a man was capable of bearing arms. During the month of February alone 20,800 sick were received in the ambulances, and *almost all of them died*. The exact number of deaths was probably not known, at all events it was never published, that we know of.

How was it that the British army attached so much importance to ventilation, and escaped this plague in so marvellous a manner, whilst the French and Sardinians were nearly exterminated? The study of the habits and customs of different people will account for this, for all people carry their habits and customs with them wherever they go.

In England, the predominant principle in the construction of all Hospitals is ventilation — the free circulation of pure fresh air in the interior of the buildings. The wards in the London Hospitals have several direct communications with the external atmosphere, in addition to the open chimneys and windows. In St. George's Hospital, there is a large opening through the roof above each staircase, so that the atmosphere of the staircases and passages is continually renewed, and none but pure fresh air can penetrate the wards even from the interior of the building. With such practical ideas on ventilation, it was quite natural that the British army should carry

out the same principle in the construction of their huts.

In France and in Italy, on the contrary, there is a perfect horror of fresh air. It seems ridiculous to say, that even in these countries, no one can deny that air is necessary for the support of life. Is it not then inconsistent, that, in these countries, every precaution should be taken to prevent pure fresh air from penetrating into their Hospitals, even when these establishments are built on the best plans, and with the special object of ventilation? This absolute horror of pure fresh air, which exists at all times, and in every class of society, is quite sufficient to account for the absence of all care for ventilation in the construction of the French and Sardinian huts.

The question of ventilation has been practically solved in the Crimea, and on so large a scale that we trust the disastrous experiment may never be repeated. May we, however, hope that this lesson, in which the lives of thousands, and often the honour of nations, are at stake, may not be forgotten? If ventilation has proved itself of such vital importance in the temporary huts of the Crimea, is it not of still greater importance in the permanent Hospitals? We have seen that nothing can be more conducive to the restoration of health than the free circulation of pure fresh air in the interior of Hospitals. Yet we find that this essential condition is not attended to in the Hospitals of Paris, and the attention of the Académie Impériale de Médecine has been roused to enquire into the mortality that undoubtedly arises from this cause. Here again, as on all occasions, we find the voice of Miss Nightingale raised in the cause of humanity. On the 22d of April, 1862, we had the honour of addressing the following letter to the Académie, on the sanitary state of the "Hôpital de Lariboisière," communicating Miss Nightingale's opinion on the subject.

“ On examining the magnificent plans and excellent arrangements of this fine building, guaranteed by the greatest authorities (Gueneau de Mussy, Messieurs Louis, Rayer, J. Cloquet), we find that the principle by which these gentlemen were guided was that of ventilation in as simple and as perfect a manner as possible. This *natural* ventilation is now replaced by very ingenious and expensive systems of *artificial* ventilation.

“ I have just received a letter, dated London, April 12th, from Miss Nightingale, a very great authority for me. Miss Nightingale says, ‘With regard to the very high mortality of the Lariboisière, it is perfectly well known here. Four years ago, the *compte-rendu* showed it to be one of the most unhealthy of Hospitals. The causes were fully discussed then and by persons intimately acquainted with it. The result was, that the unexpected mortality was due neither to site nor to construction, nor to overcrowding, but to very bad ventilation.

“ ‘Hot air is altogether objectionable for human beings. It keeps the body in a continually relaxed state. The tonic of fresh air is denied to the sick, who are, as it were, in a constant state of being cooked in a cool oven.’ (1)

“ Why not have courage, and introduce open fire-places, and air the wards from without at the natural temperature?

“ Try it on one pavilion. The want of ventilation in the Lariboisière is the worst I ever met with.

“ Ventilation *with* warm air is one great mistake.

“ Radiated heat, and regulated admission of fresh air, with shafts for removing foul air, would cure the Lariboisière. Nothing else will.

(1) The latter part of this letter was not transmitted to the Académie.

“ The expression ‘ le Versailles de la Misère,’ is terribly true. Let it not become proverbial.

“ While we are striving to introduce into and force upon England the pavilion construction for Hospitals, which is derived from France, the French are forcing it into contempt by their abominable *artificial* ventilation, and thus actually thwarting a progress which we acknowledge to be started by them.”

Our subject has led us to compare the French with the English huts in the Crimea. It is very curious, but we shall be able to establish the comparison between the huts built by the French themselves in Algiers, and in the Crimea, with the same advantage. We allude to the huts called “ les Baraques de l’Hôpital du Dey.” These huts were quickly run up in the beautiful garden of the Dey, soon after the occupation of Algiers. This garden is admirably situated on a little elevation at the foot of high mountains, on the border of the Mediterranean. The huts were formed of planks, raised on masonry, above the ground, with wood floors, and several windows on each side.

Though considered quite as temporary constructions, they lasted upwards of twenty years, and we believe that some of them still exist. They were threatened with demolition on several occasions, but were always allowed to remain, *because it was pleaded that the patients recovered more quickly, and that the mortality was less in these huts than in the regular Hospitals.*

We account for this great advantage by the air which penetrated freely into every part of the building, through the chinks which existed between the boards, thus *accidentally* obtaining the same salutary effects as from the ventilators in the roofs of the English huts in the Crimea.

Why did not the French obtain the same advantages

from their huts in the Crimea, that they had for so many years experienced in Africa? They *could* not, because the reason why the “Baraques de l’Hôpital du Dey” were so superior to others had passed unperceived; and the horror of pure fresh air prevented them from appreciating the principle of ventilation. The plan and mode of constructing the huts in the Crimea were consequently opposed to the theory of ventilation.

We must confess that we ourselves have derived immense assistance from ventilation, under circumstances which we were far from appreciating at the time. This occurred in January, 1846, at Sétif, Algeria (1). There were 2,332 men sick from the effects of cold; 4,800 of these were cases of partial asphyxia, with slight local affections. They were treated in the barracks, and recovered in a short time. Of the remaining 532, all of them cases of the most serious nature, which were admitted to the Hospital, 477 required medical treatment, 19 died; 55 were surgical cases, 46 of which were amputations, 3 died. This was considered an immense success; but to be enabled to appreciate it, we must take into consideration the difficulties which asphyxia from cold with local mortification opposes to the vital power necessary to general reaction, and to the cicatrization of wounds of this nature, particularly in cases of amputation. This accounts for the frequent failure of all our efforts under similar circumstances. And here we must take into consideration the fatal consequences of the crowding together of so many patients, with the fœtid emanations from their mortified wounds.

We have only to refer to the war in the Crimea for a

(1) Reference may be made to our “Relation Médico-Chirurgicale de l’Expédition du Bou-Thaleb.” (*Mémoires de Médecine, de Chirurgie et de Pharmacie militaires*, vol. XVII.)

terrible example of this nature. Monsieur Scrive says that with the thermometre at 5° below zero, on January 4th, 1855, there were 2,500 men in the French ambulances, and that 800 of these died. He moreover says that all the patients sank and died after amputation, so that he was obliged formally to forbid every kind of operation.

To what, then, can we attribute our great success in the treatment of the 532 cases, which were certainly in themselves of a much more alarming character than those in the Crimea? *To ventilation.* If our patients had not been accidentally placed in the most favourable condition in this respect, all the efforts of medical science would have been of no avail. The overcrowding was frightful. Straw mattresses were put close to each other, and scarcely any room was left to get near the patients. All the patients had foetid suppurating wounds, and, huddled together as they were, Hospital gangrène, and Typhus were imminent.

Under the influence of so unfavourable a combination of circumstances, it is not possible to attribute the success of the treatment to any other cause than the salutary effects of ventilation. *Ventilation is the only preventive of Hospital diseases.*

The Military Hospital at Sétif is admirably constructed, but it was full, and our patients had to be accommodated with a building which appeared, at first sight, the most unfit for Hospital purposes. It was nothing more than the shell of a building, roofed in, and with boards put together in the most imperfect manner for the flooring and stairs. There were no ceilings, so that the air circulated freely through the tiles and the whole building. The atmosphere of the wards was in this way continually changed, and as the temperature was always below freezing point, large cast-iron stoves were kept

burning, and thus the circulation of the air was greatly accelerated. Though ventilation is the principle without which no good can be effected, everything else must be done to render the sanitary condition as favourable as possible. The first thing to be done was to separate the worst cases from the others, and to give them more space; all the wards were cleaned every day with the greatest care, and the doors and windows left wide open, whilst all the patients that could be moved were taken out. We are convinced, and we trust our conviction will be accepted by every one, that the immense success in the treatment of our 532 cases of asphyxia from cold was entirely due to the active circulation of fresh air from without. Had it not been for this accidental circumstance, we should not have been more successful in Algeria, than our confrères were in the Crimea, for our patients were in a much worse condition than theirs.

We have been induced to give the foregoing examples of the immense advantages to be derived from ventilation, for, as we have already seen, we must attribute the immense improvement in the sanitary state of the British army in the Crimea to this cause. We have felt it our duty to give all possible development to a subject of such extreme importance, and before concluding this little pamphlet we must profit by the opportunity, to make a few remarks on the general application of ventilation, more particularly to Paris.

This beautiful city, which every one admires with ecstasy, increases in grandeur and magnificence every day, whilst at the same time everything is done to improve its sanitary condition. Yet this magnificent city is frequently stigmatized with the reputation of being unfavourable to ladies in their confinements, and to patients who have undergone serious surgical operations.

Paris has acquired this unfortunate reputation from the horror of fresh air with which almost all the inhabitants seem to be possessed. Every possible means is employed to prevent fresh air from penetrating the sick chamber. To this, and to this alone, we must attribute by far the greater part of the mortality from Typhus and Puerperal fevers in the city of Paris. These terrible diseases, which excite such just alarms, are not only modified in their natures, but they are disarmed of their most fearful power, that of contagion, by good ventilation. Yet we find these dreadful diseases frequently revived in the Hospitals and public establishments from the absolute want of ventilation. No other cause need be sought for the Typhus fever which raged so violently in the Colleges of Lille, Maubeuge, Stenay, Gray, St. Etienne, Tulle, and lately also in the Military College of St. Cyr. Assuredly we do not mean to say, that the state of the external atmosphere is not a matter of the highest importance; but it is well known that the absence of every kind of ventilation in the "Salles d'étude," or Class rooms, and in the "Dortoirs," or Bed rooms, was the direct cause of Typhus fever in the Military College. We must add that no benefit whatever can possibly be expected from the immense works which have been undertaken for the drainage of the country around the College, unless a good system of ventilation is established within. What good can all this drainage do, if the young men continue to breathe a corrupted atmosphere in the interior? We may ask the same question concerning the city of Paris. Of what use are all these magnificent sewers, these large boulevards, these beautiful gardens, fountains, etc., etc., if people will obstinately breathe nothing but a corrupted atmosphere in their apartments, and never allow any pure fresh air to enter the sick chamber? It is as ridi-

culous to pronounce Paris an unhealthy city, because people will expose themselves to such dangerous illnesses from their own fault, as to say that the magnificent mountains of Switzerland are unhealthy, because some poor stupid mountaineers might have suffocated themselves in hermetically closed chalets.

In concluding our little pamphlet, we must express a hope that the efforts we have made to bring forward questions of the highest interest and importance may attract the attention of eminent persons, and thus hasten the progress of reforms of the most urgent character.

Miss Nightingale has necessarily occupied the most prominent position in our account of the Crimean War; we must therefore say a few words on the termination of her glorious mission. Without doubt our heroine must have enjoyed the grateful satisfaction of seeing all her efforts crowned with the most perfect success. But if her constant humility, in the midst of all her glorious deeds, made her consider herself only a submissive instrument in the hands of God, and unwilling to admit of any personal merit, she was soon rewarded by the fervent gratitude of the whole army and nation.

Towards the end of the war the British nation wished to offer a spontaneous testimony of their gratitude and admiration to her, who had accomplished all that could be done by the exercise of powerful genius supported by true Christian heroism.

From the *Times* of December 24th, 1855, we extract the following: "At a meeting held at Willis's Rooms, on Thursday, November 29th, His Royal Highness the Duke of Cambridge, K.G., in the chair, the following resolutions were unanimously agreed to:

“1. Moved by the Marquis of Lansdowne, seconded by Sir William Heathcote, M.P. : ‘That the noble exertions of Miss Nightingale and her associates in the Hospitals in the East, and the invaluable services rendered by them to the sick and wounded of the British forces, demand the grateful recognition of the British people.’

“2. ‘That it is desirable to perpetuate the memory of Miss Nightingale’s signal devotion, and to record the gratitude of the nation, by a testimonial of a substantial character ; and that as she has expressed her unwillingness to accept any tribute designed for her personal advantage, funds be raised to enable her to establish an Institution for the training, sustenance, and protection of nurses and Hospital attendants.’

“3. ‘That to accomplish this object on a scale worthy of the nation, and honourable to Miss Nightingale, all classes be invited to contribute.’ ”

The army was foremost in the subscription for this noble testimonial, and £30,000 were almost immediately collected.

Miss Nightingale’s departure from the Crimea was accomplished with the greatest secrecy ; and her arrival in England was so thoroughly private, that the public were disappointed in their desire to receive her with the greatest demonstration of joy and gratitude, by learning that she had been honoured by an invitation to Balmoral, and had already been staying there for some days. The Queen desired to express her personal satisfaction, and to hand to Miss Nightingale, as a mark of Her Majesty’s highest approbation, a superb cross of St. George, with the crown and the initials of the Queen in diamonds. The cross is to be worn rather as an order than as a simple ornament, and, with various allegories, bears the motto, “Blessed are the merciful.”

Soon after Miss Nightingale's departure from the Crimea, an immense marble cross was raised on the height of Balaclava, so as to be seen at a great distance at sea. On the foot of the cross is inscribed, "Lord have mercy upon us," which is repeated in Russian and in French. It was soon known that this sacred monument had been raised to the memory of the dead by the pious care of Miss Nightingale.

This short treatise was in the printer's hands when our attention was called to a new work by Miss Nightingale: her "*Observations on the Sanitary State of the Army in India.*" A most admirable book, condensing into a small space all the most important points of the Stational Returns of the Commanding, Engineering, and Medical Officers of India, and bringing before the public, in her clear, laconic style, all the consequences of the absence of proper hygienic measures, as well as of the neglect of intellectual occupation for the men in India. The national feeling has been roused by Miss Nightingale's observations, and the most important reforms are become not only urgent, but compulsory—the sanitary condition of the whole country will be improved, and the soldier will be better formed and prepared for the exigencies of war. Thus India, instead of being the burial-ground, will become the nursery of the British army. This new work will render more service than can at once be appreciated, and, with the History of the Crimean War, will transmit Miss Nightingale's name to future ages as one of the greatest benefactors of her country.