

EO 317



NAWAB SALAR JUNG BAHADUR
• INTRENCHING AN OUTPOST.

PRACTICAL TREATISE
ON
STRENGTHENING AND DEFENDING
OUTPOSTS,
VILLAGES, HOUSES, BRIDGES, &c.,
IN REFERENCE TO THE
DUTIES OF OFFICERS IN COMMAND
OF PICQUETS,
AS LAID DOWN IN THE FIELD EXERCISE AND EVOLUTIONS OF THE ARMY.

By J. JEBB, C. B.,
Lieut.-Colonel, Royal Engineers.

RE-PRINTED FROM THE LONDON EDITION OF 1853.
BY MESSRS. PHAROAH AND CO., ATHENÆUM PRESS, MOUNT ROAD.

1855.

TO THE
SUBALTERNS
OF
THE BRITISH ARMY,
• ,
THIS LITTLE TREATISE,
•
DESIGNED TO ASSIST THEM IN THE ACQUIREMENT
OF A PRACTICAL KNOWLEDGE OF
• •
AN IMPORTANT DUTY,
IS INSCRIBED BY
•
A BROTHER OFFICER. 4

P R E F A C E.

At page 302 of the King's Regulations for the Field Exercise and Evolutions of the Army,* it is laid down under the head of the "Duty of an Officer on Picquet," that his first care "ought to be the Strengthening of his Post by constructing Abattis, Breastworks, &c., and especially when the Defence of a Bridge or Ford is intrusted to him, he ought never to omit to throw up something of the kind to protect his Men, and impede the advance of an Enemy."

This Duty is further enforced in a stronger manner at page 317, where it is urged that "the Defence of the Posts should constitute a most important branch of every Officer's study, for upon Service all are liable to be detached and placed in charge of Posts, with orders to defend them;" and it is added, "In almost every case of this description, some measures must be taken to protect the Party from being overcome by a Superior Enemy; while if placed to Guard a Bridge, or Watch a Ford, an Officer who neglected to Strengthen his Post by every means in his power, and to make the very most of his situation, would incur the hazard not only of his own destruction, but of entailing some disaster on the Force from which he was detached."

• It is to be apprehended that few Young Officers give themselves the trouble to consider how these orders are to be carried into effect, until they find themselves in some dangerous and critical situation in the Field, and the necessity arises for complying with them.

The following little Treatise is offered with a view of suggesting some Definite Ideas on the subject, and facilitating the Acquirement of a little Practical knowledge of a Duty, which, from a long interval of Peace, and the few opportunities that occur of giving Men and Officers any practical Lessons in the Field," does not appear to excite that interest "in the Service generally, which its importance deserves."

* This Treatise was first published in 1836, and the Regulations referred to are those which were in force at that time.

My object has been, as far as possible, to discard all the Technicalities of Field Fortification, and not to enter further into the subject than merely to give a concise and familiar explanation of the nature and details of such **TEMPORARY WORKS AS COULD BE COMPLETED IN A FEW HOURS**, and for the construction of which any Officer in charge of an Outpost would justly be held *Responsible*. In thus restricting myself, however, I have considered it desirable to enter more fully than is usual, into all the minor Details of Execution, and other arrangements for setting men to work ; for unless these points are well understood, much valuable Time will of necessity be wasted before commencing Operations, and much confusion will probably attend the progress of them.


I do not claim to have originated anything new in these few pages, for the subject of which they treat has been written threadbare, by abler pens than mine : my only aim has been to condense a little Information into a Form that would be more easily got at, and understood, than where it is now to be found in volumes of Science, more immediately addressed to other branches of the Service, and generally mixed up with matter foreign to the purpose.

I was led, in the first instance, to commit a few memoranda to paper on this subject, after making a fruitless search for some Practical Work which had reference to Duties so pointedly enforced, without being Scientific, and which I was desirous of placing in the hands of a young Relative, who had just then joined his Regiment : I have since been induced to add to, and arrange them in their present Form, and thus to make an attempt to supply the deficiency, in the sincere hope that a few pages, explanatory of these Duties, may prove useful to the Service. •

J. J.

ROYAL ENGINEER ESTABLISHMENT, CHATHAM,

8th May, 1836.



PREFACE TO THE SECOND EDITION.

IN preparing a Second Edition of this little Treatise within so short a period of its first publication, I have had the satisfaction of reflecting that the reception it has met with in the Military World, justifies the idea I had formed that some Work of the kind was wanted, and that it has been acceptable to the Service, in the form in which it appeared. I have therefore made but few alterations; but it is proposed to publish separately a Second Part, on the ATTACK OF MILITARY POSTS, which it is hoped, in conveying a familiar Explanation of the Subject, will also tend further to elucidate the corresponding measures of Defence, which are treated of in these pages.

J. J.

CHATHAM, 14th June, 1837.

PREFACE TO THE THIRD EDITION.

THE object of the following pages has already been sufficiently explained. "An enlightened Public," having called for another edition, I again put myself at their mercy. In doing so, I would gladly have endeavoured to revise the whole, and render it more worthy of the subject I have endeavoured to explain, but "my hand is out." The years that have passed have been devoted to civil duties, and have brought with them, no increase of experience in the Defence of Outposts. I therefore again commit this little Treatise, with all its pristine defects, into the hands of the Subalterns and Soldiers of the Army, for whom it was originally written.

J. JEBB,

Lieut.-Colonel Royal Engineers.

LONDON, 16th March, 1848.

CONTENTS.

CHAPTER. I.

	Page.
GENERAL RULES AND PRINCIPLES which regulate Defensive Works—Flank Defence, how obtained in an Intrinched Position—Application of the same Principle in Strengthening a Town or Village—How applied in a Detached Post—Necessity of securing the Flanks enforced—Clearing Obstructions when they interfere with the Defence—Advantages of good Communications—Creating Obstructions—Observations on the Profile of Temporary Works—Disadvantages of ground that is commanded, &c.	4

CHAPTER II.

PARTICULAR CONSIDERATIONS which influence the selection of a Military Post—Circumstances under which Outposts require to be strengthened—Description of Posts classed under three heads—Points requiring attention in the selection of the Post—The facilities it offers for being rendered Defensible—Nature of the Materials on the Spot, and the Soil—Its general Situation and Figure—The Object it is expected to fulfil—Its Distance from the Enemy—Number of Men for its Defence, and for Work—The Time there is to devote to it, &c.	9
--	---

CHAPTER III.

DETAILS OF EXECUTING BREASTWORKS, FRENCHES, &c.—Description of Tools and Stores required for the purpose—Proportions of each under different circumstances—Value of Sandbags—Division of Labour—Employment of Inhabitants—Average Work of an ordinary Labourer—Distribution of the Men—Proportionate Cover that may be obtained in a given time, and Remarks on the Form in which to arrange the Profiles, so as to secure all the advantages—Double manning Breastworks—Width of Ditches—Considerations on regulating the Profiles of Works—Communications through Breastworks, &c.	14
--	----

CHAPTER IV.

DEFENCE OF HEDGES, WALLS, WOODS, &c., illustrated by Sketches of various expedients and modes of rendering them available for purposes of Defence—Principles on which Loop-holes should be constructed, and mode of executing them—Tools to be used—How to secure the Defenders of a Wall from Artillery Fire—STOCKADE WORK, different modes of constructing it—How to render a Wood or Copse defensible	28
--	----

CHAPTER V.

OBSTRUCTIONS, essential to a vigorous Defence—AN ABATTIS, and mode of making it—PALISADES AND CREVEAUX DE PRISE—their general dimensions, and the best way of fixing them—TRAP HOLES, and other temporary Expedients—Time of executing the above, and distribution of the Workmen—Collecting Materials, and the description that will be most useful, &c.	36
---	----

CHAPTER VI.

OF PLACING BUILDINGS IN A STATE OF DEFENCE.—Different circumstances under which they may be required, and corresponding measures—Chief points to be looked to in selecting the Post—Considerations as to size—Mode of estimating the number of men proper for the Defence—Details of the various Works to be executed in the order of their relative importance—Collecting Materials—Barricading doors and Windows—Levelling Obstructions—Making Ditches in front of the Doors, &c.—Cutting Loop-holes—Making Communications—Placing Abattis, &c.—Constructing Tambours—Defence of the Outbuildings, &c.

CHAPTER VII.

OF PLACING A VILLAGE IN A STATE OF DEFENCE.—General requisites it should possess as to its position, the nature and disposition of the Buildings, Extent, &c.—Circumstances under which it may require to be intrenched—Measures to be pursued for obtaining immediate Security—Modes of applying the General Principles of Defence in the taking advantage of Local Objects—Barricades, Obstructions, &c.—Difference in the measures which require to be pursued *outside* and *inside* the Post, with reference to clearing away existing Obstructions—Importance of such Posts—Selection of the Keep, &c.

CHAPTER VIII.

ARRANGEMENTS FOR THE DEFENCE OF A BRIDGE.—Importance of a successful Defence—Circumstances that will influence the general Plan and mode of proceeding—Example and detail of laying out and executing Works for the Defence of a Bridge—Watching a Ford, mode of disputing the Passage, &c.

CHAPTER IX.

DEFENCE OF AN INTRENCHMENT.—General dispositions to be made—in what respect it differs from the ordinary routine of Service in the Field—Necessity of having Support, and instilling Confidence—Disposition of the Force, and position of the Artillery—Precautions to be observed—Changes in the dispositions, when the Attack becomes defined—Qualifications required in those who have to defend a Parapet—Comparison with the fights “of the olden times,” &c.

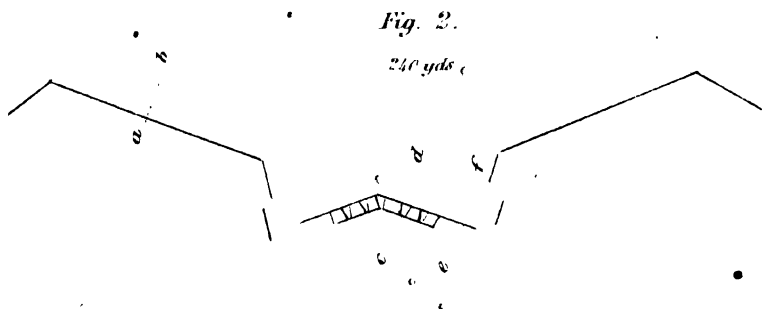
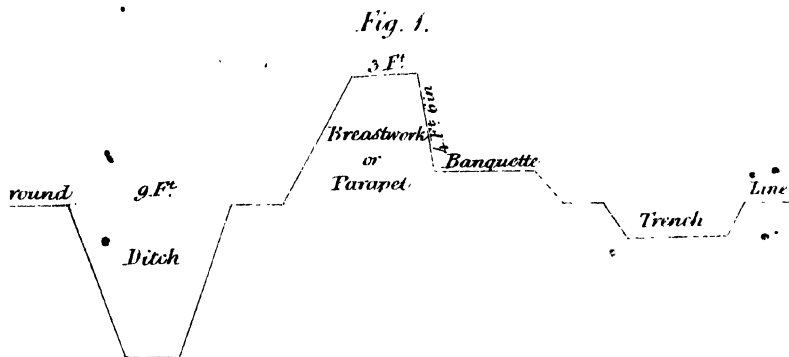
CHAPTER X.

GUARDING AND DEFENDING A HOUSE.—General Dispositions to be made, and requisite Explanations—Use of Rockets and Grenades—Defence of Loop-holes—Guard on the Doors—Reserve—Communications—Retreat to the Upper Stories, and Defence—What measures of the Assaultants should be regarded as “*Notice to quit*.”

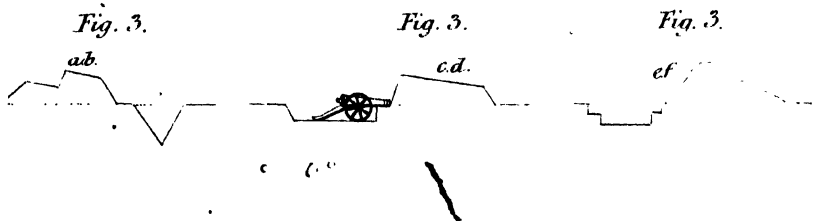
CHAPTER XI.

GUARDING AND DEFENDING AN INTRENCHED VILLAGE.—To avoid a Surprise, and to repel an Attack, shown to be the mainspring of all Defensive measures—Precautions and Arrangements for securing them—Objects to be attained, and Evils to be avoided in seeking them—Distribution of the Forces and their Quarters—Commanding Officers to have ready means of communicating Orders to all their Detachments—Sorties—Retreats—Defence of the Keep, &c.

PLATE I.



Sections of the above.



ON THE DEFENCE OF OUTPOSTS.

DEFINITIONS, &c.

1. THE object of all Defensive Works, is to place a small Force under such advantages of situation, as to be able to cope with a larger one.

2. AN INTRENCHMENT may be said to be any continued Obstacle, from behind which Men may Defend themselves with comparative safety ; or which keeps an Enemy at a distance from them ; and it may be of two kinds ; NATURAL OR ARTIFICIAL.

A NATURAL INTRENCHMENT may be a steep Bank, a Fence, a River, or a Marsh, &c., if they fulfil the above conditions.

AN ARTIFICIAL INTRENCHMENT usually consists of a bank of earth called a Breastwork, or Parapet, formed out of a Ditch, dug in front or rear of it.

The Figure and Extent of an Intrenchment,—the Thickness, Height, and Description of its Covering mass or Breastwork,—and the Breadth and Depth of its Ditch, depend entirely on circumstances to be hereafter explained.

3. A BREASTWORK OR PARAPET is the Covering mass of an Intrenchment, and it may also be Natural or Artificial ; its use is to screen and protect the Defenders from the Missiles of an Enemy, and enable them to give their Fire in comparative security. FIG. 1.

To effect these objects it should be 6 or 7 feet high, so as to give Cover to a Man when standing upright, and there should be a step, usually called a *BANQUETTE*, on which he can stand, to Fire over the top of it with convenience.

The Thickness of a Breastwork must be proportioned to the Missiles it is intended to resist. Thus, from 7 to 8 feet of Earth will resist round shot from Field Artillery, and 1 foot of Earth or 6 inches of Timber, on an average, will be Musket-proof.

4. The *PROFILE* or *VERTICAL SECTION* of a Breastwork or Parapet, by which is meant its Thickness and Height, and the Slopes it may have to the Front and Rear, may be of any form, varying of course with circumstances of Ground and Situation, and the Materials it is made of. FIG. 1.

5. A *TRENCH*. Any little Ditch made *behind* a Breastwork, for men to stand in for Cover, may be called a Trench, to distinguish it from a DITCH placed in *front* of a Breastwork, as an Obstacle to an Enemy. In either case the Excavation may furnish the earth for the Breastwork or Parapet if required. FIG. 1.

6. A *BANQUETTE* is a step on which Men stand to Fire over the top of a Breastwork or Parapet; it should generally be placed about 4 feet 6 inches below the top, which has been found a convenient average height for that purpose. FIG. 1.

7. A *BERM*. To prevent the Earth of which a Parapet or Breastwork is formed, from falling into the Ditch, a small space one or two feet broad is left between them, which is called a *BERM*. FIG. 1.

8. STOCKADE WORK, is rough substantial close Palisading, furnished with Loop-holes, and a Step or Banquette to the front. FIGS. 35 to 40.

9. AN ABATTIS is an Obstacle formed by felling a number of Trees, and laying them side by side, with the Branches well pointed and turned towards the Enemy; but in Woods, Copses, or Shrubberies, these forms may be dispensed with, and a very effective Abattis may be made by felling the Trees and Brushwood in all directions, so as to encumber the ground as much as possible.

10. A LOOP-HOLE is any opening which is made or arranged for Firing through with a Musket. No. 68. FIGS. 29 to 34.

11. A TRAVERSE. Any Mass which is interposed to protect men from Fire, which comes in any direction except their Front, is called a TRAVERSE. No. 132.

CHAP. I.—GENERAL RULES AND PRINCIPLES.

12. In all Fortification, whether of a Permanent or Temporary nature, each Line as far as is practicable should be seen and protected by another, within the effective range of Musketry or Artillery, according to the arm that is to be used for its Defence; and these Lines are best disposed when they stand Perpendicularly to each other, which is the direction that men generally fire in. It will be obvious, that when two Lines are so placed, if one of them should be attacked the Assailants would be exposed in Flank to the Fire of the other. This is what is meant by FLANK DEFENCE, or by one line being so situated as to FLANK another.

Thus in an Intrenched Position of any extent, Guns would be placed on the most advantageous points in the general line of the Works, and in the intervals between them, Lines for Musketry would be so disposed as to FLANK EACH OTHER, and to afford a CROSS FIRE over the ground in their Front. FIG. 2.

13. The same Principle applied in arranging Defensive Works in a Town or Village, would lead to the occupation of several Houses standing at right angles with each other, and to the construction of Breastworks across the Streets, or in such situations as would give a FLANKING FIRE along the front of those Houses, which were not seen one from the other in that direction.

14. Applied to the Defence of an isolated Country House or Farm, the relative position of the Outhouses,

Stables, and Garden walls would be studied, and if they did not afford Flank Defence for each other, it would be sought in the construction of some Temporary Work of a nature to be hereafter explained.

15. The same Principle may obviously be applied in Broken Ground, or in a Country intersected with Fences; the general contour and features of the former, and the general directions of the latter, one with another, would determine the Plan of Operations in reference to it.

16. In an Intrenched Line or Position, not inclosed in the rear, the situation and security of the FLANKS or extremities of the Line is a most important point; for they are more liable to be turned by a judicious Attack than those of an Army, without the advantage of being moveable.

Should they of necessity be Open and Unprotected, it might be desirable to have them rather retired, or to have a Second Line, so that if an Enemy made a serious attempt to turn either Flank of the Position, the Defenders of that portion of the Outer Line might receive more effective Support during an Attack, and have a Rallying Point to fall back upon, to prolong the resistance.

17. All Parts of a Line of Works should be EQUALLY STRONG, and where Nature or Local Circumstances have withheld their aid, Obstructions should be multiplied so as to compensate the weakness. The situations most exposed to Attack, should also be made more difficult of access, so as to equalize the whole Defence.

18. The ground within range of all Works should be as clear of Obstructions as the nature of circumstances

permit, so that an Enemy shall find no Cover, and be perfectly exposed when he approaches.

Thus in a Town or Village, the Houses in front of the situations occupied, if not levelled or set fire to, should be unroofed, the Parapet walls thrown down, and all Doors and Shutters removed. In an enclosed Country free from Buildings, the levelling of Fences, and filling in of Ditches, is perhaps all that could be attempted.

19. The surface of all Slopes should be seen, to the very foot of them if possible, and if within the extreme range of Musketry, be either laid under a FLANKING or DIRECT FIRE, as most convenient. An Enemy might otherwise advance and form under Cover at a moderate distance from a Work, which would favour the Attack, and enable him to support it. It may also be remarked, that as the Attack of an Intrenched Line is generally made in Columns, a Flanking fire, if it is near enough, is to be preferred to a Direct fire.

20. There should be well defined and well understood COMMUNICATIONS along the whole line of Works, of whatever nature they may be, so that if pressed in any particular point, a proportion of the distributed Force may readily be assembled there; and they should be so arranged as to be shorter than those by which the Enemy could alter his dispositions during the Attack. If the Line is extensive, the means of Retreat from each portion of it to some central point in the Rear, should not be overlooked, as it will give increased confidence to the Defenders, and enable them to stand their ground to the last moment; and in Retreat, their local knowledge will give them immense

advantages, in disputing the advance of a hostile Force. See FIG. 53.

“On fait d'autant mieux la Guerre defensive que l'on connaît mieux le pays.”

21. It is very essential to create OBSTRUCTIONS within the short range of Musketry, in front of all Works of a Temporary nature, with a view of breaking the order of the Assailants, and detaining them under a close and severe fire, if they persist in forcing their way through. In fact all the movements of an Enemy, whether to the front, right, or left, should be as much cramped and impeded as possible. It is half the battle to break his order or put him in confusion when under fire, for he can seldom re-form under such circumstances, and if he attacks in disorder, the chances are against his success.

22. It is very desirable that the PROFILE, or form of such Temporary Works as of themselves offer no Impediment to the advance of an Enemy, should be so regulated, that whilst they provide effectual Cover for the Defenders, they should afford as little as possible to an Attacking Force should they be taken, but should leave it exposed to the Fire of the Reserve, and liable to be attacked in return, and driven out again. FIG. 6 compared with FIG. 7, will illustrate this remark. In the former it will be observed that 6 feet of Cover is obtained for Defenders standing in the Trench, whilst an Enemy who might succeed in driving them out, would only derive a Cover of 3 feet, by sheltering himself on the *outside* of the Parapet. In the latter Figure there is equal Cover on both sides.

23. GROUND THAT IS COMMANDED BY HEIGHTS on the Front or Flanks, within range of Field Artillery, should

always be avoided in selecting a position for an Intrenchment, unless it is defiladed by nature. The inconvenience arising from a command in front may be partially obviated by deepening the Trenches, and thus obtaining proportionate Cover; but if Heights are domineering over the Flanks, and an Enemy can have access to them, the different lines of Breastwork would be exposed to a dangerous Plunging Fire in the direction of their length, which might render them untenable. A partial Enfilade, or Flank Fire, may be obviated by the erection of Traverses, here and there, as required. No. 11.

• • CHAP. II.—PARTICULAR CONSIDERATIONS.

24. THE CIRCUMSTANCES UNDER WHICH OUTPOSTS REQUIRE TO BE STRENGTHENED in the temporary manner under discussion are infinite, and it would be out of place in a little Treatise of this description, to attempt anything like a detail of them.

The kind of Posts also which may be occupied, vary in a greater degree than the circumstances; depending on the construction and disposition of the Buildings and Fences, and the Inequalities of the ground on which they are situated; defined instructions cannot therefore be laid down which will apply in all cases, but ‘WHERE RULES END, GENIUS BEGINS.’ Such Posts, too, require to be strengthened on the spur of the moment, and almost in the presence of an Enemy, where there is no time for deliberation, and it may be, when he who ‘hesitates is lost.’

25. It needs no argument therefore to show, that an Officer who has no further Ambition than being merely prepared for the proper discharge of an acknowledged Duty, should embrace any opportunity that offers (and every walk he takes will afford him one,) of examining and endeavouring to appreciate the advantages that may be taken of the ever-varying circumstances of Ground or Position; and that he should also make himself thoroughly acquainted with the most approved and simple Expedients for turning them to the best account.

Some individuals may possess greater facility than others, in acquiring a habit of determining at a glance what is the

most judicious mode of disposing a Force, and arranging Defensive Works for strengthening a Post ; but a very little time devoted to the study of the subject, would render any one competent to decide upon it to the extent of the responsibility devolving upon an Officer in command of a Piquet, or charged with the Defence of an Outpost.

26. But to return to the subject: the description of Posts under discussion, naturally fall under three heads, viz.—

First. Such as require to be ARTIFICIALLY CREATED by the construction of all the Works that are requisite for protection and defence.

Second. Such as from favorable circumstances of ground, &c., only require to have EXISTING OBJECTS IMPROVED UPON, to be equally defensible.

Third. And which is the most common, A UNION OF THESE TWO.

27. THE SELECTION OF THE Post, where a choice is admitted, is what will first engage attention, and the following considerations must have their weight in determining the point.

28. The Inequalities of the Ground, and the Objects upon it, such as Buildings or Fences, &c., should be of such a nature, and in that relative situation to each other, as to be convertible into a Fortified Post with THE LEAST POSSIBLE LABOUR, AND IN THE SHORTEST TIME.

29. The Position should not be commanded, especially on the Flanks or in the Rear, within the ordinary range of a Field Piece. No. 23.

30. *There should be plenty of Materials on the spot for the construction of Temporary Works, and for forming Obstructions in front of them.*

31. The Soil should be of a nature that is easily worked, if it is foreseen that any Trenches or Ditches will have to be executed.

32. It should generally be DIFFICULT OF ACCESS, and yet offer the MEANS OF RETREATING in security.

33. And should be in a situation for fulfilling the object for which the Detachment is to be posted.

34. In arranging the General Plan for occupying it with Defensive Works, the following points among others will require more particular attention.

35. It must be ascertained from a minute examination of the Position, what Figure of a Work will suit it, so that the greatest quantity of Fire may be directed over the most accessible points of attack, and that the general contour of the Intrenchment may fall in with the Ground, and the Buildings or Fences that are upon it.

36. THE OBJECT THE WORK IS EXPECTED TO FULFIL in reference to the Force with which it is in connexion; the Distance it is removed from that Force; whether instant support may be expected, or whether it is to be left to itself to hold an Enemy in Check as long as possible; or whether it is to be defended to the last extremity.

37. ITS SITUATION WITH RESPECT TO THE ENEMY as to Distance, &c.; whether it is likely to be attacked by overwhelming Forces, or only subject to the brusque attack of Cavalry or Infantry in smaller bodies; whether Artillery is likely to be brought up against it, for in that case Earthen Works, when merely for the purposes of cover, are in some respects better than Buildings, or Stockades; the Parapets, too, must be thicker;—whether it can be

surrounded, for in such a case it must be enclosed all round, &c.

38. THE NUMBER OF MEN THERE WILL BE FOR ITS DEFENCE, taking it as an Established rule, that it is better to have a Force concentrated, than too much distributed, and therefore injudicious to make Works of a greater extent than can be well manned and vigorously defended.

“Celui qui partagera ses forces sera battu en detail.”

For instance, in small Works there might be a File of men for every Pace or Yard in the length of their Breast-work, and in larger ones the same, with a Reserve of from one-fourth to one-sixth of the whole in addition. On some such general basis, a calculation of the Proportionate Extent of a Work might be made. All this of course depending very much upon circumstances.

39. THE NUMBER OF MEN, whether Soldiers or Inhabitants, that can be collected together for working, and whether there are Tools enough for them; so as not to undertake more work than can be well done.

40. And which is a very important point, THE TIME THERE IS TO DO IT IN. Whether an immediate Attack is to be apprehended, or otherwise, for this will decide not only the nature of the Works, but the parts of them that require the first attention; as will be more apparent when the Details of Execution are brought under consideration.

41. THE NATURE OF THE MATERIALS that can be had on the spot, or procure in the neighbourhood. This will have a great influence on the Details of the plan to be pursued, and will afford opportunity for the display of considerable tact and intelligence, in appropriating and

adapting the means at hand for carrying the general plan into effect, and securing its objects with the LEAST POSSIBLE LABOUR.

42. No one who is not conversant with work of this description, can have an idea of the great saving of Time and Labour that may be effected, by taking advantage of what might appear at a casual glance to be very unimportant local features ; such, for instance, as gentle undulations in the ground.

A reference to FIG. 16 will illustrate this remark, in showing the obvious difference of labour in obtaining the same amount of Cover on different sides of a Slope.

CHAP. III.—DETAILS OF EXECUTION.

43. The following description of Tools and Stores would be found more or less necessary, where Temporary Works were to be thrown up, and they should be furnished in the required proportions to any Detachment whose duty it might be to strengthen and afterwards defend a Post.

44. They are classed in three Divisions, that their separate uses may be apparent.

Class 1. Field Exercise Tools.

Shovels,	} For sinking Trenches, forming Breastworks, felling Timber, making Abattis and Obstructions, &c.
Pickaxes,	
Felling-axes,	
Bill-hooks,	

Class 2. For Houses, Walls, &c.

Sledge-hammers,	} For forming Loop-holes, breaking through Walls, preparing timber for Barricades, Stockade works, &c.
Hand-borers,	
Crow-bars,	
Saws,	
Augurs,	
Spikenails,	

Class 3. General Service and purposes of Defence.

Sand-bags,	} The Sand-bags for block- ing up Windows, and form- ing Loop-holes, &c. The Rockets and Shells for defence of Houses and In- trenchments.
Rockets,	
Small shells,	
Hand grenades,	

45. The proportions of these necessary to be demanded would of course vary with the Description of work which might be anticipated.

For example, in throwing up Earthen Works in an Open country, a Pickaxe and Shovel for every man that could be employed on the Breastworks would be wanted. If an Abattis could be formed, and there were Fences to be cut up and levelled, one-third of the Men would be advantageously employed with Felling-axes and Bill-hooks. In a case where Houses were to be placed in a state of defence, Walls would have to be broken through for making Loop-holes, and Windows, Doors, and Passages to be barricaded; here Crow-bars, Hand-borers, Sledge-hammers, Spike nails, and Saws would be required in greater proportion than Spades and Pickaxes.

Sand-bags are included as being very useful for many purposes, such as protecting men when firing over a Parapet or Breastwork; quickly blocking up the lower parts of Windows, &c. In each case, Loop-holes being arranged by disposing them as shown in FIG. 34.

• A man will carry one hundred empty Sand-bags, weighing about 60 lbs., each of which will contain a Bushel of earth, and when *full* they are *Musket proof*. Don't forget that.

Rockets,* small Shells, and Grenades, are mentioned as

* As an illustration of the use of Rockets, it may be mentioned that on one occasion during the late war in Canada, an American Gun-boat took up a position which enfiladed a situation where a Bridge that had been destroyed was being re-established; from whence she kept up a fire that bid fair to stop proceedings. Artillery could not be brought up, but luckily Rockets were thought of, and a few were obtained from the rear. The second that was fired entered her bows, and caused so many casualties,

being very powerful and attainable auxiliaries in the defence of Posts and Houses ; and one great advantage of them is, that any body who has common sense may use them, or at least be instructed in the requisite precautions in a few minutes.

46. A certain DIVISION OF LABOUR must also be attended to, and a man should always have a Tool put into his hand, that he has been accustomed to use ; Carpenters should therefore be employed where Saws and Axes are wanted ; Miners and Blacksmiths where Walls are to be broken through ; Laborers where the Spade and Pickaxe come into play. Those who never handled Tools of these descriptions, would be most usefully employed in collecting Materials. It would be well also to select such men for the first tour of duty, as Patrols, and Sentries, and to employ the best workmen in overcoming the greatest difficulties, which are usually found in the commencement. A little foresight will not be misapplied in considering these points.

47. It is essential to obtain the assistance of the Inhabitants in executing Works of this description, and an Officer should always have authority to enforce their attendance, and to pay them in proportion to their exertions. They should also be required to bring with them whatever Tools they can best use, or that are most wanted.

that the 24-pounder was reduced to silence ; and it was only by a shift of wind that the boat was got off, after being driven close in shore, and many of the remaining men being killed or wounded by a light company that ran into the water up to their pouches, in the hopes of taking her.

PLATE II.

Fig. 4.

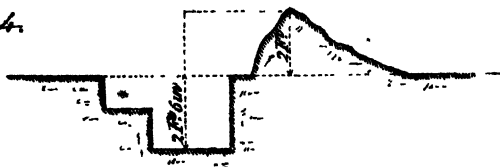


Fig. 5.



Fig. 6.

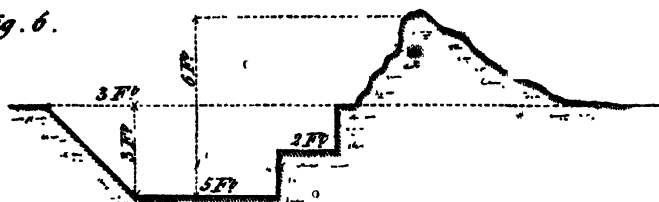
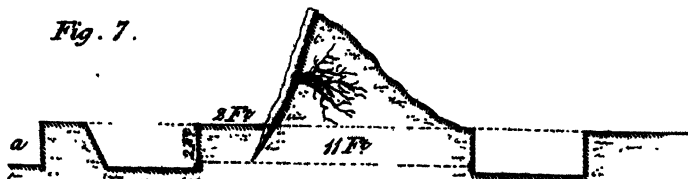


Fig. 7.



BREASTWORKS.

48. Under the first consideration, adverted to in No. 26, that whatever is required for Protection and Defence, has to be ARTIFICIALLY CREATED.

A general idea may be formed of the Quantity of work that can be done in a Given Time, and of the proportion of Cover that may be obtained in that time, by adopting different Sections when throwing up the earth, on referring to the annexed Figures 4 to 8, and the corresponding Estimates, which are calculated on the following data.

First. That on an average, an Ordinary Labourer will dig out 1 CUBIC YARD OR 27 CUBIC FEET OF EARTH, AN HOUR, in middling soil; and continue to work at that rate for eight hours or more. And secondly, on the supposition that EACH MAN HAS 6 FEET IN LENGTH TO EXECUTE, which distance enables him, when at work with others in a line, to use his Tools with perfect freedom.

It should be observed that the First of these Data admits of considerable latitude, and a CUBIC YARD AN HOUR, which is a convenient average to remember, is the least work that ought to be expected, unless in a very strong hard soil; in a light sand not requiring much use of the Pickaxe, an indifferent Labourer would remove 2 Cubic yards an Hour with more facility than he would 1, in Difficult soil; and bearing this in mind, the nature of the soil on which a Military Post might be situated, would frequently have a great influence in modifying the details. With regard to the supposed DISTANCE OF 6 FEET FOR EACH PORTION, it is not to be considered *invariable* but *convenient*. Men may be set to work as near as 4 feet from each other, but the

Time gained is not in proportion to the diminished Distance, for they will be too crowded to work with ease, and they will be liable to injure each other, especially at night. Still, however, there is no doubt that any given quantity of work would be completed in less time by disposing workmen at 4 or $4\frac{1}{2}$ feet than at a greater distance. On the other hand, when only improving the Natural advantages offered by Banks, Fences, &c., the working parties might be distributed at much wider intervals than 6 feet, having reference to the Time in which they could execute any given portion. For instance, a man might possibly convert 20 or 30 feet of a Hedge into a good Breastwork in three hours, when he could not execute 6 feet in length, of one equally defensible, in the same time, that required to be artificially created on a Level Field. An Officer should never shackle his mind by precise rules; it should rather be his study to obtain a clear perception of *General Principles*, and of the immediate object he has, in applying them. Book that!

49. Before entering further into the Details, it may be right to mention as a General Rule, that in almost all cases where Trenches are required, it is essential that the means of getting out of them with facility, both to the Front and Rear, should be preserved, by leaving Slopes or Steps for that purpose. Thus on some occasions it is desirable they should offer no impediment to a forward or a retrograde movement, but that Troops should be able to march straight over them when necessary. In the Trenches, however, which will now be brought more immediately under consideration, and which are designed not only to provide Cover, but to be vigorously Defended when attacked, the

chief object of making a Step in the rear would be, that the Defenders instead of waiting for the Assailants in the bottom of the Trench, might step out after giving their last fire, and thus interpose a fresh Obstacle between them and their enemy, besides placing themselves in a better attitude for resistance.

50. FIG. 4—in the annexed Plate, represents the Section of a small Trench, and the Parapet or Breastwork that has been formed by throwing the earth up in front of it. The Trench is $2\frac{1}{2}$ feet deep, and the same width, having a rough Step of 1 foot broad in the rear. The earth thrown out will make a Parapet of a height nearly equal to the depth of the Trench, without taking any precautions in building it up at a steeper Slope than it will stand at of itself; we will assume that it is 2 feet high, which will make a total of $4\frac{1}{2}$ feet from the bottom of the Trench. A man therefore, though he can reach to fire over the top of the Parapet, has to stoop to be wholly concealed or covered by it, and it therefore affords as little protection as is worth the trouble of considering in this place.

The Solid Content of the excavation, from which the probable Time it will take to execute may be determined, is found by multiplying the Depth and Breadth of the Trench together, for the Superficial measure or Area of the Section, and that product by the Length each man has to do. Here $2\frac{1}{2}$ feet multiplied by $2\frac{1}{2}$ feet, is equal to $6\frac{1}{4}$ feet, and that product multiplied by 6 feet, which we have assumed to be the portion allotted to each workman, gives $37\frac{1}{2}$ cubic feet. The Step is 1 foot broad and 1 foot deep, and being 6 feet as before in Length, there will be 6 solid feet more to add, making altogether $43\frac{1}{2}$ cubic feet

for the Solid content of the mass of earth that has been removed.

Now if a man is only supposed to dig out 27 cubic feet in an Hour, it will take him rather more than an Hour and a half to remove $43\frac{1}{2}$ cubic feet on level ground.

51. FIG. 5—affords more Cover, for the top of the Parapet is 6 feet above the bottom of the Trench. The best way of executing such a Profile would be to sink a Trench 3 feet deep and 3 feet wide, and to throw the earth about 2 feet in front of it; so that in the progress of the work, when the Trench was found to be too deep to stand in, and fire with convenience over the top of the Parapet, a little Step might be cut out of the solid left in front, for a Banquette, as shown shaded in the Section; and another step of the same description in the rear would complete it as far as it went. The steps might be 18 inches wide, and the same depth.

The Area of this Section is nearly 14 feet, the Trench itself being 9 feet, and the two steps $4\frac{1}{2}$ superficial measure, which multiplied by 6 feet, the length of the portion allotted to each workman as before, gives $84\frac{1}{2}$ Cubic feet, or about 3 Cubic yards, for the Solid content of the excavation; and therefore, under the presumed Data, it would be completed in three hours; still however it will be observed, that it offers no Impediment in itself to an Enemy, and men could only be drawn up in single file for its defence, from their not being room for more.

52. A Trench of the dimensions shown in FIG. 6 might be completed in five hours on the presumed Data, and being roomy enough to dispose Men in Double Files for its Defence, and high enough to Screen and Cover them, may be

considered as large as is necessary for merely fulfilling those conditions; for if more time could be devoted to strengthening a Post, or if other circumstances were favorable, it would become a consideration whether some Profile of a different form could not be substituted with advantage, for such as only afford Cover, without opposing any Obstacle to the advance of a hostile Force, as will be explained in No. 56.

- 53. FIG. 7—is a form of Breastwork that might be adopted for obtaining Cover in Rocky or Marshy Situations, where a Ditch or Trench could not be made deeper than 1 or 2 feet; and if there were plenty of men they might be set to work in two lines, and get it completed in half the time it would otherwise take, either by sinking on each side of the proposed situation, or by arranging the men in two lines behind it, as shown in the Figure, where the Situation for the Second line of Workmen is shown at (a).

To work on both sides the Breastwork, which is the quickest way, it would have to be considered what breadth of ground the Breastwork with its Slopes to the front and rear would stand upon, and what breadth the Banquette and Berm ought to be. These particulars being determined, two parallel lines would be roughly traced on the ground with pickets, at the required distance. The workmen would be drawn up facing each other on these lines, and would work backwards, throwing the earth into the space between them, which some spare men would form into the Breastwork.

Here sinking only 2 feet, the Breastwork must be raised $4\frac{1}{2}$ feet to obtain Cover. Suppose the Slope on the inside is made steep by building it up with Sods, or other Mate-

rials, so that it only occupies 18 inches of level ground, the Outside Slope, being left to find its own level, will require a Base equal to its height, or 4 feet 6 inches; and if we add 2 feet for the thickness of the Breastwork at the top, it will cover 8 feet of ground. Then if the Banquette be made 2 feet broad, and the Berm 1 foot, the distance between the two lines of workmen will be altogether 11 feet.

Under the second supposition, if the two lines of workmen were drawn up one behind the other, and both working to the same front, the distance between them might be from 4 to 7 feet, according to the depth.

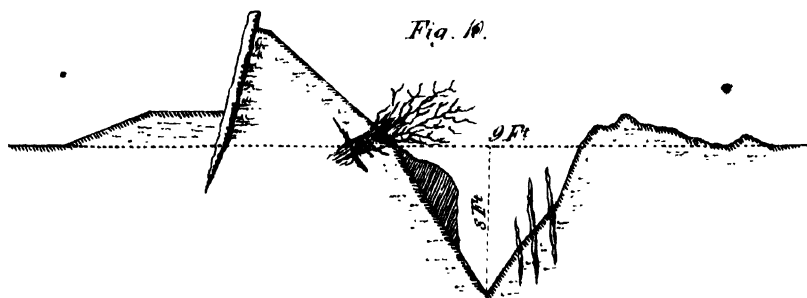
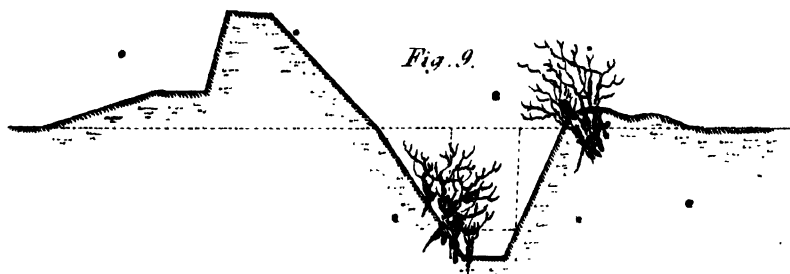
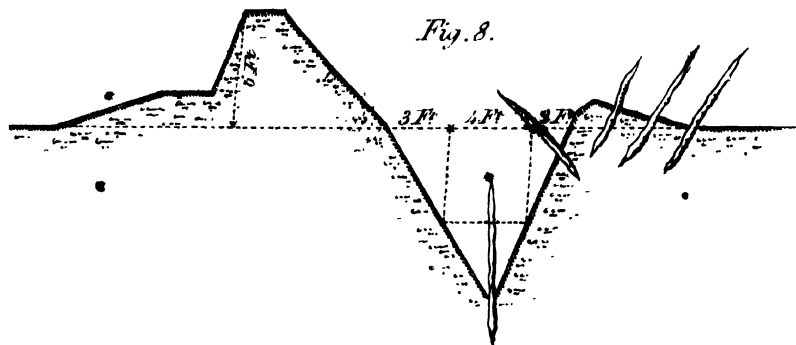
The level of the ground in this instance forms the Banquette or Step to fire from. There will be about 5 Cubic yards in 6 running feet of Breastwork, and as there are supposed to be a double number of Men at work, it ought to be finished in two or three hours.*

54. This mode of executing Work may also be adopted with advantage, in other cases when Time is an object, and there are plenty of hands, or when it is of importance to strengthen and give height to Breastworks in particular situations. But as far as this Profile is concerned, it is to be observed, that it would afford Cover to an Enemy when he got at it, without opposing any impediment to his advance, which it is always very desirable to avoid. (No. 22.)

55. Should the Ground be Rocky or very hard, as in a Road or Street, Cover may perhaps be more expeditiously obtained by raising a Breastwork from Rubbish or Materials

* When from circumstances the depth of a Trench or Ditch is very limited, the probable time it will take to form a Breastwork out of them, is more readily determined, by estimating the content of the *mass* to be raised, than the *excavation*, as in the preceding cases, because the breadth of the latter will probably be irregular.

PLATE III.



brought to the spot in Baskets, Sand-bags, or Barrows, than in attempting to sink at all. Different expedients are shown in Figs. 14 and 15.

56. Having thus far detailed the most expeditious modes of providing Cover for men, it may now be worth while to consider whether in securing that advantage for the Defenders, you cannot at the same time add another, in opposing an *Obstacle* to an Enemy, by excavating a Ditch in *front* of the Breastwork in place of making a Trench in *rear* of it. A Ditch to stop people at all, should not be *jumpable*, either "flying," or "in and out" and it should therefore be at least 8 or 9 feet broad, and 6 or 8 feet deep; in more Permanent Works it would of course be considerably more.

57. FIG. 8—shows the general Dimensions which such a Profile might have. The Ditch it will be observed is of a triangular form, the Area of which, for calculating the quantity of earth to be moved, will be found by multiplying its Breadth by *one-half* its Ditch, that is 9 feet by 4 feet, which gives 36 superficial feet; and that multiplied again by the Length of the portion each man has to execute, (we will here say 4 feet, as the Breadth is considerable) will be $36 \times 4 = 144$ Cubic feet, or about 5 Cubic yards in each portion of 4 feet; which, considering the increased labour arising from a greater depth than has hitherto been contemplated, would not probably be completed in less than 6 Hours by the same Workmen. Some spare men, probably equal to one-half the number employed in the Ditch, would also be required for ramming the earth, and forming the Breastwork. Thus, on 100 feet in length there would be 25 Men working in the Ditch, and 12 additional, making

in all 37; whilst in the common Trench work, which has hitherto been under consideration, only about 17 Workmen have been shown to be necessary for every 100 feet.

58. A Profile, such as that now under discussion, therefore requires not only longer time to execute, but Double the number of Men; and it would not seem advisable to undertake it, unless there were a reasonable probability of its being completed before an Attack could be made; for if an Enemy came upon it when in an unfinished state, it would be almost useless, and the labour, which if otherwise applied would have secured at least good Cover, would thus be thrown away. Still, however, the advantages it offers should not be lost sight of in situations where a determined stand is to be made, and on very accessible points, or to shut up Roads or Streets, &c., even if the rest of an Intrenchment were differently arranged. As far as the means of Resistance is concerned, it is obviously of more advantage to have a Ditch in front of a Breastwork than a Trench in rear of one; and the only point to be determined is whether there is TIME and MEANS for executing it; and it is on this point that an Officer will have to exercise his discrimination, when he has carefully considered the various Circumstances of his situation, which will have influence upon it; and which have already been detailed in the Second Chapter.

59. Such a Profile may further be much strengthened by planting a row of Palisades in the Ditch, or even by driving Stakes in and sharpening them, or making what may be called a perpendicular Abattis, by planting Brushwood upright in the bottom, with the ends sharpened, as shown in Figs. 8 and 9.

An expeditious way also of adding to the Difficulties of an Assault is shown in FIG. 10, where common Hurdles or Gates, Rails or Brushwood, laid on the ground soon after commencing the work, and their extremities buried under the Parapet, may be made use of: the earth underneath them, shaded dark in the Figure, should be cut away, when the Ditch has been sunk to its full depth. •

Short Posts laid horizontally every 8 or 10 feet in the same situation, and long Rails or a Chain afterwards nailed to them, would be a ready expedient; the ends should project about 2 feet over the Ditch, and stand at least 6 feet above the bottom of it.

60. It is to be observed that in all the foregoing cases, only a MINIMUM OF COVER, AND MEANS OF RESISTANCE has been sought for, in a MINIMUM OF TIME. It has been shown WHAT CAN BE EFFECTED IN A FEW HOURS, "*faut de mieux*;" it may so happen, however, that Time is given to improve upon the Profiles described, as would be the case if an advanced Post were held for some days in succession, and each Officer in command had done what he could towards it. These Improvements would consist in strengthening the Breastworks, making the Ditches deeper and wider, and planting more redoubtable Obstructions; and such opportunities must never be thrown away, as the means of Defence, and the security afforded, will be augmented in proportion.

61. It may be remarked, that such Breastworks as offer little or no Impediment of themselves to an Enemy, if well laid out, permit the defenders to charge over them in Line if they wish it, and still possess one of the principal attributes of any work, which is that of screening them from

previous Observation. But a forward Movement from those that do offer an Obstruction, must be through an Opening, and therefore on a narrow Front.

Now the space between a Breastwork and an Obstruction placed in front of it, is ground belonging to the Defenders which, if circumstances permit, should be disputed ; and as an Enemy would probably be in some confusion in forcing his way through such Obstruction, a favorable moment would doubtless occur for making a Sudden Charge, which, supported by a good Flank Fire, ought to be successful. These Advantages should never be lost sight of, in arranging the General Plan of Defensive Works, and determining the Profiles they shall have. A reference to FIG. 2, and the Sections belonging to it, FIG. 3, will illustrate these remarks. The Salient angles of the Intrenched Line are the points most open to attack, and it will be observed that the Profile of the Lines, terminating in those Salients, has a Ditch in front which presents more or less of an Obstacle ; whilst the Profile of the Line adjoining the Battery in the centre, is only that of a Trench for providing Cover, because it is not in a situation open to attack.

COMMUNICATIONS THROUGH BREASTWORKS, &c.

62. When an Opening or Passage is required through a Breastwork or Stockade, it must be arranged so as to be easily closed and defended. These objects may be in some measure secured by disposing the Lines in such forms as are represented in FIGS. 11 and 12, and providing rough strong Gates, Chevaux de frize, or something of the sort, for quickly shutting them up. When houses are concerned,

purpose he might pace the whole length of his proposed Line, and then by forming an idea how long it would take one Man to finish a certain portion of it, say 4 or 5 yards in length, of deepening a Ditch, scarping a Bank, or felling a Fence, he would see whether the number of men at his disposal could complete the whole in a given time, and would curtail or enlarge his Plan accordingly, and distribute his Men at intervals of 4 or 5, or 7 or 8 yards, as the case might be; for it is impossible to offer any defined Rules which shall apply where circumstances are ever varying. This however must be borne in mind, that there is *more wisdom in doing a little well, than in attempting too much.*

A Stick may be cut for measuring out the portions, and Stakes may be driven in for explaining the Slopes and the general form of the Profile that is required.

DEFENCE OF WALLS.

67. Walls are readily made available for purposes of Defence by Loop-holing them, the mode of doing it varying with their height and situation.

68. It is a General Rule, that Loop-holes must be so placed, as that an Enemy, if he succeeds in rushing up, shall not be able to reach so as to make use of them; for it is clear, that if he stands on the same level as the Defenders, the Loop-hole would be adapted for serving the convenience of *both* parties, which is not their object.

To obviate this inconvenience, Loop-holes should be placed 8 or 9 feet above the ground on the Outside, but on the Inside, the Banquette, or Step from which the Defenders are to fire, should not be more than about 4 feet 6 inches

below them, which may be assumed as a convenient height for the purpose, as already explained in treating of Breast-works. A portion of the wall also, not less than 18 inches high, should be left *above* the Loop-holes, where there is opportunity, for the purpose of securing the Men's Heads, when giving their Fire.

69. These points are attainable in several ways, and circumstances must decide which is the most convenient; for example, if a Wall were 10 feet high, the Loop-holes might be pierced within 18 inches of the top, and a Temporary Stage might be made of Casks, Waggons, Ladders, &c., or an earthen Banquette might be thrown up inside for the people to fire from. FIG. 29. And in cases where a very determined Resistance was to be made, a second row of Loop-holes might be arranged, as shown in that Figure. On the other hand, if a wall were only 6 feet high, the Loop-holes might be pierced 4 feet 6 inches above the level on the inside, and a Ditch cut on the inside to obtain the requisite height, which arrangement would save the trouble of making any Banquette. FIG. 30.

70. The quickest way of making a Loop-hole is to break a Wall down from the top to a depth of 2 feet, in the form of a narrow fissure, at intervals of 3 feet or more apart, and as this can be done with common Pickaxes if there are no better Tools at hand, it will generally be found a more convenient mode than cutting them through the Wall, when Time is an object. Such Loop-holes will appear as shown in FIG. 31; it will be seen that they are not quite so safe to fire from as others, but this inconvenience may be partially remedied by filling the upper part with a Stone, a log of Wood, a Sand-bag, &c.

PLATE VIII.

Fig. 29.

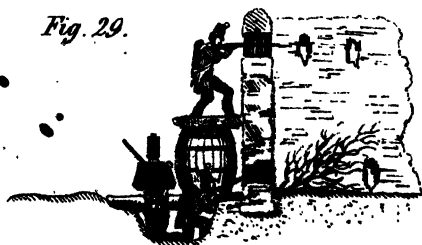


Fig. 30.

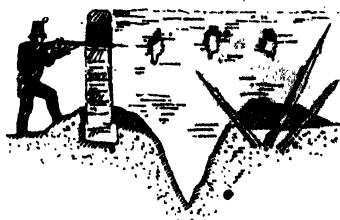


Fig. 31.

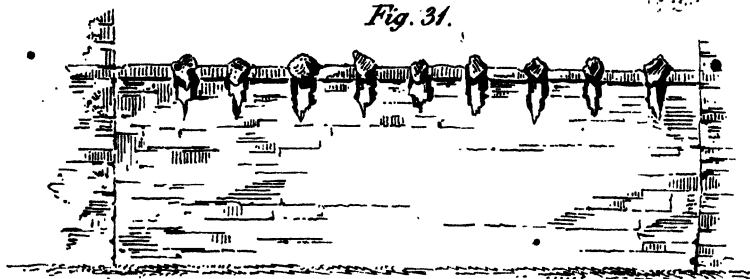


Fig. 32.

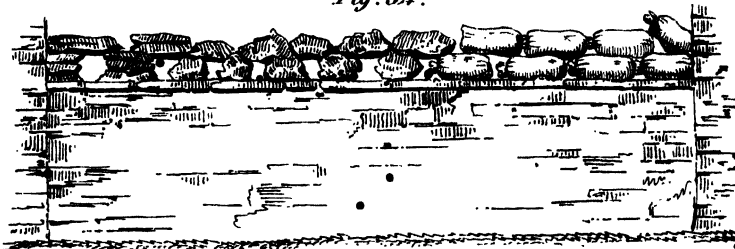


Fig. 33.



Fig. 32.



71. If a wall should be very low, or there were not time to make Loop-holes, a piece of Timber, or the Trunk of a Tree supported by a couple of Stones, on the top of it, would be a ready expedient, and Men could fire from the opening under it. FIG. 32. Or Sand-bags, if they were at hand, might be laid there, having Loop-holes between them. FIG. 34. Or large Stones or Sods might be placed there in default of Sand-bags. A man of resource would seldom find any difficulty in appropriating something to his purpose.

72. The temporary Loop-holes that are made in Walls or Buildings, are not of course confined to any regular form; they are merely Holes to fire through, made in the required direction, and so as to see the ground from within a few yards of the foot of the Wall or Building in which they are pierced, to the extreme range of a Firelock, affording also the opportunity of firing a little to the right and left.

To secure these points, the absolute Dimensions will vary with the thickness and height of the Wall; the width of the Hole outside, however, need not exceed about 3 inches; but the width inside should, if possible, be equal to the thickness of the wall.

73. The best Tools for breaking Loop-holes through Brickwork or Masonry, are short Iron Bars, steeled at the head, called Hand-borers. They are held in the proper situation by one Man, and struck with a Sledge-hammer by another. But if People are employed who have not been accustomed to the use of such Tools, they would perhaps get on better each Man with a Crow-bar, which any body can handle. A beginning might be made on the face of a Wall with a Pickaxe, which would very much facilitate

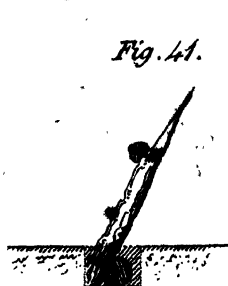
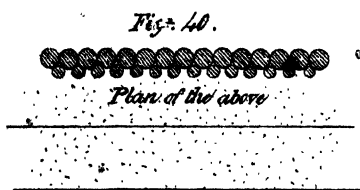
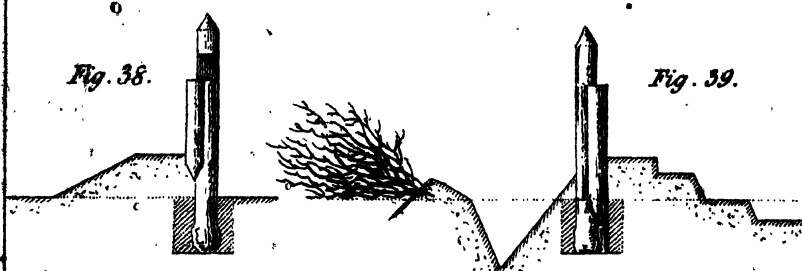
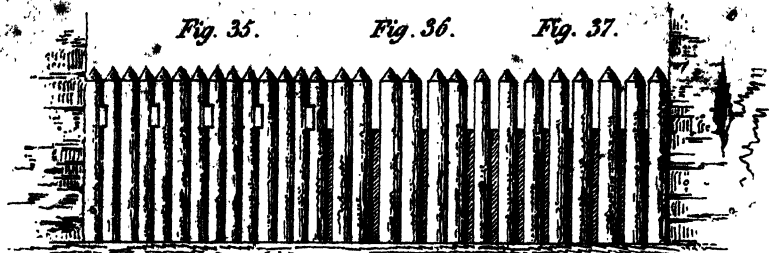
proceedings. The Time it will take to break through a Wall, will be best determined by a Trial on the Spot; for Materials are so very various, it might lead to erroneous conclusions, were any attempt made to state a general Average. Much also would depend on the Tools and Workmen, which adds to the difficulty of offering any precise Data.

74. A wall exposed to the fire of Artillery, will not afford very pleasant Cover, in consequence of the Splinters that will fly from the Materials whenever it is struck; but if time admits of it, this inconvenience may in some measure be obviated, by sinking a Trench a few yards in the Rear, and throwing the earth up against the *Inside* of the Wall; or a Ditch may be sunk on the Outside, and the earth be thrown over, as shown in FIG. 33. The Trench is best, as it will give additional protection to the Men; but the Ditch may be required as an obstacle, or to give height to the Loop-holes, and therefore as usual, circumstances must decide what is best to be done. It is not contemplated that there would be opportunity for giving this embankment sufficient thickness to make it Shot-proof, but most of the Splinters would bury themselves, if it were only 3 or 4 feet thick, and “*Half a loaf is better than no bread.*”

STOCKADE WORK.

75. Stockade Work may be substituted with advantage for Breastworks, when there is Timber to be had in abundance, especially if it can be Covered from the Fire of Artillery. It has this advantage over Earthen Works of

PLATE IX.



very small Profile, that if made high enough, it is not easily got over, and therefore in itself it opposes an Obstacle to an Enemy, which they generally do not.

Stockade Work may be made with the rough Trunks of young Trees, cut into lengths of 12 or 14 feet, and averaging not less than from 10 to 15 inches in diameter. They should be firmly planted, upright, in a narrow Ditch, 3 or 4 feet deep, either close together, or with intervals of a few inches for Firing through. The interstices in either case should be filled up to a certain distance, with shorter pieces of Timber, to protect the Men, as will be better understood by referring to Figs. 39 and 40; and the Loop-holes should be arranged with the precautions adverted to in No. 68.

A Banquette or Step will generally be required on the Inside; and a Ditch, and any other Obstacle on the Outside, that can be made in the Time, will add to the difficulties of an Assault. See Fig. 39. In defending a Stockade, the means of stopping up any partial Breaches which may be made by Artillery, should be at hand, and a Flank Fire across the Front is very essential, as it will be obvious that were an Enemy to succeed in rushing up to it, he would be under Cover from the direct Fire of the Loop-holes.

CHAP. V.—OBSTRUCTIONS.

76. OBSTRUCTIONS in front of Temporary Works of inconsiderable Profile, are essential to their being vigorously Defended, and various expedients have been devised, some of which it will be well to explain.

AN ABATTIS is perhaps the best Obstruction that can be formed in a limited time. It is made by felling a number of Trees, if they are on the spot, and laying them side by side, with the branches towards an Enemy, and interlaced as much as possible. Small twigs should be cut off, and the projecting points sharpened. If the Trees are so large that they cannot easily be displaced, no precaution is necessary for securing them; but if they are smaller, they must be confined in their places by driving Stakes among them, and laying heavy Timber on their butt ends, or burying those ends in a small Ditch. If Trees and Brushwood stand pretty thick on the ground, there will be no necessity for placing them in any regular form when cut down, for it has been found on Service, that if permitted to lie as they fall, a most formidable Obstacle will be presented.

For instance, if a Wood or Copse forms part of a Line, a breadth of 20 or 30 yards of it being felled in front of the situation proposed to be taken up for the Defence, would so encumber the ground, that but little else in the way of an Obstruction would be required. A Breastwork behind such an Abattis would give the means of Defence, and if opportunity offered, and the Wood were extensive,

several such Lines might be made and disputed in succession.*

In wooded countries these Breastworks may be made of Trunks of Trees, cut into lengths, and piled one upon the other, to the required height, which affords a means of obtaining Cover very quickly, if there are a few Workmen who understand laying about them with an Axe. •

Stumps should be left of different heights, varying with their size; those that are large enough to conceal a man, should be cut as near as may be to the ground, but it will be useful to leave smaller ones, some 4 or 5 feet high. If these latter, instead of being entirely separated, are only half cut through, and the heads pulled down, and interlaced among the other stumps, in the way in which a growing hedge is "pleached," it would puzzle the Devil himself to get through such an Entanglement under a close Fire, provided there were enough Trees on the spot to make it perfect. There used to be a blackthorn Cover, of only a few acres in extent, overlooking the vale of Belvoir, and not 100 miles from Melton, which had been laid down as an Abattis of this sort, for the better protection and security of that valued animal, the Fox; and many is the time, when *Mr Pug* has kept close, that it has taken the best pack of hounds in England 20 minutes to go through it, though each particular dog was as *au fait* as a Hedgehog in working his way among thorns. A Grenadier would have had no chance at all.

* It was from a strong Abattis of this description that Colonel de Salaberry, with a handful of Canadian Voltigeurs, successfully disputed the advance of an American Army on the line of the Chateaugay River, in 1813, during the late War in Canada.

77. **PALISADES** form a very good Obstruction, especially if protected from the effects of Artillery ; and if the means are at hand, they are soon planted.

An expeditious mode of doing it, is to sink a small Ditch, about 2 feet 6 inches deep, and the same breadth, and to nail the ends of the Palisades to a piece of Timber, or the Trunk of a Tree laid on the bottom of it, and then fill in the earth, and ram it well. FIG. 41.

The Palisades should be 9 or 10 feet long, so that when finished, the ends shall be at least 7 feet above the ground. They may be made out of the stems of young Trees of 6 or 8 inches diameter ; but stout Rails, Gates with the ends knocked off, Planks split in half, Cart shafts, Ladders, and a variety of such things, will come into play, where more regular Palisades are not to be had. If the Materials are weak, a cross piece must be nailed to them near the top, to prevent their being broken down, and they must not be placed so close together as to cover an Enemy. FIG. 42.

78. **CHEVAUX DE FRISE** of a temporary nature may be made for stopping up an outlet through a Barricade, or for adding to the defence of a Door-way, or cutting off the Communication between different parts of a Post, &c. It will differ little from Palisades as to Scantling, &c., and its general form and proportion will be understood as referring to FIG. 43. The ends of the Stakes should stand from 5 to 7 feet above the ground, and be strong enough to resist any attempt to break them, and there should be as many short legs, as long Stakes, otherwise a few handy fellows, with Axes, might let it down. If it is to be removed for the convenience of passing, it should be made in lengths

proportionate to the weight; and when so arranged, the means should be at hand for chaining or otherwise securing the lengths together.

79. A good Obstruction might be made out of common sheep Hurdles, planted in Rows, at 8 or 10 feet distance, and leaning a little to the front, in which direction they are very awkward to get over. Stiff Brushwood interlaced would add to their effect; or Stakes driven firmly into the ground, and plenty of them, are not easily passed over in close order.

80. Holes about 3 feet deep and the same diameter, usually called Trap Holes, dug in rows as if for planting trees, and the earth out of them piled up in small heaps, would materially interfere with regular and rapid movement, and if Time admitted, the depth might be increased so as to present a more formidable Obstruction.

81. Many other Temporary expedients would naturally suggest themselves under the difference of circumstances that are to be met with at every step. It should ever be remembered that whatever will cramp and impede the steady movement of a Column, and detain it under a close Fire for however short a period, *is worth having*, and should not be neglected. Where a mighty Abattis could not be formed, perhaps a Cabbage Garden could be found, and even that would be *better than nothing*, inasmuch as it would be preferable to a Bowling Green, over which people could come at a racing pace to the Assault of a small Work.

82. As it is wisdom on all occasions to give an Enemy full credit for doing his utmost, it would be well not to be deceived by appearances, but to subject an Abattis or any other Obstruction to a Trial, before coming to any conclu-

sion as to its efficiency ; for if one Man could get over or through it, with his Arms and Accoutrements on, another could do the same. Some people have a way of allowing their wishes and hopes to deceive their judgment, which does not signify much if the effect only falls on themselves, but is of importance to be guarded against, in cases where others are included among the sufferers, if a mistake be made.

83. It would have been desirable to have conveyed an idea of the Time in which a certain length of Stockade or Palisading could be executed, but this kind of work is influenced by so many circumstances, such as the Quantity, Size, and Nature of the Materials, the Expertness of the Workmen, &c., that were any Data offered, it would be more likely to embarrass, and lead to erroneous conclusions, than to be of any assistance in enabling an Officer to form an accurate opinion when applying them.

If, however, he determined to make the attempt to construct something of the kind, he could never go wrong in setting the greater proportion of his Men to work, in the first instance, in collecting an abundance of Materials, and depositing them in convenient situations for being afterwards worked up.

To prevent confusion, it would be well to divide his Men into small Squads, of eight or ten each, for this duty ; and to prescribe to each where they were to obtain Materials, and of what description, whether by felling Trees in the neighbourhood, unroofing Houses, taking up Floors, &c., and where each Squad was to deposit what it procured.

When the quantity began to accumulate, all the Carpenters might be employed in preparing the *Stuff*, whilst

some Labourers working in Line, at 6 feet apart, were sinking the Ditch, into which the Pickets were to be planted, No. 79; and when this was deep enough, a proportion of the Carpenters, assisted by Labourers, might commence fixing them.

If Time were an object, which is supposed throughout these pages, and there were plenty of hands, the business of fixing the Stockade or Palisading should be undertaken in distinct portions, that there might be no confusion in employing as many Men as could work to advantage at the same time. For instance, one Carpenter and two Labourers might be told off to every 10 or 12 feet, and with exertion and good arrangement, a very respectable appearance ought to be made in a few hours, under ordinary circumstances.

CHAP. VI.—OF PLACING BUILDINGS, &C., IN A STATE OF DEFENCE.

84. If a Building forms part of a general Line of Defence, or is in the Contour of the Works round a Town or Village, the front and sides only may require being prepared for Defence, for a Force must not be shut up without a special object; if, on the contrary, it is an Independent Post, to be defended to the last, and is open to attack on all sides, every point must be equally looked to, and the means of retreat and of re-enforcing it, must be preserved, if considered necessary under the circumstances.

85. The great art of making a Defensible Post out of Buildings, and the Outhouses and Walls that usually surround them, consists in selecting from the mass of Objects before you what will answer the purpose, and sacrificing everything else, making use of the Materials to strengthen the part you wish to fortify. It is more difficult to state any precise Rules for such proceedings, than for laying out Works in the Field, for in one case you generally have a choice in the form of your intended Works, and a better opportunity of arranging what you have to execute under the direction of some General Principles, but in the other you must take what you find, and all you have to do, is to *make the best of it*.

86. The Principles of Defence adverted to in Nos. 12 to 23, must be taken into consideration as far as they will apply, and if with a knowledge of these Principles an Officer is practically acquainted with the Means that are

usually employed for strengthening such Posts, a very little experience will enable him to arrange his Plan, and set his Men to work with a confident expectation, that in a very few hours he will be able to enliven a peaceable domicile, by converting it into a respectable Fortress.

87. The Objects now under consideration are Churches, Country-houses, Factories, Prisons, or other substantial Buildings; and as there is but little difference in the mode to be pursued for placing any of them in a state of Defence, an explanation of the details applied to a single House, will perhaps be sufficient to convey an idea on the subject.

88. What has been before said in Nos. 26 to 42, of the points requiring attention in the selection of a Military Post, will be applicable if a choice is to be made among Buildings; thus, a Building proper for defensive purposes, should possess some or all of the following requisites:—

First. It should COMMAND all that surrounds it.

Second. Should be SUBSTANTIAL, and of a Nature to furnish Materials useful for placing it in a state of Defence.

Third. Should be of an EXTENT PROPORTIONED TO THE NUMBER OF DEFENDERS, and only require the TIME AND MEANS which can be devoted to completing it.

Fourth. Should have Walls and Projectings that mutually FLANK each other.

Fifth. Should be DIFFICULT OF ACCESS on the side exposed to Attack, and yet have a SAFE RETREAT for the Defenders.

Sixth. And be in a Situation proper for fulfilling the Object for which the Detachment is to be posted.

A Church will be found more usually to unite all these good properties than any other Building.

89. It may be remarked that though good strong Walls are an advantage, yet their Thickness should be limited to 2 or 3 feet, from the difficulty there would be in piercing Loop-holes; unless when they are likely to be battered by Artillery, in which case the Musketry must be confined to the Windows, and the more solid the Walls are, the better. It should also be remembered that Brick Houses and Walls are preferable, on several accounts, to those built of Stone; for when exposed to Artillery, a Round Shot merely makes a small hole in the former, but Stone is broken up in large masses, and dangerous Splinters fly from it in all directions. It is much easier also to make Loop-holes through Brick-work than through Masopry. Wooden Houses, or those made of Plaster, are to be avoided, from the facility with which an Enemy can set Fire to them, and they are frequently not even Musket-proof. Thatched houses are equally objectionable, on account of fire, unless there is time to unroof them; and after all it must not be forgotten, that earthen works when exposed to Artillery, are to be preferred to houses, as far as affording security to the defenders is concerned. In seeking this security, however, it should be borne in mind that they are not so *Defensible*; for Troops cannot be run into a House, but they are not exempt from such an intrusion in an Earthen Work of the nature under discussion. The two together can be made to form a more respectable Post than *either* can be made into singly, for the merits of both will be enhanced, and the defects be modified, by the union. A Building is therefore at all times a capital base to work upon.

The Walls may be partially protected from Cannon Shot by throwing up Earthen Parapets round it, and the House may “reciprocate” by acting the part of a Keep, and afford the Garrison a place of refuge, in which they may either defend themselves with advantage, or if it “suits their book,” resume the offensive and drive the assailants out again.

..90. An Officer will be able to make his selection at first sight, with reference to most of these points, but it requires a little more consideration to determine whether a Building and its appliances are convertible into a Post, of a Size proportioned to the Force under his command. The average number of Men, however, proper for the defence of a House, may be roughly estimated on some such Data as the following:—That in a Lower story it might generally be proper to tell off one Man, for every 4 feet that the Walls measured round the Interior.* In the Second Story One Man for every 6 Feet, and in an Attic or Roof One Man for every 8 Feet. For example, if a House of three Stories high were found on pacing it to measure 140 feet round the interior Walls, the number of men for its defence on the above Data would be determined thus:—

Feet.

$\frac{140}{4}$ Would give 35; which would be the number of Men for the Lower Story.

$\frac{140}{6}$ Would be about 23 Men for the Second Floor.

$\frac{140}{8}$ Would be 18 Men for the Attic.

* Pacing round the outside of the House, and making an allowance for the thickness of the Walls, would be the easiest way of determining the interior dimensions.

making a Total of 76 Men for the three Stories ; to which about one-sixth of the whole, say 14 men, should be added as a Reserve, making altogether a Garrison of 90 men. If there were Out-buildings or Walls in addition, the number of Men required for their Defence, would be determined in a similar manner, by assuming certain Data adapted to the circumstances as a guide in the calculation.

91. These numbers are not to be considered *definitive*, but merely to convey an idea on the subject ; for if a Detachment were much weaker in proportion to the Extent, a vigorous defence might still be made. The Force might be concentrated where most required, as it is not a matter of course that a place will be attacked on all sides at once ; or if a Building were found so large that the disposable Force would be too much disseminated, or if there were a want of Materials and Time for putting the *whole* of it in a State of Defence, a *part* of it only might be occupied.

92. Should there exist any doubt about having sufficient Time to complete all that might be wished, it would become matter for consideration what were the Points which it would be of the greatest importance to secure First, so as to be in a condition to repel an *immediate* Attack, because such Points would naturally claim attention to the exclusion of all others.

In such a case, it might be well to employ as many men as could work without hindering each other by being too crowded.

First. To collect Materials and Barricade the Doors and Windows on the Ground Floor, to make Loop-holes in them, and level any Obstruction outside that would

give Cover to the Enemy, or materially facilitate the Attack.

Second. To sink Ditches opposite the Doors on the outside, and arrange Loop-holes in the Windows of the Upper Story.

Third. To make Loop-holes through the Walls generally, attending first to the most exposed parts, and to break Communications through all the Party Walls and Partitions

Fourth. To place Abattis, or any feasible Obstructions on the Outside, and to improve the Defence of the Post by the construction of Tambours, &c.

Fifth. To place Out-buildings and Garden Walls in a state of Defence, and establish Communications between them. To make arrangements in the Lower Story especially, for defending one Room or Portion after another, so that partial possession only could be obtained on a sudden rush being made. These different Works to be undertaken *in the order of their relative importance*, according to circumstances; and after securing the immediate object for which they were designed, they might remain to be improved upon if opportunity offered.

93. An endeavour will now be made to explain the mode of executing these Works in the order in which they are mentioned.

COLLECTING MATERIALS.

The Materials that will be found most useful in Barricading the Passages, Doors, and Windows, are Boxes, Casks, Cart Bodies, Bricks, Stones, Cinders, Dung, &c.,

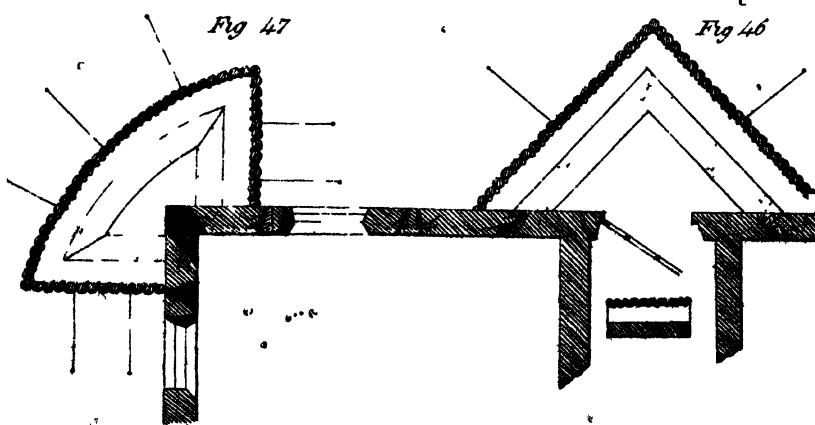
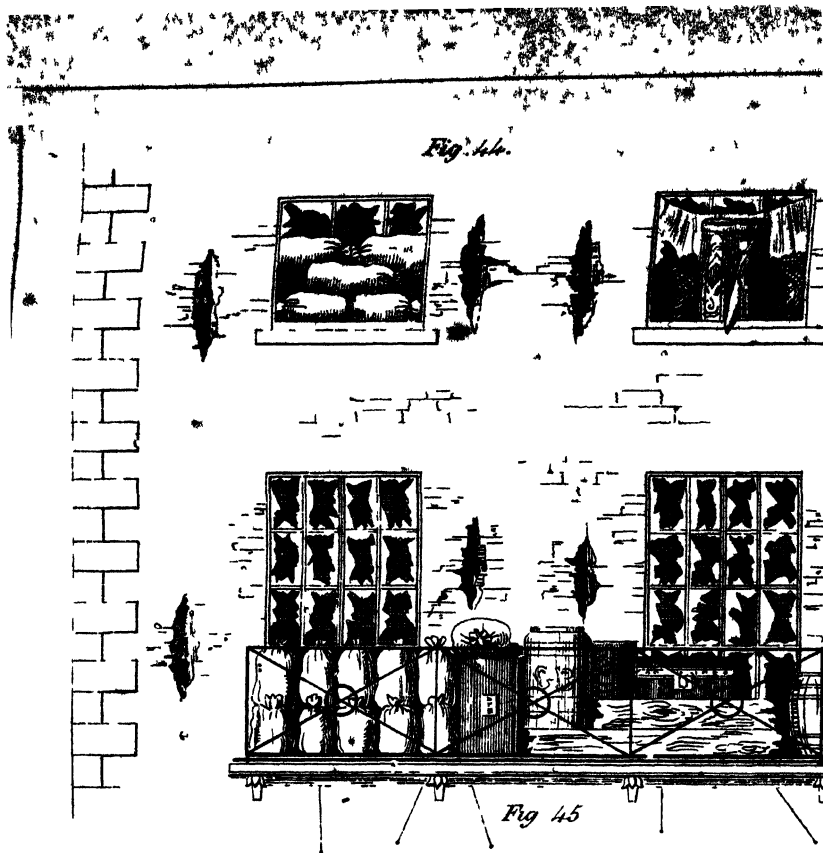
and Timber of any sort that comes to hand, which, if it cannot be found elsewhere on the Premises, the Roof and Floors must be stripped to furnish what is required..

BARRICADING DOORS.

94. In the application of these Materials, the Boxes and Casks filled with Cinders or Dung, and placed against the Doors to a height of 6 feet, will prevent their being forced open, and Loop-holes may be made through the upper portions, which can be rendered Musket-proof to protect the Men's heads; short lengths of Timber piled one upon another to the same height, leaving a space between any two of them in a convenient situation for Firing through, and their ends being secured in the side walls of a Passage, or propped with upright pieces on the inside, will effect the same object; or a Door may be loosely bricked up, leaving Loop-holes, &c.

If it is probable that Artillery will be brought up for knocking away these Barricades, and so forcing an entrance, a Passage may be partially filled with Dung, or Rubbish to the thickness of 8 or 10 feet, or thick Beams of Timber may be reared up on the outside of a Door, and the interval filled with the same, or with earth if more convenient.

A hole, about 3 feet square, may be left through an ordinary Barricade for keeping up a Communication with the Exterior; but for effecting a Retreat, or making Stories, it will be necessary to make a Door Musket-proof, by nailing on several additional thicknesses of Plank, and arrange it so to open as usual, or to contrive something



on the spot which shall equally protect the Men when Firing through the Loop-holes, and yet be removable at pleasure.

BARRICADING WINDOWS.

95. Windows do not require to be Barricaded so Strongly as Doors, unless from their Situation an Entrance may easily be effected, or an Escalade be attempted. The principal object is to Screen and Protect the Defenders whilst giving their Fire; anything, therefore, that will fill up the Window to a height of 6 feet from the Floor, and that is Musket-proof, will answer the purpose. Thus two or three rows of filled Sand-bags, laid in the sill of a Window, FIG. 44, or short lengths of Timber would do; or a Carpet, a Mattrass, or Blankets rolled up, would be ready Expedients. Loop-holes would in all cases be arranged whatever Materials were used. If Time presses, and Windows could not be blocked up, one means of obtaining concealment, which is the next best thing to security, would be to hang a great Coat or Blanket across the lower part of them as a Screen, and make the Men fire beneath it, kneeling on the Floor. The Glass should be removed from Windows before an Attack commences, as it is liable to injure the Defenders, when broken by Musketry.

LEVELLING OBSTRUCTIONS OUTSIDE.

96. Any Shrubberies, Fences, or Out-Buildings, within Musket-shot, which would favour an attack by affording Cover to an Enemy, and allowing him to approach unper-

ceived, should be got rid of as soon as possible. The Trees should be felled, leaving the Stumps of different heights, so as to encumber the ground, and the Materials of Walls, &c., should be spread about with the same view; but whatever is convertible for Barricades should be carried to the house. The Thatch from Roofs, and any Combustibles, should also be removed or destroyed. ..

DITCHES IN FRONT OF THE DOORS, &c.

97. As a means of preventing a Door being forced, a Ditch may be dug in front of it, about 7 feet wide and 5 feet deep; such a Ditch is also necessary in front of the Lower Windows, if the Loop-holes cannot be conveniently made high enough from the Outside to prevent an Enemy reaching them, for the reasons before explained in the Defence of Walls. No. 68. These partial Ditches may afterwards be converted into a continued Ditch all round a House if opportunity offers, as it would contribute to the Defence of the Post. The Floors may also be taken up on the inside, opposite the Doors or Windows open to attack.

LOOP-HOLES.

98. If the Walls are not too thick, they may be pierced for Loop-holes, at every 3 feet, in the spaces between the Windows, &c. FIG. 44. The dimensions, and mode of executing these Loop-holes, has been already described in treating of the Defence of Walls, Nos. 68 and 72, and in the FIGURES to which they refer.

Two Tier of these Loop-holes may be made if opportunity offers, and a Temporary Scaffolding of Furniture, Benches, Casks, or Ladders, &c. erected for Firing from the upper ones: on the Lower story a row of Loop-holes may be made close to the ground. The Floor must, in this case, be partly removed, and a small Excavation made between the beams for the convenience of making use of them. Just under the Eaves of a Roof there is generally a place where Loop-holes can be made with great facility, and a Tile or Slate knocked out here and there with a Musket will give other openings, from which an Assailant may be well plied as he comes up.

COMMUNICATIONS.

99. A clear Communication must be made round the Whole Interior of the Building, by breaking through all Partitions that interfere with it: and for the same purpose, if Houses stand in a Row or Street, the Party Walls must be opened, so as to have free Access from one end to the other. Means should likewise be at hand for Closing these Openings against an Enemy, who may have obtained any partial possession. Holes may also be made in the Upper Floors to Fire on the Assailants, if they force the Lower ones, and arrangements made for blocking up the Staircases, with some such expedient as a Tree, prepared in the same manner as for an Abattis, or by having a rough Pallisade Gate placed across. Balconies may be covered or filled up in front with Timber or Sand-bags, and made use of to Fire from downwards, FIG. 45.

ABATTIS.

100. The partial levelling of any object on the Outside, that would give Concealment to an Enemy, and favour an Attack, is supposed to have been already attended to : but if Time admits, after the Loop-holes, &c. are completed ; this system must be extended and perfected, and the formation of a more regular Abattis should be commenced, and any other Obstruction added that opportunity permits. The best Distance for such Obstructions, if they are continuous and cannot be turned, is within 20 or 30 yards of a Work, or even less, so that every shot may tell whilst the Assailants are detained in forcing a passage through them ; within such a distance also of Defenders securely posted, it would not be pleasant for a Hostile Force in confusion, to “ *Fall in,*” or “ *Re-form Column.*” No. 21. If Hand-Grenades are to play their part in the Defence of a Post, the Obstruction, whatever it may be, should be placed within their influence. A man will easily throw them 20 yards, but a trial on the spot will best determine the distance at which they can be used with effect.

TAMBOURS.

101. If the Building that has been selected has no Porches, Wings, or Projecting Portions from which Flank Defence can be obtained, it will be advisable to construct something of a temporary nature to afford it.

Stockade Work offers a ready means of effecting this object ; it may be disposed in the form of a triangle, projecting 8 or 10 feet in front of a door or window, FIG.

46, planted in the manner, and with the precautions of having the Loop-holes high enough, as described in No. 68. A small hole should be left in the Barricade of the door or window to communicate with the interior. Three or four Loop-holes on each face of the projection, cut between the timbers, will be found very useful in the Defence. These contrivances are usually termed *Dambours*, and if constructed at the angle of a Building, will flank two sides of it.

OUT-BUILDINGS AND WALLS.

102. When the defences of the Main Building are in a state of forwardness, any Out-buildings or Walls which have been found too solid to be levelled at the moment, or which have been preserved for the chance of having Time to fortify them, and thus to increase the strength of the Post, must be looked to. They may be placed in a state of defence by the means already described, and separate communications should be established between them and the principal Building by a Trench, or a Line of Stockade work, and by breaking through the Walls when necessary. In this way a Post may be enlarged in any required proportion, by turning all objects that present themselves, such as Out-buildings, Sheds, Walls, Hedges, Ponds, &c. to the best account; first taking the precaution to secure what is absolutely necessary for *immediate* protection, and for placing it in a state to be defended on the shortest notice.

103. An Exterior Wall or Fence, tolerably close to a House and parallel to it, may be retained for the purposes

of Defence, without the danger of affording Cover, and thus facilitating an Attack, by throwing up a Slope of earth on the outside of it, or planting an Abattis in the same situation. FIG. 48. An Enemy would thus remain completely exposed, and it would be worse than useless to him.

104. If a Post of the description under consideration were composed of two or more Buildings, and it were to be left to itself, and were open to attack on all sides, the Stockades or Trenches, forming the Communications between them, would obviously require to be so arranged as to afford Cover, and the Means of Resistance *on both sides*. This would be effected by merely making them *double*, as shown in FIGS. 49 and 50; but for greater security, the exterior of such Communications should be laid under Fire from the Buildings at their extremities. If Cover cannot from circumstances be obtained, Screens should be contrived that will conceal the movements that may be necessary.

105. In arranging the defences of such Posts, it is an essential point to make each portion of them so far independent of the others, that if any one part, such as a Building for instance, be taken, it shall not compromise the safety of the remainder, nor materially impair the defence they will make by themselves; so that whilst free Communications are essential in most cases to a vigorous defence, the means must be at hand for instantly cutting them off by some such expedients as would be afforded, by a Loop-holed Musket-proof Door, or rough Gates, or by letting fall a Tree, prepared as for an Abattis, and which till wanted might be reared on its end in the situation required;

PLATE XI.

Fig. 49.



Fig. 48.

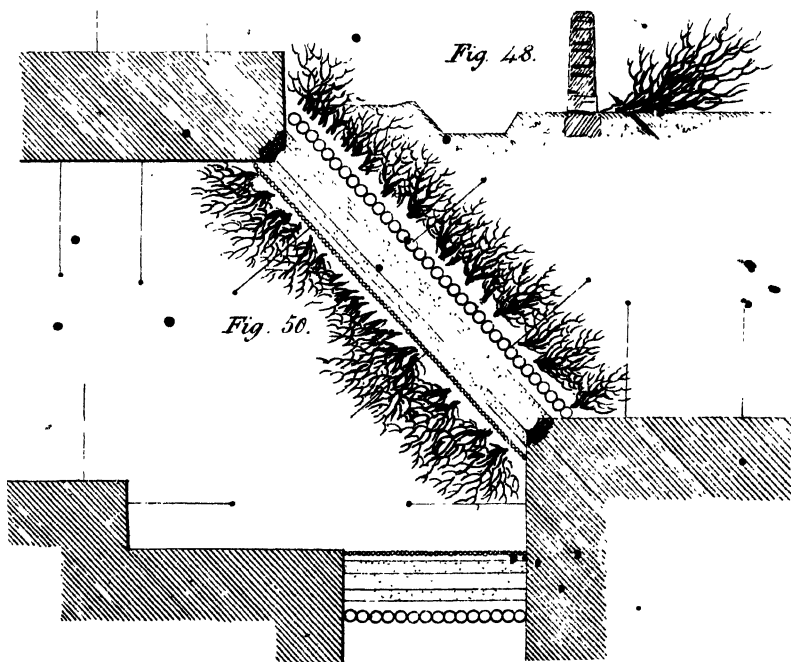


Fig. 50.

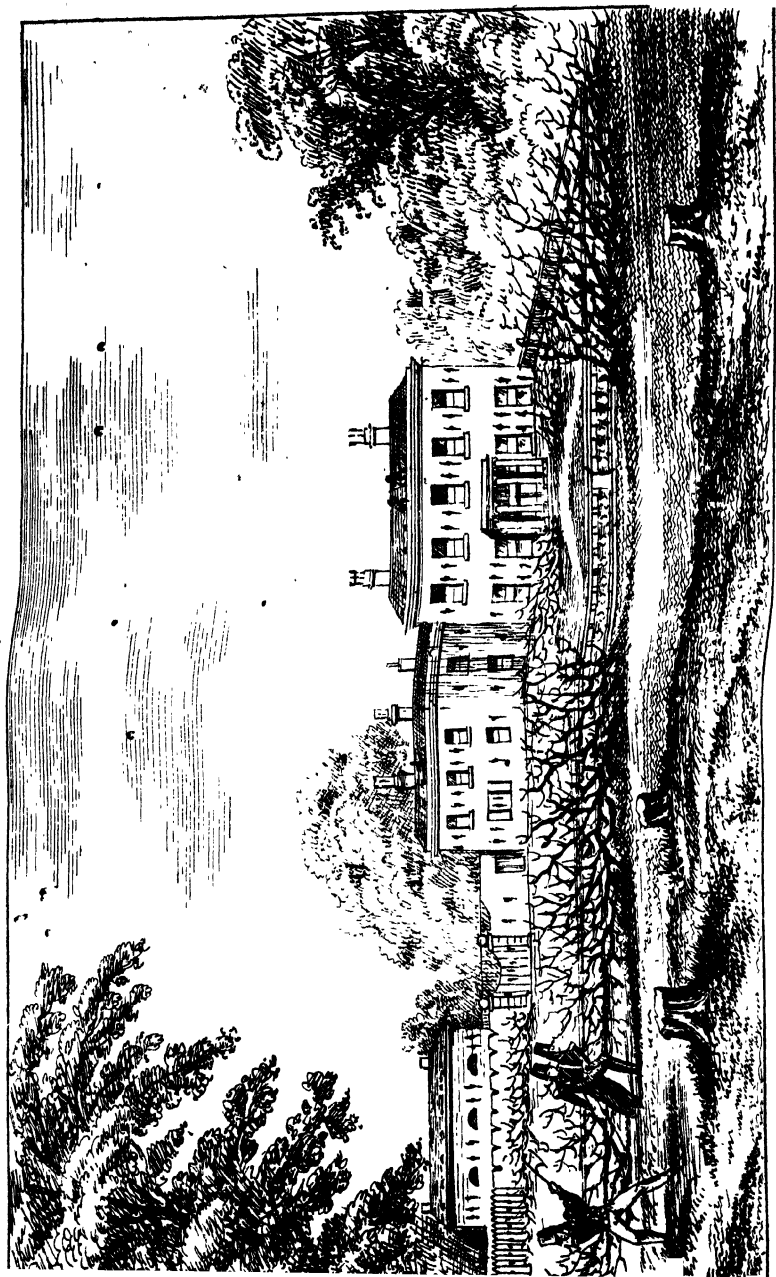
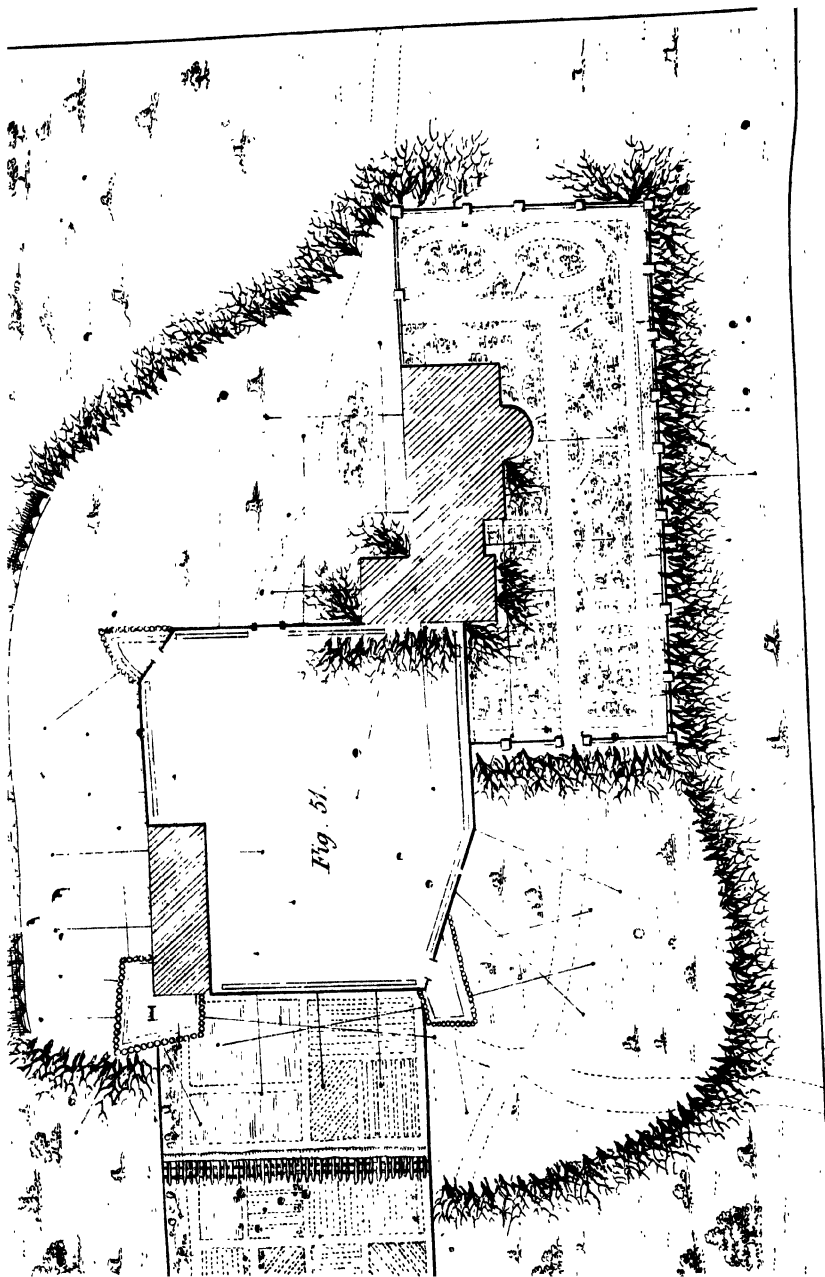


Fig. 52.



having previously secured the means of bringing a close fire upon it.

106. It is incredible what a Defence may be made in a substantial Building, if it has been properly prepared, and the right sort of people have been put into it. The Siege of Saragossa in 1809, affords a proof of how much may be done in defending Streets and Houses. The French were reduced to the delay of an attack, *secundem artem*, and no impression was made but by the regular means of Artillery and Mines. It is to be recollected, however, that the Houses could not be set on fire, and the Walls were of extraordinary thickness.

FIGS. 51 and 52, are given as examples of a Country-house and Out-buildings which have been prepared for defence in the manner described, at a considerable sacrifice of the picturesque; but with that we have nothing to do.

CHAP. VII.—DEFENCE OF VILLAGES.

107. Though placing a Village in a state of defence argues that larger Forces, and Officers of higher rank and more experience are engaged, than has hitherto been contemplated in the smaller Posts that have been discussed in this little Treatise; yet, in cases of emergency, much responsibility may still devolve on a young Officer in executing, and in some measure planning portions of the work; the subject therefore will be briefly noticed, though the details already entered into, embrace much of the information which would enable him to make himself useful on such an occasion.

108. As a Village is only the extension of a smaller Post of the same nature, the general requisites adverted to in Nos. from 26 to 42, in treating of such Posts, should be looked for, in determining whether or no it is favourable for Defensive purposes, and whether it offers such facilities for executing the necessary Works, as that they can be completed in the Time that can be devoted to them.

Thus a Village should not be commanded;—it should furnish Materials proper for its defence, and be of a nature not easily set on fire;—of a size proportioned to the Force designed to occupy it;—should be difficult of access, &c. In addition to which there should be some Substantial Buildings near the Exterior, to be converted into strong salient points of the general line. And in most cases a Church or large building in the Interior, to serve as a Keep, would be a desideratum. There should likewise be a

facility for forming a connected line all round, or on the front and flanks, if they only were to be fortified. If it were situated on a height, some of the sides of which were inaccessible, or if it were partially skirted by a River or Marsh, so much the better ; it would be more easily rendered defensible.

• 109. An idea may be formed of the Extent the Works should have in reference to the disposable Force, by making a rough estimate on the principles advanced in Nos. 38 and 92, bearing in mind that they will admit of considerable latitude either way.

110. Villages may be required to be Intrenched under a variety of circumstances, but as far as the Works themselves are concerned, two cases only require consideration, viz., when they are left *Open in the Rear*, and when they are *Enclosed all round*.

111. Under the first consideration ;—If a Village is to be held as an Advanced Post, or forms part of a general line, in front of an Army, and that it can receive instant Support when attacked, it will generally be left *Open in the Rear*, and only be strengthened in Front. To effect this, the first attention of an Officer, after determining his General Plan on the Principles already laid down, would be directed to the readiest means of stopping up all the Streets, Roads, and Lanes on the Front and Flanks of the exposed side, with such temporary Obstructions as could be most expeditiously formed. •

Men would be detached to bring to the spot selected, whatever Materials would assist in the work, such as Waggon, Carts, Ploughs, Harrows, Trees, Gates, rows of Paling, Furniture, Chains, Ropes, &c. With these there

would be no difficulty in creating Obstructions in a very little time, that would interfere with the visits of Cavalry, or break the order of Infantry, and thus offer impediments to an immediate Attack. They should be placed in those situations where they would afterwards be of some use, either as Obstacles in front of other Works proposed to be executed, or in the principal line itself, and therefore to be improved upon; for if possible NO LABOUR SHOULD BE THROWN AWAY.

112. Whilst these Works were in progress, an Officer would have more leisure to examine his whole Post in detail, in doing which he would find it convenient to make a memorandum of the number of men that could be employed to advantage, and the probable time it would require to complete each of the Works he proposes for its Defence, so as to suit them to his means. No. 48. These being afterwards confided in distinct portions to the active superintendence of intelligent young Officers, would ensure their being done in less time than were he to attempt *ubiquity*, in looking after them all himself.

113. In arranging his General Plan, he will have selected, as far as circumstances have favoured him, some good substantial Buildings, not exceeding the effective range of a musket, say 150 or 200 yards apart, for the most prominent or salient points of his line, which will be prepared for Defence, as explained in the foregoing pages; or he will have decided on occupying those points with the best Breastworks or Stockades he can make in the time, Nos. 57 and 75; and availing himself of all Buildings, Hedges, Ditches, Walls, or Inequalities that lie between them, he would proceed to make arrangements for con-

necting them by Breastworks, Trenches, Stockades, or some other of the means already described, and on the principles laid down respecting Flank defence, and giving a good Fire to the front. His Working Parties would be distributed accordingly, and it would be his constant endeavour to obtain the best Cover, and to create the greatest Obstructions, with the least possible labour. No exertion should be spared until the enclosure were perfect, and in a state to be defended; all hands should be employed night and day, if necessary, in alternate reliefs, and every arrangement should be made with this view; such points as required the greatest attention might then be progressively improved upon.

114. All the Streets and Roads open to Attack, should be shut up by good Barricades constructed in rear of the temporary Obstructions that have been created. These Barricades may be made, if Time admits, by sinking a Ditch 7 or 8 feet deep, and forming the earth into a substantial Breastwork, FIG. 9, planting Palisades, &c., if opportunity offers. Or if not exposed to Artillery fire, Stockade Work, No. 75, would be very effective; but if Time presses, Casks, Boxes, or Cart bodies, arranged in order and filled with earth, stones, dung, or cinders, would be a ready expedient. Bales of goods, hogsheads of sugar, sacks of corn, or even the rolls of cloth out of a tailor's shop, would be very convertible to *Warlike purposes*, if they came to hand.

The Mass should be raised 6 or 7 feet high, and a Banquette or Step be arranged for Firing over it. No. 3. The access should be as much obstructed as possible, and above all, every House in the neighbourhood should be Loop-

holed, so as to give a good Flanking Fire over the ground in their front. Figs. 14 and 15 may be referred to as examples.

115. If several Barricades, to be disputed in succession, are made in a street, the means of retreat through them must be preserved. This may be effected by disposing the lines as already explained, (Figs. 11, 12, and 13,) by which the passages would be readily closed and defended; and a communication should be made from house to house on each side the street, for firing on an advancing Column. No. 99.

116. In Front of his Post, it would be an object to destroy all houses within range of Musketry,—to level all Fences, and fill up all Ditches, &c., that ran *parallel* to the general line he had taken up within that distance, so that an enemy might find no cover whatever; such Fences and Obstructions however, as ran *perpendicular* to his Post, and that could be seen from it on both sides, might remain, as they would interfere with the flank movements of an attacking force, and embarrass his approach. Within the line of works, on the contrary, all Fences and Obstructions that are *perpendicular* to the line, and interfere with a free communication from right to left, should be cut away. Those that are *parallel* should be preserved, as affording protection to a retreat and further means of defence, if the outer line were forced. It is very important to have a second or even a third line of defence prepared, if the position of the buildings and localities admit of such an arrangement, so that if Troops are driven from one line by a superior force, they may find another and yet another in their rear, all ready for occupation. If there be any truth

in the proposition we started with, that the object of defensive Works is to enable a small force to cope with a larger one, the defenders ought to have the advantage from first to last, and they should profit by it, as long as ammunition lasts and bayonets can be made use of.

117. Such Posts as these, when situated in a plain before the front of an Army, or as a point of *appui* for one of its wings, have a very important part to play, as was illustrated at Waterloo. But to enable an inferior force to derive the greatest possible advantage from them, they should not only be strengthened in themselves, but every obstruction in rear of them should be levelled, so that there may be facility for the movement of all arms for their immediate support when attacked. If there are fences or walls in existence, which cannot be cleared away, good broad roads should be made through them; on the other hand if a Force in connexion with such a Post, is on equal terms with an enemy, so that the offensive may be taken up, and a forward movement made, as opportunity offers, it would be injudicious to have Obstructions in front, which might in that case be in the way. It is the old story again, probabilities and circumstances alone can decide what is best to be done; but this only tends to show, that if an officer is to *do his duty* under such circumstances, he must do more than learn the Regulations by heart.

118. Under the second consideration, if a Village were to be occupied as an independent Post, to be defended to the last, energy and intelligence must be drawn upon to the utmost, to place it in the best possible state. The details of execution will be similar to those already explained, as well as the general principles which regulate the whole:

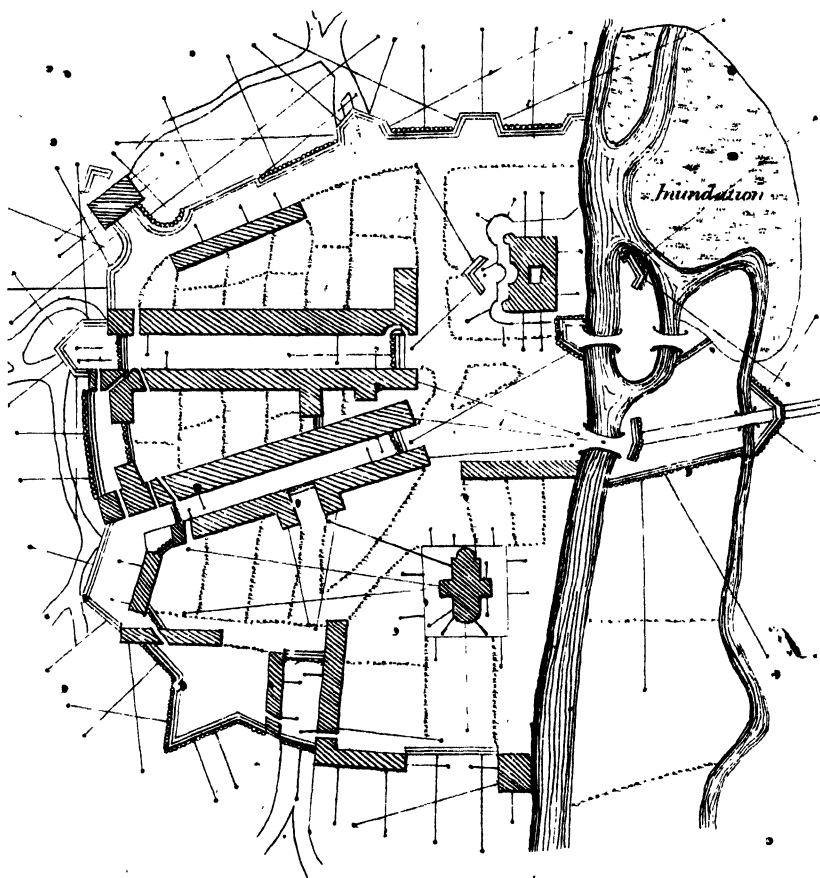
but it must be *enclosed all round* with an outer line, and if possible some strong building, such as a Church or Jail, must be looked up and put in a state of defence, and supplied with provisions, ammunition, &c., to which, as a Citadel or keep, the defenders may retire, if driven in by an overwhelming force, and there fight the battle over again, with a better chance of success.

119. This Keep should be centrally situated, in a position covered from the Enemy's Artillery, and commanding the principal roads or streets. It should be of a nature not easily set on fire, and should have good and assured communications with all the out-works. Advantage must be taken of any Walls or Out-buildings surrounding whatever has been selected as a Keep; and they should be converted into out-works, for strengthening it as an independent Post. These out-works are the more necessary, as besides the additional strength they will impart, they will be found of essential service in securing a retreat into it; for a Reserve quietly occupying them, ought to command considerable respect from an enemy, however hotly he might be in pursuit.

If suitable buildings were to be found, and there were men enough to defend them, several such Keeps might be prepared; and on the contrary, if a Village should be of too great an extent for the force thrown into it, a portion of it only might be strengthened, and the remainder be separated or destroyed; or the defence might be confined to some principal building. FIG. 53, taken from sketches inserted in some Instructions published by the French Imperial Minister of War in 1814, and translated by Major (now Lieut.-Colonel) Reid of the Royal Engineers, is given as

PLATE XIV.

Fig. 53.



an example. In this sketch the existing buildings and streets, &c., that have been taken advantage of for defensive purposes, will be easily distinguished from the new works, which it has been necessary to add for a more effectual application of the principles adverted to in Nos. 12 to 14. On one side, the Village is covered by a River and an Inundation, which of themselves present a Barrier, and the Bridges which communicate with the country are shut up with temporary works of the nature explained in CHAP. VIII., so as to render it tolerably secure against an attack from that quarter.

On the other side the River, the buildings do not appear to have been disposed very favourably for the defence, which has made it necessary to construct a variety of new works. These have been laid out, so as to give Fire to the front and reciprocal flank defence, No. 12, and they consist of Stockades, No. 75, and Earthen Breastworks with ditches in front of them, probably an improvement upon FIG. 10. The Streets it will be observed are all Barricaded, No. 112. Communications are also broken through all the houses, in the contour close to the Parapets, No. 20. The Principal Buildings, probably a Church and a Prison, will be easily recognised, they have been converted into Keeps, and appear well situated for the purpose of supporting, and if necessary, of receiving or covering the retreat of the Defenders of those portions of the outer lines which are contiguous to them.

120. Such works as are here treated of, are not supposed to be proof against Round Shot, which is a defect that must be charged against the want of time to make them so ; if, however, Troops are secured from observation, and

from the immediate effects of Case Shot, Bullets, Sabres, and Bayonets, which are far more destructive, and that they are besides placed in an attitude to resist a superior enemy, and above all to *gain time*, it will be admitted that a great object has been attained, at a trifling expense of labour.

121. Numerous instances might be adduced where Posts, fortified in the greatest haste have offered a more protracted and effectual resistance than more regular and more imposing Works have done; which may partly be attributed to measures of evident necessity being adopted, which might have eluded previous calculation; and to an enemy generally coming upon them unprepared with the requisite means for their attack.

The Post of Hougomont in front of the Right Centre of the position at Waterloo, is a striking illustration not only of the importance of such Posts, but of their strength, when the Defenders are really in earnest, and determined to hold them. It possessed no advantages which might not be found in almost every substantial Farm-house and Buildings, and only a few hours' labour had been bestowed in improving them. The Duke of Wellington thus speaks of it in his Despatch to Earl Bathurst, dated Waterloo, 19th June, 1815, p. 858.

“About 10 o'clock the enemy commenced a furious attack upon our post at Hougomont. They occupied that post with a detachment from General Byng's brigade of guards, which was in position in its rear, and it was for some time under the command of Lieut.-Colonel Macdonell, and afterwards of Colonel Home; and I am happy to add, it was maintained throughout the day with the utmost gallantry

by these brave troops, notwithstanding the repeated efforts of large bodies of the enemy to obtain possession of it.

The determined attitude that troops are enabled to maintain in such a post, may be inferred from this account; and the following anecdote will show that the confidence which reigns within a post is infectious.

Late in the day, the Prince of Orange sent directions by the Earl of March,* that the wood in front of Hougoumont, which was occupied by a detachment of the Guards, should be held to the last. Lord Saltoun, who received the message, had a fine opportunity of serving up a few flowers of speech in his reply, but posterity has lost the benefit of any more elaborate record of the resolutions he formed, than is contained in the following pithy answer: "Tell him it's all right," said he.

It will ever be found that a man of energy and resource will do more for himself in a case of emergency than a man of rule; and it will be encouraging to a young Officer to reflect, that in strengthening an outpost, zeal and intelligence, aided by a very little practical knowledge, will go far to accomplish all that could be expected from scientific acquirement and greater experience.

* The present Duke of Richmond.

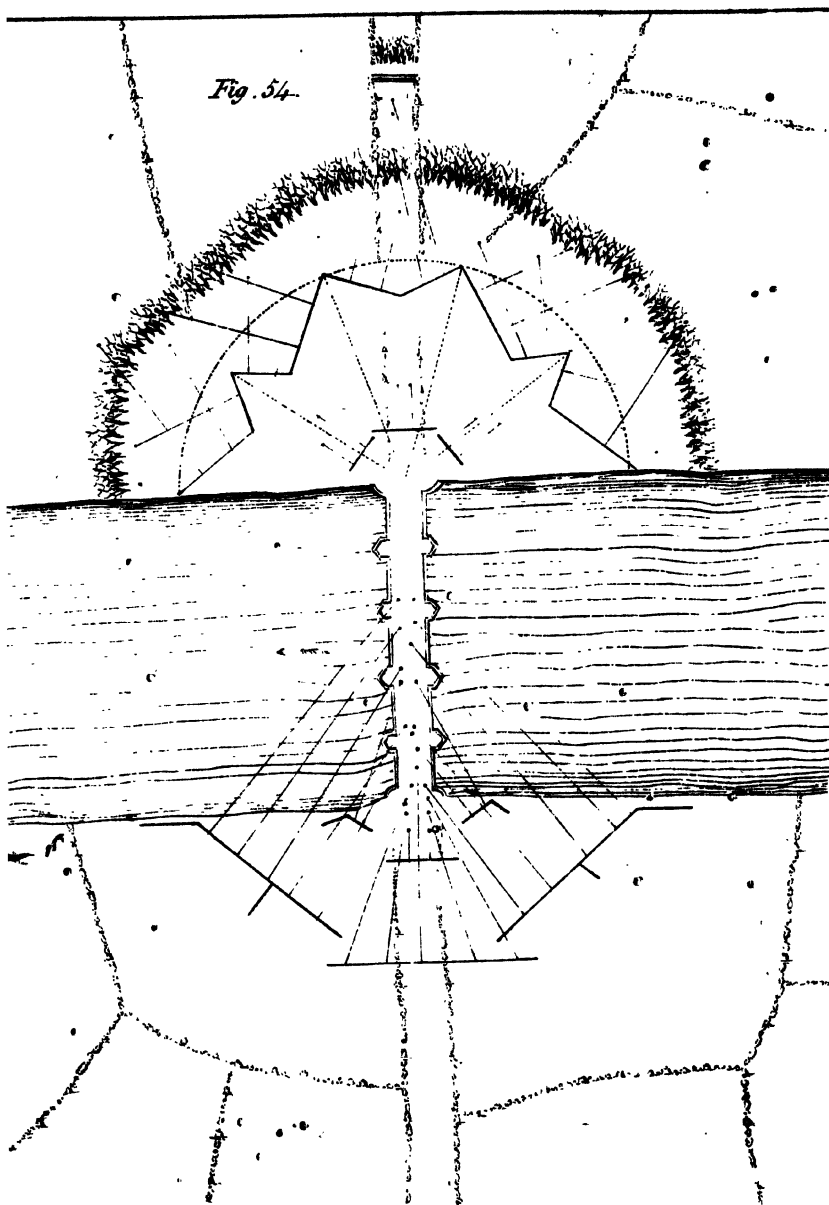
CHAP. VIII.—ARRANGEMENTS FOR THE DEFENCE OF A BRIDGE.

122. The most important results may depend on holding an enemy in check, and successfully disputing the Passage of a Bridge; it would therefore be desirable to construct Works of some extent, and of a respectable description for such a purpose. Exigencies will however occur in the Field, when this cannot be done, and it is contemplated that the duty of strengthening such a Post may devolve on an Officer in command of a Piquet. It may be useful therefore to consider what can be effected by five or six hours of active exertion applied in throwing up Temporary Works of the nature before described, under certain conditions.

123. In deciding on the general plan for the Defence of a Bridge, reference must be had to the circumstances of the contending parties, and the particular object that is to be fulfilled. For instance, if a body of Troops had to retire over a Bridge in presence of a Superior Force, Works would naturally be thrown up *in front* of it, for covering the Retreat, and ensuring its being held until the passage had been effected, and others might perhaps be placed *in rear* of it for giving Support, and prolonging the resistance; or if the protection of the Bridge itself were the object, the same plan would be followed; but if it were merely for disputing the Passage, in order to cover a Line of Operations or a Flank-march, when it either could not be destroyed, or it were desirable to preserve it, Works *in*

PLATE XV.

Fig. 54.



front of the Bridge would not in this case be so necessary, and it would entirely depend upon circumstances, and the relative strength of the force charged with that duty, whether the principal Works would not be more judiciously placed *in the rear*, which is obviously the most advantageous position for purely defensive purposes.

124. For the sake of illustration, it may perhaps convey a better idea of the thing, to suppose a larger Force to be employed, and more extensive Works to be undertaken, than a young Officer would be responsible for, in order that the General Principles may be more apparent; for in proportion as an Officer comprehends *all* that is going on, will be the interest he will take in any portion confided to his superintendence; and his sphere of usefulness will always keep pace with his acquirements. On most occasions it is quite as well for a Soldier not to be *thinking*, when he ought to be *obeying*, but here the two will work very well together, and at times also, it is agreeable to know the design and object of one's exertions.

125. The annexed Sketch, FIG. 54, may serve as an example of Temporary Works, thrown up in front as well as in the rear of a Bridge in an open country, for guarding it, and disputing the Passage, with a Force of 600 men available for throwing them up, and afterwards defending them; but without Artillery.

126. With a view of ascertaining in the first instance what extent of Works should be undertaken, and where they should be placed, an Officer would have to consider how he could post whatever Force he might have, to the greatest advantage for securing his object. Suppose, with 600 men under his command, he determines generally, for

the protection of the Bridge, to have three-fourths of them in advance of it, and one-fourth as a Reserve in rear ; and that he thinks it advisable to post a small proportion of the former number as a Support, close to the front of the Bridge, to cover the retreat of the larger body, if driven in from the outer Works. Also that he determines to have a File of men, on every running yard of Breastwork *in front* of the Bridge, to be applied as circumstances require, and to post his Main Reserve in other Works *in rear*, which shall be sufficiently extensive to receive two-thirds of his number, or 400 men, if he is afterwards obliged to fall back to a more favourable position, from his opponents being too much for him ; the remainder being held in reserve further off.

127. This being his general idea of defending the Post, the following distribution of 600 men would be in accordance with it, *viz.*—

400 men would be posted on the Outer Line in front of the Bridge.

50 men close to the front of the Bridge for covering a Retreat, and to act as a Support ; and

150 men, partially occupying the Works in rear of the Bridge, as a Reserve to the whole.

Now for the extent of Works to correspond, with these numbers, and what has been said of the General Plan, 400 men, at one File to every running yard of Breastwork, would require 200 yards of Breastwork on the Outer Line : and 50 men close to the head of the Bridge would require 25 yards more, making—in all 225 yards of Breastwork front of the Bridge.

128. The ~~Extent~~ proportioned to the numbers being thus ascertained, the next point to decide would be, the

Form in which to dispose the different Lines, on the principles laid down in Nos. 26 to 42 ; and in reference to the nature of the ground and circumstances, so that the whole Outline should not exceed the total length it had been judged advisable to undertake.

129. A simple way of obtaining something approaching to accuracy on the ground, would be, first of all to trace a rough semi-circle with pickets, about one-sixth part less in running length* than the required Breastwork ; for doing which, it would only be necessary to remember, that the distance taken in a pair of compasses for describing a semi-circle on paper, (called a radius,) is equal to the third part of the extent it describes ; so that if a semi-circle which should measure 300 yards, had to be traced on the ground, or as in this instance in front of a Bridge, FIG. 54, it would readily be done by measuring 100 yards each way, from the centre of the Bridge, along the bank of the River, and then measuring from the same central point 100 yards in several other directions, as shown dotted in the Figure ; C B, C D. Stakes, or as they are usually termed, Pickets, being driven at the extremities of all these measured lines, would indicate so many points in the outline of the required semi-circle.

The Salient, or outermost angles of the proposed lines of Breastwork being fixed in the outline of the semi-circle so traced, and their lengths being disposed within the

* It is traced in a certain proportion less, because the Breastworks which are disposed within it at different angles, for obtaining Flank defence, &c., necessarily have a greater development (see FIG. 54) ; the semi-circle or polygon being as it were a base on which a series of triangles or other figures, formed by the lines, stand. The proportion of one-sixth is merely given as an average, which may produce a result near enough the truth for our present purpose.

semi-circle, in different directions, so as to flank each other, &c., the total length of the *Trace*, though it will of course vary with the different figure that may be given to the Works, will perhaps be near enough the required extent for practice.

In the present example, the outer line in front of the Bridge is not to exceed 225 yards in running length; the outline of the Semi-circle, within which to dispose the Works, would therefore be only about 188 yards, which is one-sixth part less in extent, and the *radius* or length to be measured for describing it, will be one-third part of that distance, or 63 yards nearly; which being marked out in several directions as already explained, C A, C B, &c., would determine the points required; and when a sufficient number of them were obtained, the intermediate ones might be picketed by the eye. If from the nature of the ground the Works could not judiciously be disposed in any regular form, the semi-circle would not of course apply, but the *Principle* would. In such a case the measured distances between the most Salient points ought, of course, to be of *less extent* than the required length of Breastwork, for the reasons already stated.

* 130. In rear of the Bridge, we suppose that an extent of Breastwork to cover 400 men would be required (which we may estimate at 200 yards in running length); the remainder of the original number being held in reserve, further off, to act according to circumstances. This might be traced on the ground in the manner already described, but in arranging the Plan, it would have to be borne in mind that the Bridge affords the only accessible point of attack; the Works should therefore be so laid out, as that

the whole Fire should be *concentrated* upon it. It would likewise be necessary to guard against an Enfilade fire of artillery, which would be effected, either by so disposing the Lines, as that their prolongations should fall in such places on the other side the river, as were inaccessible to guns; or if that were impracticable, it would be necessary to erect substantial high Traverses at the extremities, and at intervals along the Lines subject to the Enfilade. No. 11. These Traverses may be merely short portions of Breastwork, standing perpendicular to the General Line, and made of the requisite height and thickness, to answer the purpose.

131. The Extent of Breastwork, and the position of the most Salient posts being thus determined, the Lines to connect them may be traced with sufficient accuracy by the eye. In this example the Salients are only about 40 yards apart, and it is rather a refinement breaking the Lines into smaller portions, but it serves better to explain the principle on which such Works are laid out. The Breastwork connecting these points has therefore been traced in an indented form, the advantages of which are, that in the centre portion, a more powerful Fire is directed on the most accessible part of the Abattis in front; and as regards the two sides of the Intrenchment, the Lines are not subject to be enfiladed by artillery placed at a distance on the road, which being the position most easy of access, would probably be that which Guns would occupy in supporting an attack. A Flanking Fire is also obtained for the defence of the Salients, and a more concentrated Fire can be brought upon particular points of the Abattis, if necessary.

132. At any convenient distance, varying from 20 to 40 or 50 yards to the front, an Abattis or other Obstruction, is designed, parallel to the general contour of the works, and extending to the River on each side. There is no necessity for its being of any regular form, so that it is connected; and in executing it, advantage would of course be taken of all Fences or local facilities that might offer.

133. The Details of executing all this Work now remain to be considered. There are supposed to be 225 yards of Breastwork in front, and 200 yards in rear of the Bridge, altogether 425 yards; which, at 2 yards a man, would require 212 men for working on it. If this arrangement were adopted, it would leave 388 men disposable for making the abattis in front,—pulling down the Parapet Walls, in order to lay any Force passing the Bridge under the Fire of the Defenders,—making Barricades across the Bridge,—blocking up the Roads, and others necessary Works; or if the Working Parties at the Breastworks had a yard and a half in length to execute, instead of 2 yards, 283 men would be employed on the Breastworks, and 317 would remain disposable;—or if the Obstructions were already in existence, in the shape of Hedges, Drains, &c., the Breastworks might be double manned, and the men extended at work, as explained in No. 53; circumstances would decide which arrangement was the best. The Profile to be given to these Works, would be regulated by the considerations adverted to in CHAP. III. A reference also to Figs. 2 and 3, will show that the most accessible points, should have a different Profile from those which are not open to attack, and which only afford cover for Troops. For instance, in front of the Bridge, all the

Works should offer the greatest possible impediment to an Assault, and therefore the Profiles should be of the nature described in No. 56; but in rear of the Bridge, the Breastworks close to the front of it should be made from a Trench, Figs. 4 to 8, which in merely affording Cover for the Defenders, should, when taken, leave the Assailants as much exposed as possible to the Fire of the more extensive Works behind them; and these again should be made of the Profile adopted in front of the Bridge for the reasons stated.

134. If the Force of disputing the passage of a Bridge were very much smaller than is here assumed, no difficulty would be found in executing works of an extent to correspond, that would offer rather more than a proportionate resistance. Supposing there were only 50 men, or less, than that, for working and defence, a good Breastwork with an Abattis before it, or a deep cut with Pallisades, &c., No. 144, might be made across the Bridge, close to the front, another such Barricade might be added in the centre, and a third at the foot* of a Bridge, flanked by short Breastworks along the river side, where a final stand would be made. It would be necessary to look out that there was no Ford near, and no swimming over on rafts going on, and a handful of Defenders would then be very respectably off. Care would also be taken to secure them from the effects of Artillery, by digging out a good Trench for cover, and by making the Parapets as thick as circumstances permitted; such materials also should be used for

* The Head and Foot of a Bridge are synonymous with the front and rear of it, considered with reference to the direction in which Troops are defending it.

the Parapets as do not splinter when struck by shot, for it must be remembered that the limited front of a Barricade, would cause the whole fire to be concentrated upon it; and any thing that would tend to lessen its effect, would be deserving of attention. If Stones necessarily formed the mass which was raised, they should as much as possible, be covered up with earth, mud, brushwood, &c. With a still smaller Force, as already hinted, it might be desirable to confine the defence to the foot of the Bridge; the side walls would, in that case, be removed, so as to expose an attacking force at any Flank fire that could be brought to bear; the road way would be as much encumbered with the materials or other obstructions as possible; which with a good Barricade, obstinately defended, would render an attack rather a hazardous and difficult operation.

135. Similar principles and details to those laid down for strengthening a Village, No. 114, would be applicable to a Bridge, if the ends of it were closed in by Buildings; Obstacles, and Barricades, in successive lines, with Flanking Fire from the Houses on each side, and *plenty of it*.

The duty of "Watching a Ford," with a view to dispute any attempt of an enemy to avail himself of it, would be fulfilled in following out the same principles, as far as they would apply; and all the details would of course correspond with the specific objects that were to be attained. The defence however would, in almost all cases, be confined to the *safe side* of the river; for the Ford must be a very good Ford indeed, that did not present something of an obstacle in itself, or at least the facility of creating one, by some of the temporary expedients adverted to in Nos. 81 to 83; and nobody would choose to sacrifice these advan-

tages for the satisfaction of engaging an enemy under less favourable circumstances. It would be prudent therefore to keep the Ford *in front*, and make the best of it. In a narrow river, and with a little assistance from *good luck*, it might be possible to add a little to the depth of water at a Ford; and it must not be forgotten, that even a few inches, especially in a rapid current, might be *worth having*. It might make a difference of swamping the Pouches of the Assailants, or sweeping some of them off their legs, and creating confusion. It will not do to talk of the construction of a Dam, for that sounds beyond our means, and as if we were trenching upon the privileges of Engineers: but any temporary obstacle which arrests a stream, has the effect of holding water up, and, if opportunity offers, a few Trees felled across, or dragged into any situation below a Ford, will form a base for the further operation of adding any stray Gates, Hurdles, Brushwood, Sods, and Rubbish that come to hand; and in proportion to the Time and Labour that may be judiciously bestowed, will, even this, be found *better than nothing*.

CHAP. IX.—DEFENCE OF AN INTRENCHMENT.

136. It is hoped that the foregoing pages may have shown that there is no great difficulty in fortifying an Outpost with various Temporary Works, that shall give Cover and protection to the Defenders of them, and that a little knowledge, which is said to be a “ dangerous thing ” on most other subjects, will suffice for this. The DEFENCE OF AN INTRENCHMENT, when it is made, is however perhaps a more difficult affair ; and it may not be considered out of place briefly to advert to it, with a view of pointing out some of its leading features, and wherein it differs from the ordinary routine of Service in the Field.

The general dispositions for the defence of an Intrenchment, are the same in *principle* as those of a Force acting on the Defensive, in an Open position ; in both cases a Line is formed for resisting an attack, and this Line being forced, is a prelude to defeat ; in either case the *fighting men* must be sustained by a Reserve, &c. ; but as the Force for the defence of an Intrenchment is not in a situation for manœuvring so freely as in the Field, and are thus deprived of a powerful means of remedying any partial success of an enemy, by change of position, it becomes the more essential that all measures which will tend to instil *Confidence*, should be adopted and persevered in. If the truth of this remark is not disputed, it would appear that *Support* is more necessary to a man engaged in repelling the attack of a Breastwork, than in the open field. Again, under the latter circumstances his resistance is of a more passive

character. The crossing of bayonets, and maintaining a personal combat, is comparatively of rare occurrence; but the defence of a Parapet is altogether another thing, every man must be a "fire eater" whether he will or no, if he does his duty; for anything approaching the character of a vigorous defence, may only be said to *begin* when an Enemy is within arm's length. If the very ground you stand upon is yielded for an inch, your object is in a great measure defeated; for it is far safer to keep people *out* of a work by determined resistance, than to let them make good their footing, and trust to the chance of expelling them by assuming the offensive.

It will be obvious, however, that no particular rules can be advanced to meet all circumstances, but a Commander is responsible for adapting General Principles to every exigency that may arise on Service; and as before said, it is only by knowing what special objects he has to attain, and what dispositions will best conduce to secure them, that he will be enabled to act with decision and effect.

137. For the sake of illustration, we will assume that a Road leading through a defile to the Flanks of a Position, has been shut up by an Intrenched Line of a decent profile;—that it is in a state to be defended, and that 600 Men and two Field pieces have been detached for occupying it, with orders to hold an Enemy in check as long as possible, without compromising their own safety; and that they are to be left to their own resources to make the best of it. Further, that the Flanks of the Intrenchment are secured by the nature of the ground, and that therefore, when an Assault is made, it will be "a fair stand up fight."

It would perhaps not be amiss under such circumstances,

to man the Breastworks with one-half the Force, and hold the other half, as a Reserve and Supports. 300 men would therefore on this supposition be disposed along the interior of the different lines of Breastworks; one-half of the remainder, or 150 men, might be brought up in either Column or Line, as appeared best, about 100 yards in rear, opposite the weakest point, and with free communication to the Front, and the remaining 150 might be posted further off as a Reserve, to act according to circumstances. The two guns would be placed so as to see an advancing Column at the greatest distance, and in a position to do it the greatest damage as it came up. Every facility for retiring should be looked to, and a fresh point should previously be selected where the Guns might be posted for covering a Retreat, if the Works were carried, or for supporting the advance of the Reserve, when charging the Assailants, to regain possession of them. Each Officer and Man should have his exact Post assigned to him, and be thoroughly instructed in the Duties that would be required of him, under the different circumstances of Attack that might be foreseen. It would be explained to the men posted for the Defence of the Parapet, what was the particular object of each Line, and to what they must direct their attention. How they could best cover themselves when giving their Fire; when was the most favourable time for Charging the Assailants, and what was to be done if they beat them off. What would be the line of Retreat, and the point of reforming, if the Works were forced: what was to be done for regaining possession of them, &c. The conduct to be observed by the Supports, the Reserve, and the Artillery, in these circumstances, would likewise be

clearly laid down, and the whole Force should be made to appreciate the strength of the Work, the many advantages they possessed over their Assailants, and the best way of profiting by them.

When the nature of the Attack was sufficiently defined, the general dispositions that had been made to meet it, might be modified so as to correspond. Thus the men defending the Parapets would be closed in on those Lines that flanked the approaching Columns, and towards the threatened point, where, besides those who were giving their Fire over the top of the Parapet, others would be drawn up close in rear of them for giving instant Support, &c. These men would also be advantageously employed in loading for the Files in front, for in order to maintain a very vigorous Fire, the men for defending a Parapet should be drawn up four deep. The best and steadiest shots should be selected to line the Parapet, at the distance of about a yard, or a little more apart, which will enable them to cover themselves, and give their fire with freedom, and the rear files have then nothing to do, but to load and relieve those in front in succession, should the firing be kept up for any length of time. By this arrangement each man in front might fire 50 rounds in five minutes, taking a steady aim, when if he had to load for himself, he could not Fire more than about 15 rounds, which is sufficient proof of the advantage which is gained.*

When these dispositions were made, all that would remain to be done, would be, to stop the head of the assaulting

* Philippon, at Badajos, adopted something like this mode, and it was practised with murderous effect at New Orleans.

column, by a determined and obstinate resistance at the Parapet; failing in this, to make an instant and vigorous Charge with the Supports, whilst the Enemy was reforming and in confusion within the Work; or if the worst came to the worst, to effect a steady and orderly Retreat, should these good intentions have been frustrated. Columns of Assault, and storming Parties, are sometimes so very unreasonable, they will not be denied, and when that is the case they may get into a Work, but they ought at least *to pay a good price for it*; and they generally have done so, when anything worthy the name of a Defence has been made.

138. It will be admitted from the foregoing observations, that in the defence of Works, *much more* is expected from individual exertion and personal bravery, than in the Open Field, where there may be plenty of fighting without absolute contact, and where change of position and tactic, save an infinity of trouble. A Soldier therefore, in these encounters, becomes much less of a warlike machine, than under circumstances when he is more usually content to play at *long shot*, and see all opposition vanish in a moment as he rushes forward at the word "Charge," and long before he has an opportunity of measuring the length of his Bayonet with his opponent. It is therefore but reasonable to suppose, that these important duties cannot be performed with all the advantages which are within the influence of Instruction to impart, unless a Soldier were made thoroughly to comprehend all he had to do, and the best mode of doing it, and that his *morale* were cultivated in proportion to the exertions required.

139. It is too much to expect that a little Field Work,

of an inconsiderable profile, will enable men to perform such miracles, as they could under more imposing circumstances; all that is necessary to impress is, that *much is to be done*; and that *much may be done*; and, that the Defence of a Parapet, is a very different thing from sustaining a Charge in an Open position. There is far more to be done,—more energy is required,—more individual exertion, and courage. In fact, a good Defence becomes like a Fight of olden times, when two-handed Swords and ponderous Battle Axes were wielded by the brawny arms of our Saxon and Norman forefathers; when such fellows as “Reginald front de Bœuf” ate the plum pudding of England;—fellows who, in the ordinary course of their morning’s amusement, would give and take blows for half an hour, every one of which would have annihilated a rhinoceros. Those were the men that learnt the style of fighting best adapted for an obstinate defence: the Field Exercise, as doubtless then taught in the Drill Squads of those days, would have made them stand to their work at a Parapet, as a Blacksmith does at his Anvil, milling away “right merrilie” at the thick skulls of their adversaries; nor is it doubted for a moment, that their Successors, of modern times, the present Malt-consuming Army of England, have all the will and Heart to do the same, were they equally instructed, and had better Tools to work with. But the instinctive hardihood of the British Soldier, is perhaps, after all, his best Drill-master, when he gets within reach of his adversary; it may however be *hinted*, without disparagement to a Firelock, that it is not a Weapon, of all others, one would choose for a combat of personal strength and address at close quarters, into which all Assaults and

Defences, more or less, resolve, themselves, when there are serious intentions enlisted on both sides: this however forms the exception to its general usefulness for other purposes, and necessity almost forbids any other being thought of, or suggested, in addition, to meet remote exigencies of the service. On such *grand* occasions as the regular defence of Breaches, &c., a variety of Weapons, chiefly very long ones, are sometimes paraded, but let that pass as foreign to the present subject, and let us trust to our Bayonets, as there is no help for it: they have hitherto accomplished Deeds that make one's hair stand on end to think of, in these Piping times of peace; and instead of being cried down, they ought to be crowned with a portion of the same Laurels that adorn the brows of the Heroes who have either directed, or used them.

CHAP. X.—GUARDING AND DEFENDING A HOUSE.

140. Having explained in CHAP. VI. some of the means for placing a House in a state to be defended, a few observations respecting the disposal of Defenders may perhaps be of use. When the Defences were in a state to be occupied, a Commander would, under most circumstances, divide his Force into as many Parties as there were distinct portions of works to be occupied. For example, one Party for each Story, No. 90, one for an Outhouse, another for the Stables, &c., their numbers corresponding with the extent of the Works they were to defend. He would explain to each Officer, or Non-Commissioned Officer in command of these portions, how their duties were to be performed, what object they had to fulfil, and what was to be expected from them;—when was the proper time for opening a Musketry fire from the Loop-holes;—when the critical moment for dipping a Rocket into an advancing Column;—when the throwing of Grenades should commence, or small Shells be rolled down. How the different Communications were arranged from the Out-buildings to the House, and from one Story to another. What means had been provided for closing these Communications, and under what circumstances a retreat should be made to the Upper floors, if the Post were to be defended to the last, or elsewhere if it should become necessary to abandon it.

The Parties might then be told off by their own Commanders to specific duties. For example, two men to each Loop-hole in exposed situations, and one to all others, who

would also be disposable for *double manning* those on the sides attacked; or this might be done, if more convenient, from the Reserve. In the Lower story and Outworks a greater proportion would be posted than in the Upper stories, which are not so liable to be forced. A special Guard would be placed at all Doors or Lower Windows open to assault, and a small Reserve would be held in readiness, especially on the Ground floor, to act according to circumstances; for reinforcing particular situations when pressed, or if a Barricade were forced, for charging the Assailants, or covering the Retreat of the Defenders, to those points they had been ordered to retire upon. Other men would be held in readiness to make use of the means provided for cutting off the Communications, No. 99, or to stop up any partial breach that might have been made by artillery, either through the Walls or Barricades. The situations to which men might retire for Cover against artillery fire until their services were required, might also be pointed out, &c.

141. If after an obstinate resistance an Enemy should drive the Defenders from all their strongholds below, it would be remembered that the Upper story was their Citadel; and it will be obvious that with a barricaded Staircase, they would be in a position from which they could not be very easily dislodged, if they were determined to hold it. Without refining however, too much on the Defence, and leaving Hot Water, Quick Lime, Molten Lead, and a host of *small fry* which have been recommended as accessories on such an occasion, to those who have leisure to prepare and make use of them, Attention is merely invited to the Fact, that a Hole here and there

through an Upper floor, would give passage to as many Grenades, as of themselves would make it very lively work in the Lower regions ; and that a few additional ones for Musketry, would afford the means of adding to any confusion that might result. The attempt to force a well barricaded Staircase, so as to gain access to the Upper stories, would always be a hazardous operation, and here the advantage is manifestly on the side of the Defence ; but we may not feel too secure in these good quarters, for it must be admitted that there would be little difficulty in the Assailants setting fire to the House, or in making arrangements for blowing it up, which, under most circumstances, it might be prudent to receive as a formal “ *Notice to*

CHAP. XI.—GUARDING AND DEFENDING AN INTRENCHED VILLAGE.

142. The general disposition of a Force for the Defence of an Intrenched Village, would be influenced by the principles adverted to in CHAP. IX, as far as the difference of locality and circumstances will permit of their application; and as the chief Defensive Works would usually consist of a combination of Buildings and Intrenchments, &c., which have been separately under consideration in the preceding pages, it will be needless again to enter into the *Local* disposition of the Defenders of such Works, or the means to which they should resort, for resisting an Attack. A Village however may be of considerable extent, calling for additional precautions and defensive measures, corresponding to its importance as a Military Post: a few further remarks on the subject may therefore not be superfluous, as they may at least serve to combine under one general plan, the separate Defences of such detached portions as would be under the superintendence of individual Officers, and thus render each part more intelligible.

143. To guard against a Surprise, and to be in readiness to repel an attack at any moment, and in any quarter, are objects demanding equal attention, and are the mainspring and basis of all Defensive measures. The former of these important points will be secured by an adherence to those golden rules which appear in Sect. 8, Part V., of the Field Exercise, in which the Duties of advanced Picquets, and their Sentries, Patrols, &c., are clearly laid down and ex-

plained ; the latter by judicious internal arrangements, in occupying the different Works to advantage,—posting the Picquets, Reserve, and Support, so as to enable them to do their Duties with decision and effect,—appointing convenient situations for assembly on the first alarm,—judiciously quartering the Troops, &c.

.144. In making these preliminary arrangements for the Defence, a Commander would never lose sight of the great importance of getting every man to his Post in the least possible time ; and when he had ascertained by false alarms or other means, what he could trust to in that respect, his next care would be to take such steps, as would at least insure sufficient notice of the approach of an Enemy, to enable him to dispose of his Force without hurry, for giving him a warm reception. For instance, it might require half an hour to do this leisurely, and he would therefore, on this supposition, so distribute his Outposts, &c., as to feel secure of having that time, to himself, after the first alarm was given, and before an Attack could possibly be made. If he fails in having sufficient notice to do this, it is 10 to 1 he is beat, for the best measures will be of little avail, if they cannot be carried into full effect. It will be needless to harass Troops by multiplying Outposts so as to secure earlier intelligence than is required, but still it will be an error on the right side to take 20 precautions too many, rather than to neglect a single one. In making his dispositions therefore, he would endeavour to steer a middle course between two extremes ; on the one hand, if Troops are overworked in preparing for an Attack, and guarding against a Surprise, they are thrown out of condition for resisting it when made,—on the other, if all due precautions

are not taken for first strengthening the Post, and then guarding it, they risk the loss of all their labour in being exposed to a sudden Attack, at a time when they are in no form for opposing adequate resistance.

In the distribution of the Defenders too, there are extremes to be avoided; for instance,—if all the Parapets and Works are manned without regard to the requisite Force which should be in reserve for giving Support, though the greater number formed for opposing a first shock might lessen the danger of being upset by it, yet a Line cannot stand up for any length of time against a Column, that from circumstances can be brought into contact with it; and when once it is forced at two or three points, the game is pretty nearly up, unless there is something fresh to go to work with. The opposite defect would be in giving undue strength to the Reserve at the expense of the Parapets, which, from being feebly defended, would not then offer the resistance they ought to oppose. Another such a Scylla and Charybdis, and another to that, might be added if these little principles were pursued further, but we may safely trust to common sense suggesting more on the spot, under the ever-varying circumstances that arise on Service than the *memory* can supply,—provided that the *simple Principles* and *Essentials* of the subject have made that impression on the mind which has secured their *saliency*. If they are *at home* when wanted, there is a natural tendency in minor matters to fall into their places and come right of themselves, and we will therefore leave the rough outline as it is.

145. The proportion of the disposable Force to be retained in hand for the Reserve, would be governed by cir-

cumstances, depending on the number of assailable points, and the calls that might be expected to be made upon it for assistance,—perhaps from one-fourth to one-sixth of the whole would not be far off the mark. The remainder would be subdivided for a variety of duties, such as a Garrison for each separate House that had been strengthened, and one for the Keep,—Defenders for the Intrenchments, Breast-works, and Stockades,—Picquets, Guards, &c.

.146. A strong Reserve Picquet should be mounted at the rallying point of the Reserve, which should be near the centre of the Village, in some open place having free communication to all the Defences. Another Picquet would be in the Keep, and according to circumstances others might be required at different points. An outlying Picquet or two would be equally necessary in commanding situations beyond the Works, and a communication between all of them should be kept up by a chain of Sentries, or frequent patrolling. If Cavalry form part of the Force, some of the Outpost duties during the daytime should be intrusted to them, as they can patrol to a greater distance to see what is going on, and obtain information. In the evening they would be replaced by Infantry, but if the Posts were distant, a few Cavalry patrols should be attached, to assist in keeping up the communication, or to gallop in with intelligence. The Picquets would of course be accoutred, and ready to stand to their arms at an instant's warning, and those for the immediate defence of any distinct portion of the Works, such as Intrenchments or Barricades, should either be hutted or encamped close to the spot, or lodged in the nearest building, if one were found conveniently situated for the purpose; this is essential, for an Enemy, if un-

opposed for even a few minutes, will surmount without difficulty such Obstacles as are usually met with in the temporary Works that have been treated of.

147. Every Commanding Officer of a Regiment should have a steady Non-Commissioned Officer of each Company to sleep within hail of him every night ;—one who is perfectly acquainted with the quarters of every Officer and Non-Commissioned Officer in his Company ; so that at any instant, orders might be conveyed with the utmost promptitude to any part of the Corps, however much it might be distributed. And on the same principle, every Officer in command of a Company which was detached, should retain the means of readily communicating orders.

The Support too, should be close at hand, in the nearest houses, and they should have a hint that there is no necessity for being *shy* about breaking out fresh doors, or doing anything else, that may make their Communications more *direct* or *convenient*. On these occasions it should always be borne in mind that a *straight* road is the shortest, and if it is a *wide* one so much the better, provided it is not one that an Enemy can avail himself of. In more permanent Works, there is not this extreme necessity for having the Defenders of them as it were, constantly under arms to repel an Attack ; for if a sharp look-out is kept, the Obstacles presented by deep and wide Ditches, stout Palisading, &c., will of themselves, consume as much time of the Assailants, as will enable the Defenders to repair to their Posts, even if it were at rather shorter notice than might be agreeable ; but here it is obviously a matter of paramount necessity.

These precautions having been taken for guarding a Village against a Surprise, and for immediate Defence, and the remainder of the Force being apportioned according to circumstances for occupying the different Works and Buildings, it would become an object to quarter them all as close as might be, to the scene of their exertions, that there should be no unnecessary delay in getting them to their Posts, No. 144. Each separate Detachment should have a Sentry to stir them up on the first alarm, and when circumstances required it, they should all sleep on their Arms, or they will not make so quick a "turn out" of it as may be wanted. Every precaution should be multiplied by 2, when the nights are dark and tempestuous, as that is "the time o' day" for a Surprise. During the winter too, when men cannot be so much exposed Under Arms, and human nature is prone to look for scraps of creature comfort, under the lee of anything that will protect them from a keen North-Easter, the attention of Officers cannot be too much directed to enforce these Duties, and to see that every body who ought to be on the alert is so. A single Sentry standing with his back up behind a Tree, or under a Parapet, instead of snuffing the morning air with his face the other way, might cause the sacrifice of the whole Post. Indeed when all has been done that the most zealous watchfulness could dictate, a Commander and most of his people should still "sleep with one eye open" if the enemy is within a march of him. The best measures that can be devised are not infallible, even by day, and to prevent being *taken short* at night, it is safest to consider that a Column of Attack, with Grenadier Caps and Mustachios, all teeth, hair, and steel, might rise up out of the bowels of

the earth, or drop from the clouds, close in front of the Defences at any moment. If you are prepared for such emergencies as these, you may go to bed with the conviction that you are ready for him ; and let an Enemy then do his worst, you will at least have the satisfaction of not having been outwitted.

148. Among other things, it is most essential that every Officer and Soldier should be thoroughly instructed in the nature of the Work he had to defend, and the Duties he had to perform, in all the exigencies which prudence could foresee. They should also be perfectly acquainted with every street, alley, or footpath by which they might have to move, so that on the first alarm, even if the night were as dark as pitch, there would be no confusion or mistake in repairing to their respective alarm-posts, and afterwards being posted for the Defence according to whatever orders might have been given.

149. If it should seem desirable, and the Garrison is sufficiently strong to afford to make a Sortie, it is essential that it should be well-timed and vigorously executed, and be in sufficient force to make some impression, either as a diversion in favour of the Defenders of the Parapet, or to drive the Assailants back beyond the Obstacles they may have already surmounted. The Party may be selected from the Reserve and the Defenders of the interior of the Village, leaving the Parapets fully manned, as they ought to be. The Sorties should be drawn up at the points by which they are to go out, and at the critical moment when the speed of the Assailants has been first checked by the opposition they might meet with in front, a furious onset with the Bayonet should be made on one or both Flanks, and

when the object was effected, the Troops should retire within the Works again, as fast as they came out. The Firing, from the Defences would cease whilst they were engaged, and be resumed with the utmost vigour, the moment the Front was clear again. Arrangements should also be made for covering their retreat, by being in readiness on the neighbouring Parapets to open a heavy Fire the instant it was required.

.150. During an Attack, the Reserve should be within ear shot of the Commander of the Post or his Bugle, as it would be by the instantaneous application of this part of the Force at the right moment, that his hopes of remedying any disaster would mainly depend.

Before he determines to strike a decisive blow with so important a body, a Commander should assure himself that the Attack is a *real* one, and that the Defenders and their Support have been unable to deal with it ; and when he has made up his mind to fire this his *great Gun*, he should bring forward the whole, or a portion of the Force to the spot, as might seem expedient, and make the most impetuous Attack possible ; for if the Reserve is checked, and the original Defenders of the Work are still in disorder, it will be up-hill work to regain the ascendancy. But however desperate the case might become, it would be as well, just to try one's luck, and " have another shy at them," for the local knowledge of the Defenders gives them immense advantages, No. 20. The whole Force should rally, and be reformed at some little distance, and a desperate Attack be directed on the Front and Flanks of the Assailants, who we may reasonably conclude would not be in the very best order for receiving it ;—and if it were successful, and they

were fairly driven back, all would be right again. The Reserve would regain its Post, the Defenders and the Support would do the same, and everything would then be ready for another round.

If, however, a Commander sees that it "won't do," and that he is overmatched, either by the combinations or numbers of his Enemy, it remains for him to conform to circumstances.

15]. It is stated in No. 110, that Villages may be intrenched under different circumstances, the chief of which are,—whether the Force defending them is to be supported from the Flanks or Rear during an Attack, or whether the Post is to be considered independent of other operations, and therefore to be defended to the last by the Troops thrown into it. In the former case, the communication with the Rear and on the Flanks, and the means of holding the ground by a succession of defensive Lines, would have been previously arranged, which would give the supporting Troops the opportunity of acting with effect, whilst the original Force was re-forming. In the latter, a Keep would have been indispensable, and the Reserve would protect the Retreat of the different Detachments from the more open Works of the Contour into this stronghold, where they might be more safely indulged in showing fight, after the manner prescribed in CHAP. X.

Much however would have to be done on both sides before a retreat to the Keep or anywhere else would be thought of; and as *much* cannot be done without an expenditure of *Time* to do it in, the object of defending the Post at all, might still be fulfilled, whatever the issue of the combat might be; for in all combined operations we may

say with a French author, “ *Que le But de l'Art Defensif est de gagner du Temps.*”

More important ends than saving a little time are however frequently gained at the trifling cost of taking the trouble to strengthen a Post ; for the determined attitude which all the Troops affected by the operation are enabled to assume from feeling a proper confidence in the resources which may be acquired by these means, either for defending themselves, or for repelling an attack, may have the effect of warding off a threatened blow altogether. There is certainly something in the bristling look of an Abattis, and the mischievous aspect of a Wall or Building full of Loop-holes, enlivened by an occasional peep at a Cap or a Bayonet, that is more calculated to induce a little reflection than when dangers are more obviously inviting ; and when people once begin to reflect, they may think *twice* about the matter,—*second* thoughts are sometimes best.

In illustration of these remarks, and of the subject generally which has been treated of in these pages, we will wind up after the manner of other Elementary Writers, by an *Example*, only that it shall be a *real* one, of measures which have been actually pursued in converting a House and its appliances into a small Fortress, and of the effect which this hasty creation assisted in producing.

152. After the Duke of Wellington passed the Pyrenees, the French Army continued to hold Bayonne, which being situated at the junction of the Nive with the Adour, commanded the passage of both Rivers. The Allied Army had its right beyond the Nive, whilst its centre was separated from its Left by some very marshy ground. In front of the Central position were three Buildings ; on the right stood

the Château of Arcanques, in the centre a Church of the same name, and on the left, at the distance of about 300 yards, there was a large Farm House;—all three were barricaded and occupied.

It would lead us far beyond our limits to detail the advantages resulting to a position from the occupation of strong prominent points, in front of a posted Force, especially when they are drawn up on the defensive;* we will therefore say no more on the General Principles of such a measure, but confine ourselves to the details of strengthening the Château,—for the outlines of which we are indebted to the distinguished Officer who executed them.

The Château was built of stone, and was what we should call a modern, substantial, square House. One can fancy what George Robins would have said of its Groves and Avenues, and fruitful Gardens, &c.; though we dare not emulate his beguiling eloquence. We can imagine also the pride of the Seigneur in the beauties of his residence, and his feelings on viewing the ruthless alterations which were made in adapting it to the purposes required: it is foreign, however, to the purpose, to be imaginative. •

a The side of the Château, looking towards the rear of the position, opened into a garden surrounded with a high wall, which wall was loop-holed. The Stables were on the opposite side, in front, and they served in a great measure to cover the wall of the house itself, from the best position for cannon, on what soon became the Enemy's ground. The Mangers answered for Banquettes, after the Wall above them was loop-holed. But these Stable Walls were

* See No. 117.

not so thick as those of the House, and as it did not appear likely that they would resist the first cannon shot, preparations were made to set them on fire at the moment the Enemy's Infantry should attack; for had they got into them, they probably would have found Loop-holes in the rear, through which to fire against the main Building, all ready made by their own shot.

A Grove of old Elms helped in like manner to cover the Garden Wall from the Enemy's best position for Cannon, and only a portion of these were in consequence cut down to be converted into Abbatis, &c.

The Stables were afterwards connected with the main Building by means of an Intrenchment, with a Ditch in its front. This Intrenchment was crowned with Loop-holes, made with blocks, cut off with a cross-cut saw from the large elm trees which were intended to be removed during a Cannonade, and replaced just before the Assault. The Earth of which the Parapet was formed, was allowed to roll to its own natural slope; that is, it was not levelled at the top, as is usually done, under the idea of gaining thickness, but it was left as a rough triangle, in order to procure the greatest possible Command, as well as the greatest possible Cover from the Enemy's close Musketry Fire at the moment of attacking the Work; in fact it was much the same as the Parapet of a Siege Trench, and like it had its Banquette made by simply keeping a small step clear on the Interior slope.

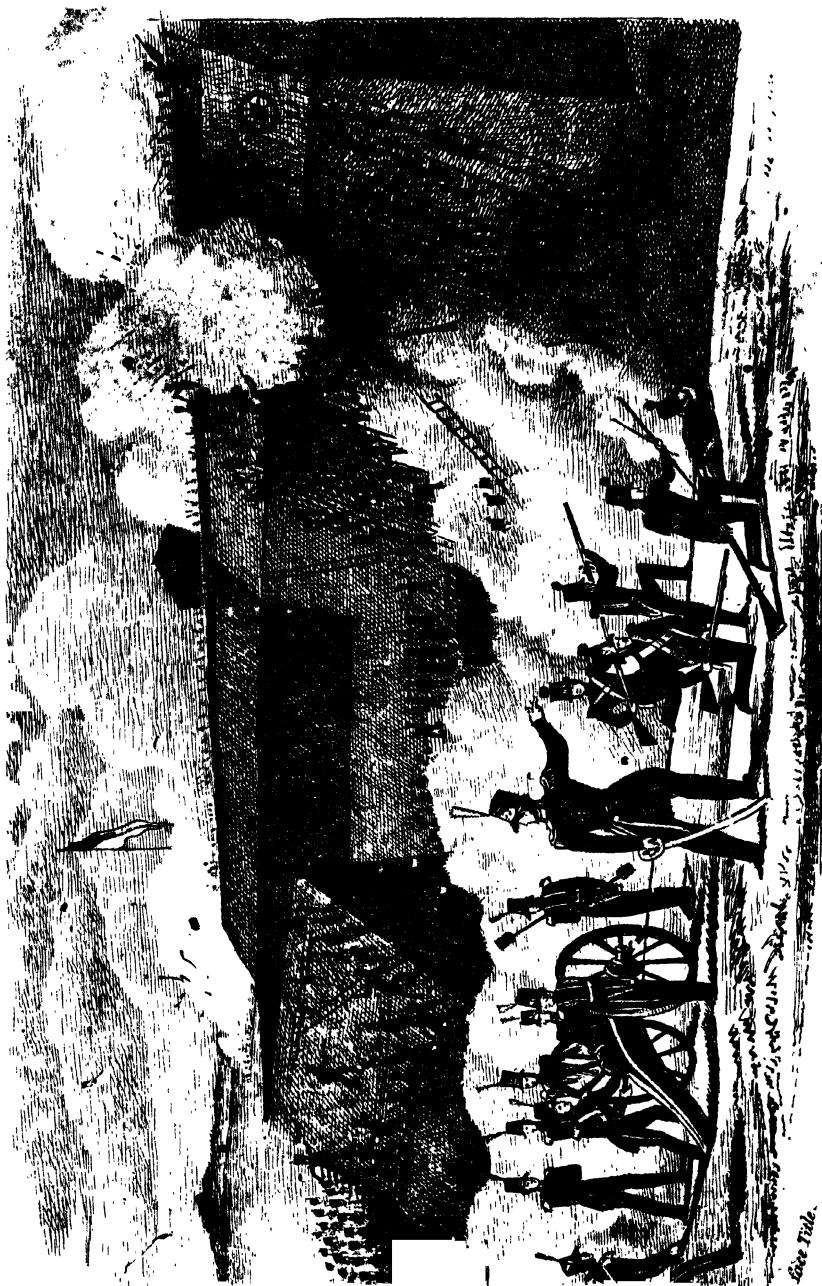
The French General having concentrated his Forces at Bayonne in December 1813, unexpectedly and rapidly drove in the Duke of Wellington's Outposts in front of this central position; pushing on until he occupied a ridge

only 500 yards in front of these barricaded Buildings, and bringing up a Field Battery, which immediately, at this short distance, opened upon them. After awhile, however, he drew off, and marching to his right, chose rather to engage the extreme left of the Allies, and on the afternoon of the same day, fought a severe action at Biaritz, and was repulsed. The French however maintaining the little ridge, 500 yards in front of the Central position, strengthened it by Loop-holing the scattered houses of the Village, which stood within their portion of the ground; and not content with this, in the night they converted an embankment into a Battery, in which there were no less than fifteen Embrasures bearing on the Château. These were masked with branches of Trees, and as the position was within two leagues of Bayonne, it was thought very possible that heavy guns might have been brought up from that Fortress to arm some of them.

This consideration, however, did not alter the determination which had been made to hold and defend the Post, which shows that a House is not to be considered untenable because "the Enemy can bring cannon against it." A Battalion of the Rifle Brigade was thrown in, to garrison it, and with characteristic gallantry and activity, they made every preparation for an obstinate and vigorous resistance. Story after story was to have been disputed, by retreating upwards if it became necessary,*—the Cellar doors, and these of the Basement story were thrown open, that a portion of the Defenders might have been placed in security whilst the cannonade lasted, and until the Assault began,—

* See No. 141.

Be that as it may however, the Marshal did not altogether like the look of things, for on the third night of the operations he moved off, and on the morning of the fourth day evinced a preference for attacking the extreme Right of the Army which was beyond the Nive, rather than encounter the Central position, which had been hastily strengthened in the manner described.



Give Title.

A
PRACTICAL TREATISE
ON THE
ATTACK OF MILITARY POSTS,
VILLAGES,
INTRENCHMENTS, &c.;

INTENDED AS A SUPPLEMENT TO
"THE DEFENCE OF OUTPOSTS;"
WITH A FAMILIAR EXPLANATION OF THE
PRINCIPLES AND PRACTICE OF ESCALADING.

BY J. JEBB, C. B.,
Lieut.-Colonel, Royal Engineers.

MADRAS:
RE-PRINTED FROM THE LONDON EDITION OF 1848
BY MESSRS. PHAROAH AND CO., ATHENÆUM PRESS, MOUNT ROAD.

TO THE
SUBALTERNS
OF
THE BRITISH ARMY,

• THIS LITTLE TREATISE,
DESIGNED TO ASSIST THEM IN THE ACQUIREMENT
OF A PRACTICAL KNOWLEDGE OF
AN IMPORTANT DUTY, •

IS INSCRIBED BY

A BROTHER OFFICER.

P R E F A C E.

IT being in contemplation to print a Second Edition of a little Work I published last year on the Defence of Outposts, &c., it has been suggested to me by a Military Friend, that in confining myself to the *Defence*, I have left "half the tale untold;"—inasmuch as it is of equal importance that a knowledge of the *Attack* of Military Posts should be acquired.

Indeed it is obvious enough, that the Attack and Defence will, under all circumstances, exercise a reciprocal influence upon each other, and that to execute *either*, with all the advantages of which they may be susceptible, a knowledge of *both* is essential. It is by knowing what power the Assailants really have in their hands, and how they can use it, that an Officer is competent to prepare and arrange his Defensive measures, and is enabled to foresee and meet such exigencies as may arise in the heat of Action; and the converse of this is equally true, an Officer cannot properly direct an Attack until he can form a just estimate of the difficulties he has to contend with, and the means which the Defenders can bring into play against him.

In the hope of throwing a little light on this subject, I hastily wrote the following pages, intending to add them to the Second Edition before alluded to, but as they have rather exceeded the limits I expected, and from other causes, it has been decided to publish them separately, as Parts I. and II. with the further view of adding Part III., explanatory of the Attack of Fortresses, and of the very important Duties which the Officers and Men of the Line are called upon to perform, in the superintendence or execution of the Works of a Siege, when opportunity permits.

Whilst on the subject of the Attack of Intrenchments, &c., briefly treated of in the following sheets, I naturally stumbled upon Escalading, and have devoted a few pages to a little explanation of its principles and practice, to which I have added a few suggestions respecting it. This mode of Attack is not generally understood, in consequence of the limited opportunities which Officers have of acquainting themselves with its merits; and it is the more to be regretted, for an Escalade may justly be considered one of

the most powerful and attainable means of assaulting Works, and is also one of general application.

Escalading on a more extended scale than had been attempted on Service, was organised into a system, and introduced by Colonel Pasley, at Chatham in the year 1822 ; and by a subsequent Order from the Horse Guards, the different Regiments and Depôts, which successively pass through that Garrison to India and elsewhere, are regularly exercised in it by him, with manifest decision and effect. The benefit of this training was felt in the Burmese War, where some European Troops,* which had been practised previous to leaving England, bore a conspicuous part in the Escalade and Capture of the numerous formidable Stockades which constituted the bulwarks of the Burman Empire, and which until then had been deemed impregnable by their Defenders.

I must deprecate the criticism which may too justly be passed, on the levity of style by which the serious subjects I have attempted to explain are occasionally illustrated, and which I am "free to confess" is extremely *disrespectful* to them ; but I fall back on "good intentions." My business is with the Subalterns of the Army, who, as a body, are not quite so *studious* as they might be ; and if I have been fortunate enough to convey a little information in a form that they *will read*, my object, which is a sincere desire for the good of the Service, is attained.

Those who so gloriously gained personal experience in supporting the honour of the British Arms in our late Wars, are ebbing fast with the tide of Time from our Ranks, and it does not much exceed the limits of probability, to say, that the Subalterns who figure in the Army List of this month of June 1837, may be the Commanders of Regiments or Brigades when next we draw an hostile sword ; and into their hands will then be confided the high character and unsullied reputation of the British Army. Circumstanced, therefore, as we are in this respect, it behoves the Junior Officers of the Service not to confine their views to the present moment, but to look forward to the time when they may have to acquit themselves of the highest responsibilities, and to prepare accordingly.

Their inherent Bravery, and their *latent* Military Spirit and Genius, none can doubt, for they come of the same Stock as those Veterans who

* The 13th Light Infantry, which so much distinguished itself in that War was practised in Escalading at Chatham in 1822, and that gallant Officer, Major, (now Lieut-Colonel) Sale, whose name stands so prominent in the heroic Enterprises in which they were engaged, was particularly active on that occasion.

have already shown what they are made of. *Blood* always has told, and always will !—but in order that we may take the Field again, with such an Army as we quitted it,—such an Army be it remembered, as the Sun seldom shines upon,—it is absolutely necessary that this Military Genius should not sleep through these piping times of Peace. It should be cultivated, encouraged, and matured, by every Officer and Man who has a just sense of what is due to the Service, and who enters it with the determination of being a *Soldier*. ●

In future Wars few will start with any EXPERIENCE, nor can that be obtained until there is opportunity; but the next best thing, which is KNOWLEDGE, is within the reach of all who choose to take the trouble of acquiring it. What Nelson said will bear repeating,—“ ENGLAND EXPECTS EVERY MAN TO DO HIS DUTY !” But it may be added, it is an essential condition that he should first KNOW HOW !

J. J.

CHATHAM, 1837.

•

PREFACE TO THE SECOND EDITION.

IN reprinting this little Treatise, I would willingly have endeavoured to do more justice to subjects I have attempted to explain, but not having had the opportunity of doing so, I must trust that the object I first had in view in drawing attention to these duties, in the disguise of what is called “ a popular form,” will excuse the shortcomings of the performance. This, therefore, is a Second Edition without the usual advantage, so much needed, of “ considerable corrections and additions.”

J. JEBB.

LONDON,
14th June, 1848.

CONTENTS.

CHAPTER I.

	Page
OBSERVATIONS ON THE ATTACK OF OUTPOSTS —Sketch by a French Author Of an irresistible ATTACK , and of an equally unconquerable DEFENCE — Of Attacks by SURPRISE , and by OPEN FORCE —Requisite information to be obtained previous to the Attack of a Village, or an Isolated Military Post, &c.	1

CHAPTER II.

FURTHER CONSIDERATIONS AND DETAILS —General Dispositions for the Attack of Works or Intrenchments, &c.—Principles which regulate them discussed and explained—Real and False Attacks—Advantages resulting from the Employment of Artillery—The two Assaults on Fort Christoval given as an Example	10
---	----

CHAPTER III.

SURMOUNTING OBSTACLES —How Infantry are to deal with an Abattis in an Attack by Surprise—How it is to be carried by Open Force—How other Impediments, such as Military Pits, &c., are to be passed—How Stock- ades, Ditches, Palisades, Chevaux de Frise, are to be surmounted or destroyed	29
--	----

CHAPTER IV.

OF ATTACKS BY SURPRISE —Circumstances which will admit of, or facilitate, this mode of Attack—Various considerations which ought to be weighed in determining the point—Of the <i>Time</i> most favourable for surprising a Post, and circumstances which influence the selection—Of the advan- tages and disadvantages of Night Attacks—Proportionate number of men for making an Attack—Requisite precautions—Division of the Force—Order of the March, and DISTRIBUTION OF THE ASSAILANTS — Specific orders they should receive—Conduct and precautions during an Attack—Scaling a Wall or Stockade, &c.— BLOWING OPEN BAR- RIERS —Mode of applying a Bag of Powder for the purpose—Previous Dispositions—Precautions to be observed	32
---	----

CHAPTER V.

OF ATTACKS BY OPEN FORCE —Under what circumstances they are impos- ed—Requisite information to be obtained, and measures to be follow- ed—In what points it differs from an Attack by SURPRISE —Precau- tions to be adopted, &c.	48
---	----

CHAPTER VI.

ATTACK OF AN INTRENCHED VILLAGE—General Sketch of Proceedings— Reconnoissance—Columns of Attack—Position of the Artillery, &c.— Arrangements for, and progress of the Affair—Reference to former Chapters for Detail	51
---	----

CHAPTER VII.

ATTACK OF A FLECHE OR EARTHEN WORK OPEN IN THE REAR—A RED- DOUBT, &c. Description of such Works—General Dispositions to be made, and precautions to be observed—Real and False Attacks, and their reciprocal influence upon each other—Capture of a Redoubt de- scribed by Captain Macaulay—Sir James Kempt's Assault on Fort Pisurina given as an Example	Page 56
---	------------

CHAPTER VIII.

ATTACK OF A FORTIFIED BUILDING—Requisite information to be obtained —Precautions to be observed, and mode of proceeding—Distribution of the Force, and formation of the Columns for a supposed Attack—Break- ing through the Berricades by the explosion of a Bag of Powder— Attack, by an Escalade of the Windows—Silencing Loopholes by superior numbers—Forcing an Entrance, and subsequent Dispositions —Scaling the Roof, and making the Attack from above, &c.	62
--	----

CHAPTER IX.

ESCALADING—An explanation of its Principles and Practice—A supposed attempt to Escalade in Column, and the practical working of such a system—Its hopeless result—True Principle of an Attack by Escalade discussed in a familiar manner—Defence of the great Breach at Badajos —Supposed Assault of a great Outwork—Progress of an Escalade in Line, and explanation of its probable effects—Suggestions for enabling the Assailants to regain the formation of Columns during the Attack— Change in the arrangements when the number of Ladders is limited— Mode of proceeding with an insufficient supply—How to proceed with <i>still less</i> than an insufficient supply—Lord Hill's Escalade and Capture of the Works at Almaraz, given as an Example—The End	71
--	----

ON THE ATTACK OF OUTPOSTS.

CHAP. I.—OBSERVATIONS ON THE ATTACK OF OUTPOSTS, VILLAGES, INTRENCHMENTS, &c.

AFTER the endeavour to show in PART I. on the "*Defence of Outposts*," how impregnable a Military Post may be made by the judicious application of a very little labour, there is certainly an awkwardness attending the addition of a Supplementary Document, to prove the extraordinary facility with which they may be attacked, and how easy it is to overcome all the boasted Obstacles, and vanquish the Defenders. Interested in a subject, a Writer is insensibly led on to make out as good a case as a regard for truth and the common sense of others will permit; in doing which he may perhaps, without intending it, sometimes trench a little on the privileges of the Special Pleader. If He of the three-tailed Wig, after having said his say on one side, should have a Brief handed over to him from the opposite one, he would have to go to the "right about;" and the extent of his predicament in a second time shewing "the worse to be the better cause," would depend upon the solidity of his former statements; and an enlightened Jury would have to balance the merits and evidence on both sides, and judge for themselves about the Verdict. An eminent French Author, who flourished not 100 years ago, when placed in this same dilemma, assumes rather an amusing attitude, and as he makes a capital Fight of it

both ways, and moreover conveys a very instructive lesson in his animated sketches of the Attack and Defence of a Redoubt, it will need no apology for plunging at once "*in Medias Res*," by inserting the substance of them here, for in doing so we shall acquire a general notion of the subject to start with. He delivers himself to the following effect:—

"Of the Attack."

"If the Redoubt is of small importance, and unprovided with Artillery, it may be attacked without much preamble. The Light Troops envelop it, keeping up a shower of well-directed balls, on the crest of the parapet, to prevent the enemy showing themselves. They approach by little and little, under cover of any irregularities of the ground that may offer. They get up any trees that the enemy have been fools enough to leave standing, from whence they can see into the Work and select their victims; by particular desire giving the Officers the preference, especially him who appears to be Chief. This converging fire so belabours the parapet and gives such a superiority, that it makes it quite a pleasant march as far as any Obstacle that may be placed in front of the counterscarp, or even to the very edge of the ditch, if no Obstructions have been placed. In the latter case they may jump into the Ditch (the depth is not stated,) without deliberation, and prepare for the assault; one party remaining above to continue the fire against any one daring to show himself. After taking breath at the bottom of the Ditch, they give the Assault, for which purpose the leading files are shoved up by their comrades as far as the Berm, and from thence by a fresh effort they scramble up the

Exterior slope,—arrive at the top,—fire down on the people,—jump into the work,—pursue the Defenders ‘*la Baionette dans les reins,*’ and force them to surrender.

“This will do for a *little one*, but for a great Redoubt or Fort armed with Artillery, provided with an interior Intrenchment, and with an Abattis, ‘*Trous de loup,*’ &c. on the outside, the dispositions for the attack would be otherwise.

“First of all, a Reconnoissance would be necessary, in order that preparations might be made for ensuring success. Batteries for Enfilade, and others for Direct fire, would be constructed during the night, and some pieces would be specially directed against the Gates, to deprive the enemy of all hope of escape. With the dawn of day, the fire commences; the Howitzers enfilade the Lines,—belabour the parapets,—breach the palisades,—damage the abattis,—destroy the artillery, and inundate the terreplein with Shells. The Direct batteries, armed with Cannon, thunder away and pulverize the embrasures,—dismount the guns, and put the greater part of the Gunners *hors de combat*. When this is accomplished, the Light Troops rush forward and cover the work with their fire, whilst the Troops of the Line, formed into as many Columns as there are Salients to attack, begin to show themselves. The drums beat the charge,—the ground trembles under the tread of these Warriors, who are only impatient for the combat: they arrive at the Abattis, which forces them to halt until some Sappers, who have marched at their head, have cleared away this obstacle. They reply not to the fire; the Light Troops must do that part of the business—the way is open to them; the columns again

advance,—the leading files throw planks (which have hitherto served them as bucklers) upon the *Trous de loup*, and a road is made which only hastens the desired instant of personal contact. The Ditch, deep though it may be, checks not the ardour of the Grenadiers; down they go into it,—upset the palisades (if there are any),—take breath after their exertions, and give the Assault. The glory is to him who first dies on the top. (Odds,—laurels!—what a satisfaction!) Numbers expire, victims to their ardour; the rest burn to avenge their memory; and after more or less resistance, the Flag of the Assailant unfurls itself on the highest point of the Fort. The Defenders, overcome by numbers, have retired into their Retrenchment, and demand a Capitulation: the generous Victor refuses it not; he knows how to appreciate a brave defence, and so far from ill-treating an Enemy, whom he esteems, grants him conditions,—fraternises uncommon,—overwhelms him with kindness, and consoles him with his praises.”

So much for that,—from which the miserable and utterly hopeless condition of the gallant Defenders of a respectable Work may be gleaned. Now for the Defence,—What can these poor devils possibly do to save themselves? *On verra!*

“ *Defence of a Redoubt.* ”

“ The Officer who receives the honour of defending a Post of importance, ‘ *a l’outrance*, ’ should neglect no means of inspiring the brave men who are to share with him the dangers of an heroic resistance and the Laurels which will crown their brows, when they are conducted in triumph before their General, if they arrest the progress of the enemy. He should fortify their *Morale* by putting a good

face upon it, and by a gaiety of manner he should communicate a spark of that fire which animates his own breast. It is by extolling their prowess and recalling their former deeds; it is by giving the Laurels, which already adorn their brows, 'a bit of a shake,' and tickling their ears with glorious names and recollections of their country, that he 'gets their steam up.' He should persuade them that they are all heroes, inaccessible to fear, and that though an enemy may vanquish, he can never force them to surrender. '*Foris victores Domi invincibiles*' is the motto he nails to his Standard.

"The Hour, that is to try what they are made of, arrives, —already some Skirmishers of the Enemy appear in the distance,—groups begin to form in the horizon, and a cloud of dust rising and gradually approaching along the main road, at length vomits forth on the Plain the heavy Columns of the Assailants which it envelops. At this moment the Guns of the Fort should be directed on the Masses, and if any one hazards a nearer approach, he should be assailed with Musketry, giving him ten shots rather than one.

"The Attack will probably be delayed till next morning. At daylight the enemy opens his fire, which must be replied to as warmly as possible; but this distant combat will not be of long duration; the Enemy impatient to overcome the obstacles which arrest his progress, sends forth his Light Troops. They are kept at a distance by showers of Grape shot. They approach again, and begin seriously to disturb the Gunners, who retire accordingly, and give place to the Infantry, who prepare to line the parapet: a species of calm reigns for a moment, and the Light Troops gain the abattis. The fire of musketry is directed upon them. Showers of

balls riddle the boldest who have dared to attempt to get over that obstacle, numbers of them bite the dust, the others 'make themselves scarce,' and this first success encourages the Defenders. The Chief retires his Soldiers into the interior of the Work, to prepare for a more terrible attack. He alone remains exposed, observing with the utmost *sang froid* what passes. He sees the Masses coming on, and gives the order for the Artillery to exterminate them. They devote themselves to that particular service with the resolution that their fire shall not cease till they have accomplished it. (Pleasant fellows !)

"These formidable Masses advance like a Storm driving before a horrible tempest. A cloud of Light Troops accompany them ; already they touch the Abattis, and the axe is at work to clear a road through it. The whole of the Defenders rise at once ;—the fire opens again and is maintained without intermission upon them. The Enemy fatigued by his efforts retires beyond its reach to take breath : each time he touches our first bulwark, he is checked by our redoubled Fire : we have the superiority and we profit by it. His loss is enormous but he regards it not, and brings up fresh Troops, and as he thus rises like a Phoenix from her ashes, he again presents a formidable front and an imposing Force.

"Our external means of defence yield at length to the Enemy : we hear him throw himself into the Ditch ; already we are menaced by his fury, but there remains for us the brightest hopes. Some of the Defenders throw a shower of Grenades ; others with difficulty lifting the largest Stones, hurl them over the parapet and crush the Assailants. Everything favours us in this unequal contest :

we wait for our adversaries with firmness, and as they, with difficulty, crawl up the slope under the weight of their Arms, with one blow we send them spinning from the top to the bottom, and in their fall they carry with them all those who were behind them. Having cleared our Parapet a second time, we cover those below with Stones and Grenades. The Ditch begins to fill up with carcasses. He hesitates—by Jove! he is going to take himself off! Hope animates us afresh;—joy redoubles;—our ardour and our last shots accompany the last of our enemies: there they go like a rabble! We celebrate our Victory with Songs of Triumph;—we repair our breaches;—we bestow a tear or two *en passant* on our companions who have paid their tribute to their country, and here come the Battalions who advance to the rescue!"

These exhilarating descriptions of Attack and Defence, though they leave us a little in doubt which side is likely to have the best of it, and have besides a dash of the marvellous about them, nevertheless give a good outline of the Principles and Practice which each party would follow.

He must have been a lively and desperate fellow, that old Writer!! One can fancy him a little Man with a longish back, (they are always valorous,) with a big cocked hat in his hand, haranguing his brave fellows—"considerable magniloquent"—directing their energies with wisdom; leading them on to glory—and afterwards either stretched a grim corpse on the reeking field of his exertions, a cheerful sacrifice for the honour of his country, or if he should have lived through the hubbub, then doing the amiable to his vanquished foes. One may swear that the "*fortiter in re*," and the "*suaviter in modo*," were alike familiar to him,

But we must leave him blazing away, and endeavour to fill up his graphic sketches by a little more detail of the operations.

1. Temporary Works may be attacked by **SURPRISE** or by **OPEN FORCE**, and it will be necessary to obtain accurate information on several essential points before a decision can be made as to which mode will be the most judicious or practicable under the circumstances. For instance, previous to making any dispositions for an attack, either of a Village, an Intrenchment, or a smaller Military Post, a Commander should have some knowledge of the *Locale*—the nature of the Defences, and the strength of the Force occupying them. It should be ascertained whether they are left to fight their own Battle, or are in a situation to receive Support, and from whence that support is to come ; how the Duty is done ; what is the nature of the Ground around it ; whether favourable for Concealment or otherwise ; which are the shortest and best Roads to it, &c. &c.

2. If an Intrenched Village is to be attacked, it should be ascertained by what means the streets and roads leading into it have been closed ; whether by Stockades or Breastworks—(Nos. 75 and 57, Part I.) ; how these Obstacles are flanked—whether from neighbouring houses, or temporary works thrown up for the purpose ; what Obstructions are placed in front of them—whether Abattis, *Trous de loup*, (No. 78,) &c. ; how the Houses forming points in the main enclosure have been strengthened ; whether there is a Keep, (No. 121,) and of what nature it is,—and how fortified ; whether there is any Building occupied on the outside as an Advanced Post ; where the Picquets are placed, &c.

3. If the Post is an isolated Building, such as a Country House, or Church, (No. 90,) attention should be directed to the mode in which the Doors have been barricaded, or the Windows blocked up; how the Loop-holes are arranged; what sort of Flank defence has been obtained; how it can best be approached; what internal preparations have been made for prolonging the defence, &c. Part of this "useful knowledge" may be drawn from Spies, Deserters, and Maps, not however trusting any of them much farther than they can be seen or verified; and for the rest, there is nothing comparable to seeing for one's self, and therefore either an open Reconnoissance, or a secret Peep must, somehow or other, be obtained.

4. These hints will suffice to show that there are a multiplicity of objects which require to be looked to, before an opinion can be formed as to the best course to pursue: and unless some previous information is obtained upon some or all of them, false calculations will necessarily be made, unexpected Obstacles will be encountered, and hazardous enterprises will be undertaken, all which might at least have been modified. • With superior numbers in hand, and no very great show of opposition in front, it may be difficult to "hold hard" and exercise patience, but under most circumstances, there is wisdom in "craning a little bit," and just finding out what one has to encounter both before and behind the little level lines of Parapets and Palings which look so inviting "for a Lark." There may be some great yawning Ditch, which it is not so easy to take "in your stride." And things are not always quite so smooth as they look; it is therefore better to find out if you can, and prepare accordingly.

CHAP. II.—FURTHER CONSIDERATIONS AND DETAILS.

5. The Dispositions for the attack, of whatever nature it may be, though they require to be made with great circumspection and executed with the utmost celerity, decision, and effect, do not perhaps call for so many precautions as are necessary for the Defence of a Work. It is with the Assailants, to choose what they will do; with the Defenders,—on very short notice, to conform and make the best of it. The first object of an Attack is to get *at*, the people who are defending a Work, and then—to *beat them*. To secure the former, a Commander would naturally seek for a point which presented the fewest Obstacles, and when he saw where to strike the Blow, he would accomplish the latter, by hitting “uncommon hard;” so hard as to make his Adversary reel under it, if it did not knock him head over heels, and get rid of him altogether. These main objects being kept in view, everything that would conduce to secure them must be studied and carried into effect. ‘He would therefore arrange his plan with the utmost Caution, and execute it with corresponding Vigour.’ It will be obvious, that where it is practicable, several real Attacks, or one *Leviathan*, and several false ones, will distract an Enemy’s attention,—divide his forces,—tend to disturb him and shake his confidence,—render his combinations more perplexing, and in short give him more to attend to, with diminished means of doing it, than if one attack only were made. It is usual, therefore, where circumstances permit, to attack several points at the same moment, or in quick

succession. To effect this the Columns are formed under the nearest cover that can be found, from which they advance with as much celerity, as will leave the Men *fresh and in wind* when they get to work. To regulate even this properly is a point of no small importance. For instance, if a Column has any considerable distance to move, in the face of a smart peppering fire, and they start at too great a pace, they may be brought to a stand still, before they can close with their opponents, and that too when the fire upon them, from its diminished distance, is the more deadly. The means of moving *powerfully and swiftly at the last*, must be preserved at all events ; besides all its other good effects, it is enlivening to go in “ at a slapping pace.” This forward movement is covered by Light Infantry, who would halt on the outside of the Ditch, or other Obstacle, and whilst the Column was engaged in getting over it, would endeavour by good steady shooting, to aid the operation in keeping down the Enemy’s Fire, or putting “ a stopper over all,” or any overt acts of opposition on the part of the Defenders. No dancing about on the top of a parapet allowed ! It would be a weak proceeding to permit any of the men in the Column to amuse themselves by Firing ; and, to prevent disappointment, it might be explained that they have much more serious business to attend to with the Bayonet, and till that is done, they should think of nothing else. Any little *decided leisure*, might be so employed by a few of the leading Files being disposed in front for that purpose ; whilst the others were lying down to cover themselves ; but the main point should never be lost sight of, no Time should be wasted upon it, for the Assailants and Defenders, under

such circumstances, are far from being on equal terms ; the former being exposed from top to toe, all in the open, and the latter at the worst would be covered up to their chins.

6. Each Column designed for making an Attack is usually divided into Two parts, the relative strength of which must be determined by the nature of the Operation,—the number of the Defenders,—and a train of probabilities too long to be enumerated here. One party is for Storming the Work, and the other is placed in Reserve, to be applied as events turn out, either to assist in following up and taking advantage of success, or as “ a friend in need ” to fall back upon in case of disaster. The former of these Parties may be again subdivided, into two or more parts ; one for the first Onset, and the others for Support ; but this should be more *nominal* than *real*. The Question is, shall we send the whole Storming party on in one Mass, or shall we first *start* it in separate Detachments, and then let it *finish* as one Mass ? We require the Moral as well as the Physical effect which NUMBERS will produce, in order to penetrate the Enemy's line ; but if we can secure those essentials when wanted, it does not appear necessary to expose the Support or the *Tail* of the Column, whilst any work is going on which the *Head* of it, or the real Storming Party can effect just as well by itself. For instance, there would be little good gained by a vast Body of Men being halted under a close Fire, whilst Workmen were engaged in cutting a Road for them through Palisades or an Abattis, or whilst the leading Files were rearing Ladders for an Escalade, &c. The *Moral effect* and Confidence produced by *Numbers*, which it is most essential to study, would be still retained if the *Head* of a Column

could feel assured that it travelled with its *Tail* on, though it could not see it, and that however fast the one might move, the other would be certain to follow; and the *Physical effect* or *Force* that is required for an Onset, would be equally secured by the same means. Numbers are in either case the chief ingredient; the only thing to be considered is, the proper application of them. This is confessedly rather a nice point to manage, and such as it is more easy to theorise upon than to carry into effect; but if Troops are handy, and are accustomed to work together, and to be *sure* of each other “in sight and out of sight,” and that their Efforts are directed by the hand of a Master, there does not appear to be any impossibilities attending its adjustment; at any rate the Principle, if true, is not falsified because the Practice is difficult. “When in doubt,” however, “*win the trick*,” says Hoyle: if, therefore, Men and Means are dubious, Measures should be of an opposite character: the lesser evil would be, unquestionably to make sure of it, and start *One* Column, preceded by an advanced party of proportionate strength, rather than run the chance of *Two*, or more, not acting simultaneously. In Night Attacks, for example, it is especially necessary that all the arrangements should be the simplest possible,—and under such circumstances an undivided force would be preferable to risking a mistake being made in the administration of separate parts of it. Give them the whole Dose at once, taking care, as *Morrison* would say of his *Pills*, to let them have *enough*.

7. In carrying out the Principle of the *Storming Party* and its Support marching separately, we ought to find that as the leading Files of the former became engaged, or as

the Explosion took place which was to blow the Barrier to atoms, by which they were to enter a Work, the Supporting Column should be close at their heels,—to add their Weight to the first Shock,—to inspire Confidence,—join in the Cheers, and be at hand to rectify anything that might happen to go wrong. These little delicacies cannot be brought within the precise limits of any Rule which shall be of general application, whether as respects Distance, or Time, or Pace, or any thing else. It is the Commander who has the right kind of Head on his Shoulders, and an Eye that is good for something in it,—who can alone apply the principle, and regulate them on the spot. As an illustration which will be understood by a select few, we should say the Support should be like a man's Second Horse,* in a quickish thing, with Foxhounds, that has lasted as long as is pleasant. By some Rule which only the few know by heart, it should be brought up quite Fresh, as if nothing had happened, and be exactly in the *right place* at the *particular moment* when it is required. One more explanatory illustration, and this digression into which we have inadvertently been betrayed, ends. It takes "all sorts" of men and comprehensions to make up a World, and a homely Simile may sometimes convey an idea more forcibly than a rounded Period. We now address those who know how to use their Fists, as well as other things—the PRIVATES who fill the Ranks of our Army; for they

* A Second Horse, be it known, does not go the whole Run, but being ridden by a *particular sort of man*, is, by nice management, made to "*nick in*" at the critical moment when his Owner could not go much further without him : and under circumstances when probably his weight in Gold, or all the Eyes of every Jew that ever was born, would not purchase him.

too ought to understand what they have to trust to, seeing they have rather a conspicuous part to play. The Storming Party is your Left Hand, the Support is your Right, and your Adversary is before you: you are not going to touch the "Light Guitar," but to knock him over. Therefore get your fingers into Close Column,—hit him straight in the Face with your Left fist, and Double him up with your Right. Do you understand that? Yes! Then when you have an opportunity practise it, and don't be ashamed to hit as hard as you can when you are about it!

8. Troops aided by Musketry in the manner adverted to in No. 5, would plant Ladders for Escalading; Sappers would cut away Palisades, blow open Barriers or Gates, make steps in Slopes that were too steep to be ascended, or clear away Impediments; and a steady Charge would then take place: not one Man running at the top of his speed with his Bayonet at a fellow's breech, and another after him; that is not the way to get rid of a set of resolute Fellows. It must be a steady Charge, or rather a quiet determined Rush; the whole Weight of the Column is wanted to make the desired impression in the Adversary's Line, and if it is frittered away bit by bit, much of the effect is expended in individual acts of Heroism, which might be more usefully employed. Where several Attacks are made, the Columns may as well all march on the same Front, of subdivisions, or a greater or less formation as might be convenient,—it will make it more difficult for an enemy to estimate numbers, or distinguish the Real from the False attacks; and the latter should look and act as if they intended Mischief, however innocent their designs may be. They should also be of such a Strength as to

command respect, and in order that they may be in a condition to profit by unforeseen success ; the *number* of attacks should therefore be in proportion to the Force that is to be divided. How frequently has it happened, that a False Attack, which would have been considered as too rash and hazardous an Enterprise to be thought of seriously for a moment, has been crowned with a success which has equally astonished Friends and Foes ; whilst others, which have been judiciously planned and organised, have altogether failed ?

9. It is explained further on, in No. 23, that the “ top o’ the morning ” is not a bad time for making an Assault ; this is chiefly because the previous movements are concealed by the darkness, and the loss is diminished in proportion. For instance, under favourable circumstances, it would be quite possible, after driving in an Enemy’s Picquets the preceding evening, secretly to dispose a Firing Party close to the Ditch on the outside of a Work, without a hostile shot being fired, for they are not always prepared for illuminating the exterior by Light balls, and to have a Column at no great distance waiting for the precise moment that was most favourable for the Attack ; and when the Troops did advance for an Escalade, or whatever the operation might be,—what would happen ? The Alarm would be given, and the Parapets would be manned ; but opposed by a Firing Party, drawn up perhaps 3 deep within a distance, it might be of 20 or 30 yards,—who could show himself to give his fire ? Let us see the man that would be long “ in easy circumstances ” with his head and shoulders above the Parapet ! If Sandbags had been disposed for protecting the Defenders, a few shots might be fired through the Loopholes, but their effect would be as nothing. Only those directly

opposite a Column could be brought to bear at all that distance, and with good arrangement there would be no Time for Mischief to ensue, even if there were more opportunity. An Attack thus favoured therefore, would secure to the Assailants most of the advantages of a Surprise, and is intermediate between a case of *amazement*, and one of *open hostility*.

10. Circumstances, however, will arise as stated in No. 40, when an undisguised Attack in broad daylight may be imposed, and like most other things in this life, it has some advantages to boast of, though they may be counterbalanced by a preponderance of Evils greater than attend more insidious proceedings. There is, of course, more previous *Exposure*, but people *See what they have to do*, and can therefore act with more decisive effect. In the preparatory movements, and during the advance of the Columns, Violence must, in this mode of attack, control Opposition, instead of its effects being eluded by Secrecy or Concealment. The employment of Light Troops and Artillery are the chief means which may be applied by the Assailants for effecting this object; the Former can act as a Firing Party under any circumstances in covering the advance, but it is quite necessary there should be Light enough in order to derive all the benefits which the latter can bestow. Artillery can effect that from a distance, which without it, Infantry would have to execute for themselves, under all the disadvantages of a close fire. Thus, by firing in a slanting direction at Stockade Work,—an Abattis,—or Palisading, these Obstacles become so damaged and torn up, that a Passage improved by the use of the axe, is readily effected through them; Barriers may be knocked away

from Doors or Windows; Walls may be breached, or the Defenders in a Building may be very much incommoded by its effects—for shot will go through and through ordinary Houses, and if a lively fire be kept up, they soon cease to be comfortable quarters. By firing shells into Parapets, that portion which covers the Defenders may, if time admits, be partially got rid of; and when all these good things are effected from the Front, the Guns being moved to one of the Flanks, so as to obtain a general Enfilade, may keep up a fire till the moment of Assault, which will unsettle the Defenders, and ensure a corresponding advantage to the Attack: in fact, it is difficult to say what a Brigade of Horse Artillery or a Battery of 9-pounders *cannot do* against a Military Post fortified in haste, or indeed against anything else. With an overwhelming Force, backed by a powerful Artillery, it would be out of place to be so particular; a Victim would be well pounded from a distance, and then being attacked on all sides, the Defenders would not have much more to say for themselves: with a Force however only just adequate to the object, more caution, but equal boldness, would influence the proceedings.

11. The Principles on which Attacks are conducted and the general arrangements for executing them, will be gleaned from the preceding pages; but in illustration of some of the Remarks, it may be useful to adduce an Example; and as such, the arrangements for, and the execution of, the two Assaults made on Fort Christoval, a large Outwork on the right bank of the Guadiana, opposite to the Castle of Badajoz, during the Sieges of that Fortress in May and June 1811, as detailed by Sir John Jones, will





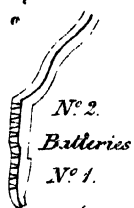
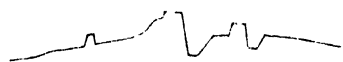
Fig. 1.
Fort Christoval



450 Yards

Section on AB.

Fig. 2.



Fort Napoleon at Almaraz

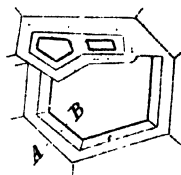
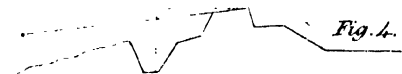


Fig. 3.

Section on AB.

Fig. 4.



Fort Picurina

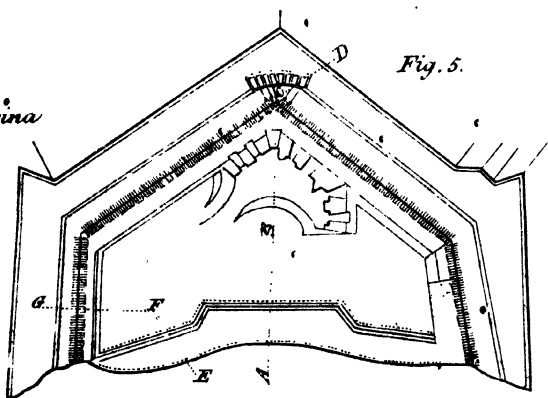


Fig. 5.

Section.

Fig. 6.

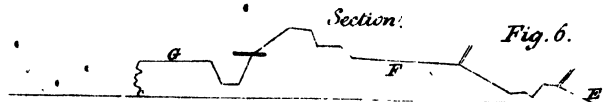


Fig. 7.

Section.

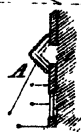
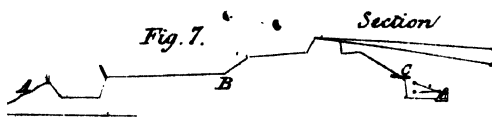


Fig. 8.

be no less instructive because they were failures. They are valuable as **FACTS**, exhibiting the terrible array which determined men have it in their power to develop for resisting an Assault, and the effect which the Means they do possess will produce; and likewise as **Proofs** that the most Heroic and Glorious efforts of the stoutest Arms and Hearts will not avail, unless they are seconded by ample Means for bringing them to bear. **FIG. 1** will explain the nature of the Work, and its relative situation with the Parallel and Batteries, &c.

“ Assault of Christoval, on the night of the 6th of June.

“ The Breach in the Flank had been closely examined during the last night by Lieutenant Forster, who considered it to be then sufficiently practicable, and this day's firing having much improved its appearance, it was determined to assault it at dark; and the following dispositions for the Assault and Lodgment was issued with the sanction of General Houston.

• “ *Assault.*

“ 1. The Detachment will consist of two companies of Grenadiers: one company will form the Assaulting party, and the other the Reserve.

“ 2. The Assaulting party will be divided into two equal Detachments, the second following at 100 paces from the first; the advance of the Assaulting party will consist of an Officer and 25 men, who will, on the appointed signal, mount the Breach, and take immediate possession of the Gorge of the Work and its entrance.

“ 3. The advance of the Assaulting party will be instantly followed by the remainder of the first Detachment, and after the whole have entered and cleared the Work, they will extend themselves from one side of the Fort to the other, where they will remain covered as much as possible from the fire of the Castle.

“ 4. The Advance of the Assaulting party will be accompanied by an Officer of the Royal Engineers, with two Ladders, two Crowbars, and two Broad Axes; and 10 Ladders will be issued to the first Detachment as a Reserve, if found necessary.

“ 5. The Company forming the Reserve will place itself under the crest of the Glacis on the East face of the Work, and continue to divert the attention of the Garrison of the Fort by a brisk fire of Musketry,

“ 6. The whole of the Guard of the Trenches, or at least 300 men, will occupy the Ravine between Battery No. 2 and Fort Christoval, and will detach 50 men to the West side of the Fort, which Detachment, advancing as far as the Ditch, of the ruined intrenchment between Fort Christoval and the Bridge head, will cut off that line of Communication with the Town.

“ 7. One company, with one 6-pounder and a Howitzer, will advance along the Lower Road in the plain, East of the Height of Christoval, so as to interrupt any Communication by Boats across the Guadiana.

“ 8. It should be clearly understood that the Assaulting party use *only the Bayonet*, and that not a single Musket is fired on our part, unless the Enemy, by their fire, make our intentions evident. The company of Grenadiers to the East, and the 50 men detached from the Guard of the

Trenches on the West side of the Fort, will then endeavour to distract the attention of the Garrison, by rapid discharges of Musketry against the Parapets of the Work.

“ Lodgment.

“ One hundred Workmen to be employed in the Lodgment in Fort Christoval, to be divided into two Parties— 50 men in advance, and 50 men in Reserve ; 25 of the first Detachment will carry Pickaxes, and 25 Shovels ; the whole of the hundred men will carry a small Gabion : besides these there will be six Carpenters and six Miners, the Carpenters with three Saws and three Axes, the Miners with four Crowbars, besides Miners' Tools.

“ After the Troops have gained possession of the Work, the Workmen will be employed in forming a covered Trench across the whole terreplein fronting the Castle, or in forming a sap along the Rampart, which, commencing in front of the Breach, shall continue from thence to the Demi-Bastion on the opposite side ; thus forming a covered Communication from one side of the Fort to the other. Every exertion must be made to render the sap Cannon-proof before the morning, and to make the Breach practicable for the admission of the Artillery : the nature and direction of the sap must wholly depend on the form of the interior of the Work.

“ Execution of the Assault.

“ The Storming party consisted of 180 men. At midnight the advance of 25 men, conducted by Lieutenant Forster, Royal Engineers, moved forward from No. 1 Bat-

tery to the right Salient angle of the Ditch of the Fort, without being opposed by any great increase of fire from the Ramparts. The Palisades had been all destroyed by the fire of the Batteries, and the Counterscarp proved no Obstacle, being at that re-entering spot only 4 feet deep ; the advance, therefore, readily descended into the Ditch in good order, but on attempting to mount the Breach it was found perfectly impracticable ; the Garrison having moved the rubbish from the foot of it, during the period between dark and the attack, and the Scarp standing nearly 7 feet high. After making an unsuccessful attempt to get over this Obstacle, the advance were in the act of retiring, and would have come away with very little loss, had they not met the main body of the Storming party entering the Ditch. The Fort was evidently weakly manned, and the Garrison not having yet brought any very destructive Fire on the Assailants, the Officers considered the opportunity favorable for an attempt to force in by Escalade, and directed 12 ladders of 15 feet in length, which had been supplied with the view of aiding in mounting the Breach, to be applied against the Scarp wall. The Scarp being more than 20 feet high, the attempt proved abortive : other points of less height were sought, and the ladders were applied in vain to almost every Face and Flank of the Work. The Garrison showered upon the Assaulting party shells, hand grenades, stones, &c., in overwhelming quantities, for an hour, in which these impracticable attempts were persevered in. At 1 A.M. the residue of the party retired, having lost 12 killed and 90 wounded. Lieutenant Forster at the close of the combat received a shot through the body, of which he died."

This failure led to a second attempt being made on the night of the 9th of June with greater numbers, and such fresh arrangements as the experience which had been gained, dictated.

“Disposition for the Second Assault.

“1. The Detachment for this service will consist of 400 men, and will be distributed in the following manner.

“2. The Assaulting party will consist of 200 men, and will be divided into two Detachments of 100 men each: they will march from the rear of Nos. 1 and 2 Batteries together, having an interval between them of 50 paces. After arriving at the foot of the Heights of Christoval, the front Detachment will move up the hill in a direct line for the Breach, while the other Detachment marches directly for the Salient angle of the Work. A subaltern and 25 men will be detached from each party, and should always advance with an interval of about 30 paces between it and the remainder. After arriving at the Palisades, the Subaltern and 25 men of each party will proceed to the Assault with all possible dispatch, and as soon as the Advance shall have nearly entered the Work, the remainder of the 100 men of each party will follow, and take possession of the Fort.

“3. The advance against the Breach will be accompanied by six ladders; the Advance against the Salient angle by 10 ladders.

“4. During the Assault, a Detachment of 30 men will keep up a brisk fire of Musketry against the Parapets of the long Face of the Work between the Breach and the Salient angle.

“5 Seventy men will march along the Lower Road under the Height of Christoval, and will halt in the Lower ground, about 300 yards from the East end of the Height where it meets the River. At that point will be placed a Corporal and three men, to observe the passage of Boats across the River; and if any should attempt to cross over, the Detachment of 70 men will advance and prevent their landing, the object of this Detachment being to cut off the Communication across the Guadiana.

“6. One hundred men will move from the Campo-Maior road, nearly across the centre of the Parallel, and advance upon the West Front of the Work, keeping up a brisk fire of Musketry against the Parapets; and at the same time checking the Communication between the *Tête-de-Pont* and the Fort.

“7. The Guard of the Trenches will move forward to the hollow between No. 2 and Fort Christoval, and be ready to act as a Support as circumstances may require, detaching 30 men, who shall enter the advanced covered way, and keep up a fire against the parapets of the Work.

“8. Further to distract the attention of the Enemy, 50 men will be detached from the Guard of No. 4, about 300 yards to the Front, which shall keep up a Fire against the Parapets of the *Tête-de-Pont*. The Officer charged with this Service will take care to place his men (dividing them into two parties of 25 men each) as much as possible in the Flanks of the Work, so as not to be exposed to its Artillery.

“9. As soon as the interior is entered by the whole of the Storming party, the Detachment of 30 men which kept up the fire against the Parapets of the long face of the

Work will enter the Breach of the loop-holed Wall, and cut off the retreat of the Garrison.

“ *Disposition for the Lodgment.*

“ 1. Lieutenant Hunt will follow in rear of the Advance of the Storming party, which moves forward to the Breach, and will be accompanied by 12 men carrying four Ladders, two Carpenters with Saws and Axes, and four Miners with Crowbars.

“ 2. As soon as the Advance have made good their entrance into the Work, Lieutenant Hunt, with the two Carpenters and four Miners, will follow the party and endeavour to overcome any Obstacle which may oppose their progress. He will reconnoitre the Work with all possible dispatch, and will search the Magazine, and destroy any lighted Match or Portfire he may meet with.

“ 3. As soon as all the Storming party have entered the Fort, and we have completely established ourselves, Captain Ross will advance with the Working party, which will be employed in the following manner.

“ 4. The Working party will be divided into two Detachments of 50 men each : 25 of the first Detachment will carry Pickaxes ; and 25, Shovels. The whole of the 100 men will carry a small Gabion ; and Captain Ross will also be accompanied by 12 men of the Brigades now attached to the Park.

“ *Execution of the Assault.*

“ The Assaulting Party paraded in the ravine behind Batteries Nos. 1 and 2, immediately that it became sufficiently dark for concealment, and every precaution of firing

on the Breach was adopted to prevent a recurrence of its being cleared, and 16 ladders, from 25 to 30 feet long, were provided to aid the Assault by an Escalade ; but circumstances had changed since the former attack. The French were then unprepared, and had only 75 men in the Fort ; this evening they were on the alert, and had an ample Garrison in it, who, elated by recent success, received the Assailants with cheers and invitations to approach. The Advance moved forward at 9 P. M. under a most rapid fire of musketry from all the parapets of the Work, which opened upon them the moment they quitted the shelter of the Batteries. The first division of the Assaulting Party followed at the prescribed distance, with the utmost regularity, notwithstanding the heavy fire to which they were exposed, and descended into the Ditch. Lieutenant Hunt, of the Engineers, conducting this division, was killed on the Glacis. Major M'Geachy, the Officer in command, immediately afterwards fell, and the next in seniority and many men were at the same moment disabled. The remainder, however, followed the advance towards the Breach ; but an immense number of Shells and Combustibles rolled upon them from the Parapets of the Fort, added to the cool bravery displayed by the Defenders, checked their efforts and saved the Breach.

“ The second Detachment of 100 men advanced with the same steadiness as the first, and descended into the Ditch without much loss. They then applied the Ladders to the Scarp, and succeeded in rearing most of them. The men ascended the Ladders with great readiness, but every one who succeeded in reaching the Parapet was instantly bayoneted down, and the Garrison after a little while

mounted on the Parapet upset the Ladders. At this time the two Assaulting Columns were completely mixed together, and united in many strenuous endeavours to replace the Ladders at various points of the Fronts; but the enormous quantity of large Shells, Hand Grenades, bags of Powder and Combustibles, which the Garrison throw into the Ditch, rendered their perseverance and gallantry unavailing; and after braving destruction till 10 P. M., and having 40 men killed and 100 wounded, the remainder of the Assaulting Party was ordered to retire."

We have now the advantage of the OPINION and OBSERVATIONS of this distinguished Author on the two Operations.

"A practicable Breach having been formed in Fort Christoval at the point selected, it only required the aid of a co-operating Fire on the Defences, with a body of Sappers, and the necessary Fascines and Gabions, to have rendered the reduction of the Work certain; for in the period between the 30th May, the night of breaking ground, and the 6th of June, the night of the Assault, there was abundant time to have carried a Sap forward to the Glacis, and to have established such a *close Front of Musketry Fire* as should have prevented the Garrison from clearing the Breach, or showing themselves above the Parapets during the Attack. Then as the troops would have been able to advance under cover to the Assault, it might have been made in Daylight, and with a certainty of success.

"The most critical examination of the Operations of this Siege* will not allow of blame for its failure being

* Of Badajos.

throw on any one. From the General to the Soldier each did his duty, nor should want of success discredit the original Project. It must be admitted that there was a judicious application of all the Means that could be collected for the reduction of Christoval. On trial *those Means proved insufficient*; many of the causes of their insufficiency could not have been foreseen, and others if foreseen, could not have been remedied; all that skill and bravery could effect, was done."

Calculations of the means required for carrying on a Siege with vigour, and ensuring the reduction of a Fortress in the shortest time and with the least loss, appears in PART III., on Siege Duties. A comparison of these calculations with the actual force employed at the Sieges in the Peninsula, will show under what serious disadvantages they were undertaken, and how much is therefore due to the unshaken gallantry and perseverance of the Troops.

CHAP. III.—SURMOUNTING OBSTACLES.

12. In the attack of Military Posts, especially such as are of minor importance, Infantry are frequently thrown entirely upon their own resources, for forcing a passage through whatever Obstructions they may fall in with, before they close with their Adversaries. They may have no Guns or Howitzers for tearing up and destroying Stockades, Abattis, Palisading, Chevaux de Frise, &c., and have only to trust to their own exertions for getting to the *right side* of them. The nature of the Obstructions which are usually employed for adding strength to fortified Posts, are detailed in CHAP. V., PART I., and the means to be adopted for surmounting them, will now be briefly adverted to.

HOW TO DEAL WITH AN ABATTIS.

13. An Abattis is probably the first Obstacle a Column will fall in with, and an awkward customer it is, if it has been properly managed, and that the Materials have been of sufficient size and weight. In an attack by Surprise an endeavour should be made to get round the Flank of it, and if that “won’t do,” the men must try and crawl through it in the best manner they can, avoiding any noise, and forming again as they succeed; should they be caught at this proceeding, it must be “back again” with the leading files.

14. If the Attack is by Open Force, and the Abattis should prove a puzzler, there is no harm in making the attempt to set it on fire. A few resolute fellows carrying small Faggots, which for the sake of a good “flare up” may as well have been previously dipped in pitch, and each

man provided with a lighted "portfire" if it is daytime ; or if they can approach unseen by night, with some other means of setting fire to them,—must rush up from some neighbouring place of concealment, covered by a smart fire of Musketry, and throwing in their lighted faggots, all will soon be in a blaze. When that has subsided, and there is no fear of the men's pouches being exploded, the Breach will be practicable without waiting for the hot cinders to cool, for they will only prove stimulants to exertion, and will make the people "vivacious." This little conflagration would go on under the protection of a Party, near enough to prevent any attempt on the part of the Defenders to extinguish it. If, however, an Abattis is formed of small materials, or that sufficient precautions have not been taken to secure it in its place ; that is, if it is a *bad one*, it will be a waste of time to submit to the delay of burning it. In such a case, a Party rushing up with ropes, may tie them to some principal Trees ; or a big Hook, fixed to a rope or pole, such as the Worshipful Companies of Firemen have for their work, may be used, and a Tree or two may by these means, be dragged forcibly out of the Line ;—or some handy fellows with good tools may partially open it, by cutting away a few of the small branches, so as to let men get through at "Open Order." A little impudence will go a long way sometimes ; and in cases of necessity, putting a good face on a dangerous enterprise, is the best handmaid to success.

HOW TO MACADAMISE OTHER IMPEDIMENTS.

15. If the Obstructions outside a Post consist of Military Pits, Stakes, or the Stumps of Trees, &c., they may be passed at "Open order" if they cannot be avoided, and

the Columns be re-formed as soon as possible. Small
 • Ditches may be filled up with faggots or bundles of hay ;
 Chevaux de Frise may be displaced by main force, with a
 rope, and a good pull altogether ; or they may be cut up
 or blown to pieces with a bag of powder ; Palisades or
 fraises in a ditch may be got rid of in a similar manner ;
 or if a party is provided with Ladders or Planks, and the
 Ditches are narrow, these last Obstructions will frequently
 offer facilities for constructing temporary Bridges for pass-
 ing over them. Stockade work or Palisading may be
 Escaladed with Ladders brought up in a line under the
 protection of a Firing Party, and carried by two or four
 men, according to their length. The Ladders would be
 planted as close together as they conveniently could be,
 and the Assailants would mount them, on as extended a
 Front as their numbers permitted ; or a Stockade may be
 breached by the explosion of a bag of powder, &c. By
 some such means as these, applied with boldness and
 decision, in a common sense sort of a way, Troops assisted
 by Workmen would be a match for any of the ordinary
 Obstructions which might oppose their advance, whether
 the Attack were made by Night or by Day, by Surprise •
 by Open Force.

If none of these means should be exactly at hand or
 applicable, something or other that would answer the pur-
 pose would doubtless suggest itself ; • a man only requires
 to be thrown violently on his own resources and it will
 strike fire out of him, if at other times he exhibits no more
 signs of life than a bit of Flint or a Zoophyte.

CHAP. IV.—OF ATTACKS BY SURPRISE.

16. A Post is said to be *Surprised*, when an Enemy either gets into it, or close up to it,—by making a false or forced march, information of which has been concealed from the Defenders, either by their own bad look out, or their Opponents having been favoured by fog or darkness, &c. ; or it may be, that they have succeeded in quietly cutting off some Advanced Post, which would have given the alarm.

17. When ably planned and carried into execution, a Surprise is the best kind of Attack that can be made ; there is less *Exposure* beforehand, and from being unexpected, there is, from the nature of things, more confusion among the Defenders, and therefore less *Resistance* afterwards. The result also is generally more decisive; and smaller numbers can act with far greater effect against a Superior Force, than can be hoped for in an Open Attack. It is only however when an Adversary fails in his precautionary measures that success can be confidently anticipated, even from the best formed scheme of Surprise ; and then, without precise information as to the nature of the Defences,—the Strength of the Defenders, and their measures of Security,—without ascertaining the *degree* of caution and punctuality, with which the Duties are performed, any attempt at a Surprise would most probably fail.

18. Neglect, in the *External* precautions of Security, such as a faulty disposition of the outlying Picquets and Videttes—the omission of Patrolling, &c. *admits* of a Sur-

prise ; and an absence of judicious *Internal* arrangements will *facilitate* it. The first, will consist in placing but few Picquets, and those at too great a distance from each other, and too far to the Front, so that the Chain becomes unconnected, and that the communication between them is not properly preserved ; or in falling into an opposite error, of placing them so near to a Post as that they do not secure sufficient notice of the presence of a Hostile Force, to enable the Defenders to stand to their arms ;—or it may be traced to a slovenly manner of carrying on the Outpost Duty generally. The second will depend upon the degree of Discipline and Readiness prevailing among the Troops generally, and the Dispositions that may have been made for applying their services in the most effective manner, and in the shortest possible time, &c. The following are likewise circumstances that will favour this mode of proceeding.

19. When there is a Wood or Ravine within a moderate distance of a Post ;—when you have the power of secretly assembling a Force equal to the undertaking, which was before dispersed with a different object ;—when the Defenders think themselves in security, either from your distance or circumstances, and are therefore less on their guard and less vigilant ;—if the Post is not quite complete in the Works designed for its Defence,—if the Troops are raw, and their Chief not much better ;—or if, from being deemed inaccessible when that fact is fabulous, any part is not so well guarded as others ; these are all very tempting circumstances to try one's luck at a Surprise.

20. Secrecy is the soul of a Surprise ; and as a secret is liable to “ fructify” when in the hands of many, the less

that is said about any intention of beating up a neighbour's quarters the better. Your Enemies must of course be deceived, or kept in ignorance, and until the moment when their exertions are required, it would be quite as well for your Friends to be so too. The requisite preparations, therefore, in collecting Ladders, Tools, &c., should be shielded under cover of being for some other distinct operation, and plausible excuses given forth to allay suspicions as they arise.

21. Among other considerations, it will have to be decided beforehand whether the Post is to be held and defended should it be taken, or whether it is to be destroyed or abandoned. In the former case, a temporary supply of Provisions and Ammunition should be thought of ; in the latter, the Attack and Retreat only have to be provided for.

22. Winter is the most favourable time of the year for attempting a Surprise. Sentries are not usually so much on the alert in cold weather, and the long Nights and the Storms and Fogs, which prevail at that season, are all "accessaries before the fact." A night when the moon sets just before you want to begin the Attack is advantageous, as the previous movements will have all the benefit of the light, and the succeeding darkness may serve an equally good purpose ; but while it is on the tapis, it may not be amiss to bestow a little further consideration on the subject of *Time*, for whether it be a Joke or an Attack, it is half the battle to time it well.

23. It is generally admitted that the peep of day is, under most circumstances, very favourable for making an Open Attack, when there is not light enough to betray the Advance or any of the preparatory movements, and the

Assailants have the advantage of daylight immediately after to profit by success in securing all the advantages they may have gained. But an Enemy knows this as well as anybody else, and the whole disposable Force of an Army or Garrison, is generally under arms at that time, and probably more on the "look out for squalls" than at any other hour of the twenty-four. This, therefore, is not the best time to catch them napping, and it would appear, that getting up a little earlier, or sitting up a little later than one's adversary, would afford a better opportunity. As to Time therefore, soon after midnight would probably be the hour when snoring would be loudest; and if it could be made to square with the object in view, which may vary with circumstances, it would probably be as favourable a time for the attempt as any other: for example, if the Post were at no great distance, and the intention was to destroy and then abandon it, before succour could arrive, a better hour than midnight could not be selected, as it would afford the opportunity of accomplishing the object, and making good the Retreat before daylight. But if the Post were to be held afterwards, the dawn of day, immediately after the Assault, would enable a Party to make better arrangements for defending itself, and later attack would therefore be preferable.

24. From these considerations it will appear that a Surprise, whether early or late, generally entails a Night Attack, and it is scarcely necessary to say that the greatest precautions, and the very best Arrangements, are required for carrying it into effect; nor can success be reasonably looked for, without them. The worst of going to work in the dark is, that unless the point to be attacked is of a nature not to be mistaken, it is ten to one the attempt to

identify what is doubtful will disclose all. Nothing can be worse than having to poke about, especially if you don't want to be found out, which is rather an essential in a Surprise. Again, when you have forced an entrance, we will say into a Village, unless you are perfectly acquainted with the interior, and familiar with every object that presents itself, there are other and great disadvantages to contend against. The Local knowledge of the Defenders is all in their favour: the offensive cannot be continued with vigour, and nothing is gained in furtherance of your object by standing still: Dangers are magnified in the dark, especially when men are not excited; and as a resolute Enemy will know exactly where to strike the blow, and you can neither see from whence it comes, nor estimate its force, till you feel its effect, it may become necessary to assume a Defensive attitude, and this under the circumstances may lead to a reversal of your previous success. If there is work to do with the shovel and pickaxe, such as effecting a Lodgment for establishing yourself on the ground that has been gained, or for other purposes, the darkness is favourable for the execution of it; but this does not affect the present question. Under any circumstances, however, the value of the Local knowledge which is conspicuous among the useful items adverted to in No. 1, will be apparent, and, with other hints which have been thrown out, will serve to create a suspicion that there is something for a Commander to think of, before he makes up his mind to commit himself in action.*

* Surprises in the open day can seldom be successfully undertaken, except in Mountainous Countries, intersected by Ravines and Hollow Roads, &c.

25. The number of men for an Attack ought under most circumstances to be superior to the force of the Defenders, which it must not be forgotten have the vantage ground; but in a well-conceived and vigorously executed Surprise, very inferior numbers profiting by the confusion and astonishment, which are inseparable from an unexpected Attack, have done "*impossible things*," and doubtless can do so again; which it is as well to remember when any similar opportunity should happen on service. Generally, however, Numbers are one principal ingredient in success, and therefore the means for the Attack should be adequate to the object, taken in all its bearings. A very inferior Force may possibly make good their footing, against all opposition at any certain point, but the question may be, can they maintain it?

26. This question arises with a greater or less demand for an answer in the affirmative, according to circumstances. For example, a modest Commander may prescribe limits to his ambition, and merely wish to set fire to a Post, a Village, or Dockyard, or to blow up a Magazine, or some other equally inviting subject, and then peaceably to retire, without any desire further to trespass on the time or attention of his Opponents. A few minutes' possession of a certain spot might suffice for the accomplishment of any of these purposes, and it might be that a very few men would be sufficient to force an entrance and effect them. In a well-concerted Surprise, a small Force might possibly be brought almost within arm's length of the desired object without discovery, and when a rush was made for securing it, there might be all the routine of sounding the "Alarm and Assembly," of turning out Guards,

and probably some marching and counter-marching to perform, before the nature of the Attack, or even the point or points where it was made, were clearly comprehended by any large body of the Defenders ; and before they had rubbed their eyes, and made their Dispositions for repelling it, the deed might be done, and the actors be on their way home again. Here it would appear, that to lay down the law of *Disproportion*, that may reign between the contending parties, might be to throw a “ wet blanket ” on some daring deed, yet in the womb of time, the contemplation of which might be affected by any preconceived notions on a subject which cannot well be defined. If a man to a sound head unites a stout heart, and though last not least—a good stomach, (for *that* has its influence upon nerves they say,) and that he sees quite clearly what he has to do, and how it is to be done ; moreover, if he has people with him that he can depend upon, there is scarcely any thing *impossible*, where physical impossibilities do not intervene ; we might safely say to such an one, “ Go along, Mister, with a face of cruelty, and do it audacious ! ”

27. If, however, the Post which is attacked, is to be held afterwards, “ *c'est une autre chose ;* ” Defenders have an unpleasant way of sometimes recovering from a first panic, and then the preponderance of Force should be on the right side, or “ the tables may be turned.” There have been instances, however, quite within the memory of the present generation, of a very inferior Force surrounding a respectable Work strongly garrisoned,—carrying it by Assault in the night, and making the Defenders lay down their arms before daylight told any tales as to the disparity of numbers.

The success of such Enterprises, as these which have for their object to effect what greater numbers ought to be employed about, depends entirely on the advantages resulting to them from a complete Surprise, and coming upon an Enemy, when he is quite unprepared: in fact, if this is not done, the attempt ought to be abandoned at once.

•28. The execution of an Attack of this nature is rather a delicate affair, for if by any means the suspicions of a vigilant Adversary have been awakened, he will have made such Dispositions as might cause the Surprise to be felt on the *wrong* side. If, therefore, there should be the least cause for believing that an Enemy is playing tricks, every possible precaution should be taken for ascertaining the truth before getting into a mess, which it might be difficult to get out of. The Main Body should be halted at a greater distance than it is likely an Ambuscade would be sent, and the whole ground in the front should be "*felt*," with the utmost caution by Patrols, who if not stopped by Outlying Picquets or Videttes, &c., should creep close up to the place, and do a little "eaves-dropping," in listening to everything that is going on. If on their report it should be decided to move on, it would still be prudent to do so with all circumspection, having an Advanced Guard composed of men who know what they are about, and Parties with the same view to protection on either Flank. If, on the contrary, there were good reason to believe that the Enterprise was no secret, and that everything was in readiness to give you a warm reception, it would depend upon circumstances whether "prudence," would not be "the better part of valour." These observations of course only apply to a Force quite inadequate to any open attempt ;

but with a proportionate Force, should there be a failure in the design of surprising a Post, the probability of which would have been foreseen and provided for, it would only be necessary, under such circumstances, to throw off the mask, proclaim yourself an open Enemy, and fight it out, which all your previous arrangements would enable you to do without difficulty.

29. The whole Force employed, whatever it may be, should be divided for fulfilling specific objects. Several Columns of Attack may have to be formed; some for false, others for real Attacks—each to be closely followed by its Support, No. 6: there should also be a certain Force posted in Reserve for covering a Retreat, in case of failure; another probably for guarding particular points, in order that should your designs have been anticipated, you may not be surprised in your turn by an attack in flank or rear. Men with Axes, Sledge-hammers, Crow-bars, &c., for forcing Barricades, or cutting away Obstacles, and a few bags of Powder with Fuses attached, for bursting open Gates, (No. 37,) would be useful. The Troops employed on these little Enterprises should be picked Men: those who are weak, and those troubled with coughs, should be drafted off and left at home; the *former* would not be in a condition for work, and the *latter* would most likely betray your arrival at the moment it was of the utmost importance to conceal it; Horses, for the same reason, should be left at a distance. Guides, if they can be depended on, will be necessary in sufficient numbers to allow two or three to accompany each party, but *personal* knowledge in the Assailants or their Leaders, is a better thing, and more conducive to success.

30. Whatever may be the Time or Disposition that is decided upon, the march must be so ordered as that the Column or Columns shall arrive at some point in the immediate neighbourhood, perhaps a mile, or a mile and a half distant, an hour or more before they will be wanted, so that the last orders may be given, and the final arrangements be made, for there is generally a parting word to say on these occasions. This will not be a bad opportunity either, after a long march, for the men to strengthen their hearts by a mouthful of bread and cheese, if their haversacks afford it, for it may be some time before they will have leisure to breakfast. This arrangement for the march presupposes that all the requisite information respecting the situation of the Picquets,—the mode of Patrolling,—and the general *external* precautions for guarding a Post have been obtained, so that a Commander knows what he is about, and can put his different Detachments in movement for the several points he intends to attack. But if this information has still to be sought, in consequence of the Enemy's Picquets being posted differently every night, or other causes, the Troops must either be brought up earlier, and wait till these points are determined; or a Patrolling Party must precede them, so as to get there at dusk, and have it all ready. In the former case, arriving at the halting place by such Roads as afford the best means of concealment, some steady and intelligent men should be detached to patrol to the front; first to ascertain if possible the situation of any Picquets which might have been posted wide apart, and then to find out the order in which the Videttes were placed,—the mode of Patrolling between them,—and any further information that could be obtained.

The success of the *Enterprise* depends upon the chance of introducing the whole Force, unperceived within the chain of *Picquets*. The state of the weather will materially facilitate this preliminary step, and when it has been accomplished, the advance should be continued until the Columns are discovered by the Sentries of the Post, when a general rush would be made, and the more impetuous the Attack, the more favourable for the object, of following up the *Surprise* by an easy *Conquest*.

DISTRIBUTION OF THE ASSAILANTS, &c.

31. A multiplicity of considerations will influence the distribution of the Assailants, so that it is hopeless to lay down any rule of general application; but we might say on a broad principle, that it would not be prudent to divide a small Force too much in attempting false Attacks, and that therefore, from one-half to two-thirds of it might be formed for the Assault, keeping the remainder in Reserve for Covering the Retreat, and acting according to circumstances; or were the Force considerable, and the Post to be attacked of corresponding extent, such as an *Intrénched Village*, perhaps one-third of the numbers might be formed for the Principal Attack, another third be divided for two false Attacks, and the remainder be left in reserve for the purposes before stated. In the former case, as a minimum, the Assailants should be at least equal in numbers to the Defenders, and in the latter, as the Force is more divided, there should be a proportionate increase; that is to say, the numbers engaged in the three Attacks should be stronger than the Garrison. A part of the Force engaged in the false Attacks, or a portion of the Reserve, should be

placed not very far from 'the Entrances to the Post that are nearest to the point where the real Attack is going on. These may be Streets, Roads, or Gateways, &c., and they should be watched, that advantage may be taken of their being turned or opened; some Workmen, who are "good at need" for breaking open Barricades, being held in readiness to accompany the Party.

32. When all these particulars had been arranged, and that the Officers or Non-commissioned Officers commanding the several Parties had been made clearly to understand their orders, and the specific objects confided to them;—when the conduct they should observe under every emergency, both during the Attack, and in the event of success or failure, had been explained; when the precise moment on which the Attacks should take place was perfectly understood, and that some conventional signal, countersign or badge, had been established by which men could recognise each other in the dark, the Columns would be in readiness to move on. The advance would be made in silence, and without haste; the Columns dividing when they got near the place, and marching by the best route to their points, preceded by a few steady Soldiers as an Advanced Guard, who would be on the look out to secure any Patroles or Videttes they might fall in with, so as to prevent their giving the alarm.

OF THE ATTACK.

33. If the object of a Column were to assault a Field Work, which has usually a Ditch bounded by slopes of Earth, the Advance of the Storming Party would silently slide down into the bottom of it, and if there were no

Obstacles, such as Palisades, &c., and that the slopes admitted of their scrambling up, they would form in the bottom of the Ditch, in Subdivisions, or Sections, as might be ordered, and endeavour to go up together without straggling; the remainder of the Party following them as closely as possible; the Support being halted at the edge of the Ditch, ready to fire or advance, and the Reserve being posted further off.

34. If there were unforeseen Obstacles, which could not be got over or removed without the noise of Workmen, the secrecy of the operation would be nearly over, and it would be time to awaken the *astonishment* of the Garrison. A few preparations being made, such as the Storming Party lying down opposite the spot, and the Support or a Firing Party, on either Flank ready to keep people off the top of the Parapet, the Workmen would glide into the Ditch, and first distributing themselves judiciously, and finding what was to be done, and the best way of doing it, they would commence work together, and regardless of any thing that might happen, would lay about them, till they had accomplished their task; when the Assault would immediately be given, and the endeavour would be made to Charge in column, through whatever Force was formed for the defence of the Parapet: when this was accomplished, a halt would be made, to reform for further Operations in following up the advantage gained.

35. After Troops once move forward to the Assault, the Bayonet should be called on to do all the work; very little is gained by the Leading Files firing down upon the Defenders from the top of the Parapet, especially in the dark, or the grey of the morning. It only has a tendency

to check their speed, at the moment it is of some use to them. The Assailants are at that time exposed and perfectly visible against the sky, when the Defenders, however near, could not be seen, and after the first man has jumped down within a Work, his comrades must of necessity cease firing; therefore anything that would be gained by permitting its use, would be more than outweighed by the inconveniences that would be entailed. It is usual therefore to make use of the Bayonet only on these occasions.

36. If a Wall or any other Obstacle of a moderate height had to be scaled, the Ladders would be carried by the Advanced Party, who would plant them side by side, and after its being ascertained that all were properly in their places, the Troops would advance up them in the most compact order, and jumping down inside, would form again and move forward, as soon as circumstances permitted. Stockade work might be scaled in the same way.

• BLOWING OPEN BARRIERS, &c.

37. In the Attack of Gateways or Houses, if secrecy is preserved till you get close to them, it is as much as can be expected. In order to force the Barriers or Doors, the most effectual agent is a Bag of Gunpowder. A bag containing from 20 to 30 or 40 lbs. according to the expected strength of the Obstacle, and furnished with a Fuse for firing it, and a Loop to hang it by, can be easily nailed or hooked up against a pair of Gates, or fastened to a barricaded Door. If it can be done without previous discovery so much the better, and for effecting this, a gimlet will be found a very useful, quiet operator. When fixed, the Fuse is lighted, and the man retires a little. The Party for

forcing an entrance may be drawn up within 15 or 20 yards, and a few expert men with Axes and Sledge-hammers may be with them. The Explosion will most probably do all that is required, and the ruins, if any remain to impede the advance, will quickly be got rid of by the Workmen. If all this has been done in secret, it will be a great object to take advantage of the bustle and confusion that will ensue by making a vigorous Attack. If, however, the secrecy of the Operation is at an end before the Bag is fixed, and that this has to be effected by open violence, in spite of what may be attempted to prevent it, the best proceeding is for a strong Firing Party to rush up, and throwing themselves under any Cover that might offer, to reply to, and endeavour to subdue the Fire that defends the point to be attacked, and when that slackened, the men with the Bag of Powder would make a run of it,—Fix—Light—and “be off.”

SECURING POSSESSION OF A POST AFTER A SURPRISE.

38. In the Attack of a Village, or even of a smaller Post, the moment an entry is made, a portion of the Force should be detached, to endeavour to communicate with the other Attacks, if there were any; and leaving a Party in reserve at the point where they came in, they should secretly march, if the alarm had not been given, to secure the Guards and principal Avenues into the Village. By thus gaining possession of the Barricades or Gates they would be enabled to open a communication, by which a portion of the Reserve, which should have been previously held in readiness, might enter. If they were discovered, and that the Garrison were assembling to oppose them, the same

measures would be of advantage, and no time should be lost in also making a furious attack on the Main Body, wherever it might be forming, taking care, during the advance, to secure the means of an orderly Retreat. The value of *Local Knowledge*, indeed its absolute necessity, is again apparent, for how could any of these steps be taken with the promptness befitting the occasion, if this were wanting?

In the case of an Intrenched Village, the Keep should be looked up, and might be attacked in the mode pointed out in CHAP. VIII.; and if there were Barracks, Huts, or a Camp, immediate measures would be taken to march there, and profit by the confusion. The principal on which such movements would be made, however, fall, more or less, within the scope of the ordinary Instruction in the Field, and will not therefore be further dwelt upon.

CHAP. V.—OF ATTACKS BY OPEN FORCE.

39. An Attack by Open Force is imposed, when something like the converse of all the circumstances that would favour an Attack by surprise exists;—such as the Ground outside a Post affording no Cover for approaching it,—or when a Post is so well and so vigilantly guarded, that the Defenders are “not to be done,”—or it becomes a measure of necessity when a Force is driven “to take the Bull by the Horns,” from having no choice left between the Attack, or a Retreat, as might happen in a General Action; or an Attack of this nature may be undertaken with confidence when the Works are weak or unfinished, and where there are facilities for Enfilading its principal lines with Artillery;—or when a Commander is known to have a “screw loose” in his nerves, or his powers of arrangement, &c.

40. Most of the information required for judiciously planning an Attack by Surprise, (CHAP. IV.,) will be also of essential service, when an Attack by Open Force is contemplated; in either case it is equally of importance that a knowledge of the Locale should be previously obtained, and that the Obstacles to be overcome should be carefully estimated, and compared with the means proposed for surmounting them, before Troops are committed in the Attempt; something must of necessity be left to chance and good fortune, but not too much. If a choice exists as to Time, the most favourable hour for making such an Attack must be determined in reference to some of the *pros* and *cons* in No. 23, as far as they might be applicable.—Should it so

happen that circumstances permitted a Force to evade any previous exposure, by attacking in the night, or before daylight, so much the better; but if the Attack is made in the open day, and there is neither natural nor artificial cover to favour the Enterprise, the strongest and most energetic measures should be adopted to control or subdue the Fire, that would be poured in upon an advancing Column; which is the worst treatment it has to endure, because it is in no condition for making a reply "*in kind*." When the leading Files get within arm's-length of the Defenders, an exchange of blows may take place, but not before; hence the advantage of a "Cloud of Light Troops," as our Old Friend calls them, or of a strong Firing Party, for the specific purpose of protecting Columns engaged in the attack of works of whatever description they may be.

41. Though there is a great difference in the two modes of Attack under discussion, because in one, it is assumed that an Enemy is half asleep, and in the other, that he is on the alert, and that all the means in his power will be developed to oppose it, yet in their *Principles they are the same*; and as a notion of these principles, and of further details may perhaps have been obtained from the preceding Chapter in which they are adverted to, a repetition of them would be superfluous.

42. The points requiring attention and the dispositions to be made after a successful Assault, have also been glanced at in No. 38, and equally apply to the more open mode of Attack under consideration. But as an Enemy will be better prepared for making Resistance, the measures will require to be of a more decided character, and no time should be lost in following up the advantage of a first success. A

Reserve would be left at the point where the entry was effected, and according to circumstances strong Detachments would be sent off to the right and left, to follow the Enemy, and sweep the interior of the defences; leaving Guards at every entrance of a street, road, or ally, by which they might be cut off. The Gates and principal avenues opening towards the side attacked would be seized, and access given to Troops from the Reserve which should be held in readiness to enter, and an impetuous Attack^s would be made on the Main Body as soon as a sufficient Force was assembled. If there were a Keep, the attack should threaten the Communication with their stronghold, and if circumstances permitted, a rush should be made to cut off their Retreat to it, or to *intrude*, by joining the Party and going in with them: we do not say much about being *beat*, because with skilful dispositions, adequate means, and Columns that will "go ahead," there is little reason to anticipate such a disaster. In any case, however, in which unexpected failure attended a first Assault, (and accidents will sometimes happen,) the Troops would fall back on the Reserve in good order, and as soon as fresh dispositions could be made, the Assault should be given again, with any additional force, or precautions, which experience might have shown to be necessary.

CHAP. VI.—ATTACK OF AN INTRENCHED VILLAGE.

43. A certain Character in some Comedy or other, when applied to for his opinion of “things in general,” or on any subject “in particular,” calls to a Yorkshire Friend of his, who is a shrewd fellow, to help him,—“York, you’re wanted,” says he; and in like manner it would be throwing away a chance, did not we, in dipping into a fresh subject appeal, as heretofore, to our Old Friend, to give us a sketch by way of a Frontispiece. He is as cheerful and full of fight as ever: speaking of the “Reconnoissance” he says, “When you are charged with the Attack of an Intrenched Village, go under the escort of a few of your best men, telescope in hand, and in the same uniform; go and explore all the environs for yourself, and make a rough sketch and memorandum of what you observe. Do you see that height from which you can enfilade the main Street of the Village from one end to the other?—Put one of your principal Batteries there.—That little wood now occupied by the Enemy will be capital ground for your Skirmishers up to the very gates of the place; that Road which is cut through in several places will be easily repaired; that little undulation of the ground;—Stop! which do you mean? Oh! your unpractised eye cannot see it, but there it is, and an excellent situation you will find it for assembling your Columns of Assault. There; now you can see all the new Works the enemy has executed;—you may reckon up his Forces if you look sharp: he is still at work

at that place where you see the fresh earth, and that great building is his keep: where you see that loop-holed Wall, must be a weakish place; but the approach is difficult on account of that Redoubt. Never mind! make a Battery to silence it. By the bye, that Farm-house yonder, on the outside, is occupied in force; you must get possession of that first, or you'll be in a scrape. If you could but get a little nearer, so as to see all, it would be better, but it cannot be helped, and what you do not discover to day, your Light Troops will find out for you to-morrow. Now go back and make your dispositions for the Attack; give your orders, and afterwards take a walk among the Soldiers at their Bivouacs: go up to their fires, and address yourself in a friendly manner to them,—tell them what a famous day you'll have to-morrow. Your air of confidence and your little sallies—spiced up here and there with a touch of military glory, will persuade the most timid that there is a very easy affair before them, and will fortify the courage of all."

After this, he waxes warm on the subject of the Attack, and delivers himself to the following effect:—"Before day-break, the Troops have breakfasted, already the Advanced Guard is under arms, and on the move, so as to arrive at the first dawn, at the advanced posts of the Enemy. The Columns form and follow them; and last of all comes the Artillery. Objects begin to be just discernable and the advanced Detachments recognise the Posts which are to be attacked: They approach for a time unperceived, but at length,—Bang!! a Round Shot comes right among them, a rattling fire of Musketry succeeds, and their arrival is announced. Then begins the game of the Light Troops;

and the Sun rises to witness all the Out-posts in the power of the Assailants! Meanwhile the Artillery trot up, take their position, and open a tremendous fire, in reply to that of the Enemy, which they soon reduce to silence, and then they thunder away against the walls:—numberless breaches appear; the shot bounds along the Streets, and compel the Defenders to conceal themselves behind the houses or in their Redoubt; the shells bursting in all parts leave them no repose. ‘Go along you Cripples!’ cries an unfeeling Wag! Several Houses take Fire, and a horrible Explosion, which for a length of time covers the Village with a dense mass of smoke, bears witness to the interminable disasters of the Enemy. The Voltiguers spring forward and surround the Village on all sides; the Guns cease firing; the Troops of the Line prepare to march; the Enemy is harassed by this cloud of Skirmishers gradually closing in upon them, the boldest of whom are at the very Breach. The Sappers who accompany them level the hedges, and burst open the gates; some of them penetrate, others follow; and the uninterrupted chain which they instinctively form, traces the route which conducts to Glory. ‘The plot thickens;’ now sounds the Signal of Attack: the Columns issue from the hollows which have hitherto concealed them; they cross the space which separates them from their Enemies at ‘best pace,’ and arrive to the timely support of the Light Troops who are paying the price of their eagerness, and are now pouring out of the breaches hotly pressed by the Defenders. The game’s alive! The heads of the Columns present themselves before the principal avenues; they upset the Barricades, stale the Parapets, and hew for themselves new roads; whilst the Light Troops

enter by other openings, charge the hedges, jump the Walls; and by this irresistible Storm, the Enemy is driven into his strongholds. The exterior Defences being overcome, the Troops rally, and forming in such order of battle as localities may dictate, take further steps for surrounding and exterminating their Adversaries. Up comes the Artillery at a gallop. The Church must be assaulted! there they have taken refuge! ‘Action to the Front’ is the word, and shot without mercy or number are poured in upon this principal defensive Post. By Jupiter! out they go by the back door, and make play across the Plain!—they run for their lives, but it won’t do! The Cavalry are at their heels,—and cut them up in the open. Still a Redoubt holds out which has never ceased firing during the attack upon the Church; it is surrounded, closed in on every side, and the terrible storm is ready to burst, when the Defenders have the wisdom to capitulate; they march out with the Honours of War, and lay down their Arms at the Feet of their Conquerors.”

44. The general Preliminaries and dispositions for the Attack of an Intrenched Village will be understood from this little Sketch of Proceedings, which is indeed no ludicrous perversion of the Author’s meaning; and the points of Attack being selected, the Columns may be formed for the Assault on the principle adverted to in No. 6. The means to be pursued for overcoming the different Obstacles that may be expected to present themselves are likewise detailed in CHAP. III., but as much of what Old Sprightly tells us “is more easily said than done,” it remains to add a few Practical Observations upon the Mode of Attacking the Chief Works, in which we may suppose the Strength of

an Intrenched Village to consist ; which will bring us in contact with Fortified Houses or Churches, Redoubts, Flèches, or other Earthen Works, some or all of which may flourish as independent Posts, or form part of the contour taken up for the Defence.

CHAP. VII.—ATTACK OF A FLECHE, OR EARTHEN WORK,
OPEN IN THE REAR,—A REDOUBT, &c.

45. All detached Works, of the nature of a Flèche, that are said to be *open* in the rear, are usually so ~~far~~ *closed* that they have at least a good Palisading and Barrier Gate to shut them in: *au reste*, they are generally Earthen Works having Ditches of a breadth and depth varying with their importance, either revetted or finished in slopes, with a palisade in the bottom. The rear, however, is generally the weak point, and it is left open, in order that it may be defended from some other Work which sees into it. To assault such a Work, if it is of considerable size, several Columns of Attack may be formed; the principal one, however, should be directed upon the weakest Point, and it should be held in reserve, and if possible concealed, until the threatening attitude of the other attacks, (which may be directed on the salient or the extremity of either face) shall have induced a corresponding disposition of the Defenders; it may then come on, in all its Glory, and make short work of the Palisade, by some of the means before described in CHAP. IV., the other Columns acting according to circumstances. If it so should happen that it was not expedient to attack a Work of this description by the rear, the general Plan of Operations would be reversed, and a show would be made of attacking that point, when in reality the principal effort would be made on the salient angle, or some other part, by a column kept out of sight until the attention of the Defenders had been previously engaged.

46. If the Ditch of a Flèche or other Outwork, is bounded by Walls, an Escalade with Ladders becomes necessary, for it is a long business filling up a Ditch, with bags of hay, or anything else, a dangerous one to jump into it, when deep, and an impossible one to get out of it when you are there, unless the retaining Walls are ~~very~~ insignificant indeed. If the Ditch is not revetted, but that still the slopes of earth are too steep for men to scramble up, Ladders applied to them will answer the purpose admirably, and if Ladders are not to be had, rough Steps may be made by Workmen, accompanying the Columns; all these Operations being under the protection of a strong Firing Party.

47. If Artillery forms part of the Force, a breach in the Parapet may be made with Shells, if time enough can be devoted to it, and the opposite Ditch being enfiladed to destroy the palisades, &c., a Column has only to wait for a signal to rush forward when these objects have been accomplished; but even in this case, with everything made so smooth, a false Attack, by distracting attention, could not fail to have a good effect.

48. The Attack on a Redoubt, which is a work enclosed all round with a Parapet, and supposed to be everywhere of equal strength, will be much the same as that of a Flèche. The angles are the weakest points, and the Attacks, whether false, or real, should direct their march upon them. A very sporting way of capturing a Redoubt is described by Capt. Macaulay, of the Engineers; in his excellent Treatise on Field Fortification. He says, "At the first blush of dawn a Troop of Horse Artillery should gallop up, unlimber on the glacis, and commence a rapid

fire of case shot to drive to the Defenders from the Parapets ; a Working Party carrying fascines, followed by a powerful Storming Party, advance at the same time with the greatest possible speed, the former fill in the Ditch enough to enable the latter to cross it, and enter the Work, which, if assaulted by good Troops, will certainly be overpowered."

49. As Facts, however, are more "stubborn things" than assertions, and are more instructive ones too, if experience is of any value, and as the former will make an impression, when the latter may fail in its effect, we cannot do better than give an example of such an Attack as has been under consideration ; nor can one be selected better adapted for the purpose of exemplifying what judicious arrangement and vigorous execution will do, than Sir James Kempt's Assault upon Fort Picurina, a strong Outwork of Badajos, in May 1812.*

“ *Description of Fort Picurina.* ”

“ Fort Picurina is a Work in the form of a Bastion, of nearly 200 feet Faces and 70 feet Flanks, the Rear being closed by a front of Fortification. The Profile from the bottom of the Ditch to the crest of the Parapet measures about 30 feet in height, but only the lower 14 feet of the Scarp is perpendicular : at that height a row of Fraises was fixed on the Wall, and the remainder of the height of the Profile was gained by a Slope, which men could ascend. The Counterscarp measured generally 9 feet in depth ; and at the rounding before the Salient angle of the Faces, four splinter-proof Cæmætes had recently been finished, which

* Jones's Sieges.

flanked the Ditch before the Faces. The Rear or Gorge was without a Counterscarp, but was well flanked from its Trace, and well secured by a treble row of inclined Palisades. The two Flanks alone were without Flank Defence.

“ Within the Work, three splinter-proof Casemates, loop-holed, and having their entrances well secured, served as a retrenched Guard-house. (See Figs. 5, 6, & 7.)

“ There were seven pieces of Ordnance mounted on the Ramparts, and the Garrison, commanded by a Colonel on the Staff, mustered nearly 300 men.

“ Major-General Kempt, commanding in the Trenches, made the following arrangements for the Assault :—

“ Two Detachments of 200 men each to be formed in the Parallel, the one on the extreme left, the other on the opening. Each Detachment to be preceded by six Carpenters with cutting Tools, five Minors with Crowbars, and 12 Sappers carrying Ladders. Lieutenant Stanway, R. E., to lead the left Column, and Lieutenant Gipps the right Column; and both Detachments to quit the Parallel at the same moment by signal. The left Detachment to move round the right Flank of the work, and endeavour to force in at the Gorge. The right Detachment to move direct upon the Communication from the Town to the Picurina, and leave there 100 men posted, to prevent any succours being sent to the Fort; whilst the other 100 should be marched upon the Work to assist the left Detachment in forcing the Gorge, and prevent the Garrison escaping. A third or Reserve Party of 100 men, to be conducted by Captain Holloway, was formed in No. 2 Battery, in readiness to assist the other Detachments by a Front Attack, should they find much difficulty in forcing in at the Gorge.

"Execution of the Assault."

"It was 10 A. M. before these arrangements were completed, at which hour the signal was made and the Detachments advanced. The Left Party reached the Gorge of the Work without being discovered; but on attempting to cut down or force over the Palisades, the defenders opened such a heavy fire of Musketry, that no one could effect it, although the utmost resolution and perseverance were displayed by both men and Officers.

"The Right Detachment strictly obeyed its orders, and the half of it which proceeded to the Gorge of the Work were received with such a heavy fire, that after two or three fruitless attempts to get over the Palisades, they drew round to the Left Flank of the Fort, where the Ditch was not flanked, and fixing their Ladders against the Fraises projecting from the Escarp, the foremost were quickly on the top of the Parapet overlooking the Garrison defending the Rear. The French Troops on the Ramparts immediately concentrated to oppose this effort, when a spirited conflict ensued, and those first up the Ladders seemed likely to be beaten back.

"Whilst the contest at the Gorge was still doubtful, Major-General Kempt ordered the Reserve Party to advance from No. 2 Battery. It entered the Covered way at the points where the Palisades had been beaten down, descended the Counterscarp, and applied the Ladders to the Fraises. The foremost men readily mounted, and waited on the Fraises till some 20 or 30 men assembled; when they pushed up the Parapet, but were so firmly received by the Defenders, that many were shot or bayoneted back,

and they only forced in at the same moment that the right Detachment mounted the Flank. Some of the Garrison continued to resist even after the Assailants were in possession of the Ramparts, and were consequently bayoneted ; and many were drowned in the inundation in attempting to escape ; but a Colonel, two other Officers, and 80 were made Prisoners.

“ This brilliant Achievement cost the Troops four Officers and 50 men killed, and 15 Officers and 250 men wounded. Captain Powis who commanded, and Captain Holloway who conducted the Reserve Detachment, were each badly shot on the Parapet, of the Left Face of the Work ; and Lieutenant Gipps received a bayonet wound on that of the Flank.”

CHAP. VIII.—ATTACK OF A FORTIFIED BUILDING.

50. The planning and execution of an Attack on a small Military Post, such as a Fortified Building, the defences of which were detailed in CHAP. X., (PART I.,) will, more generally fall to the lot of a young Officer, than the comparatively larger operations against a Village or Redoubt, &c.; but however small the Post may be, if it has been judiciously strengthened, and is ably defended, there is opportunity enough for the exercise both of talent and bravery in assaulting it. But let us have a fair fight with no Artillery on either side, so that we may see what has to be done, and how certain difficulties which are peculiar to the nature of such an operation are to be surmounted.

51. First of all we will suppose that the greater part of the information detailed in No. 2 has been obtained by an Officer meditating the Attack; that he has had his eyes and ears open; and that with the aid of a good Telescope he has made himself, and those under him, well acquainted with at least the nature of the External Defences, &c. His points of Attack are selected, and we will imagine that the little Garrison is “wide awake” to his intentions, and on the look-out to receive him; moreover that he has a fine sunshinè to enliven his proceedings. He divides his Force, and forms his Columns of Attack, and the first onset is made on the principle and with the precautions already explained in CHAP. II. We will suppose too that the Obstructions on the outside are surmounted by some of the means detailed in CHAP. III., but here is a great staring

House now before him, barricaded and loop-holed from top to bottom, and full of people; and a very serious and inhospitable looking thing it is! If an Officer had not been able to procure accurate information of the mode in which this Citadel of the Post had been prepared for defence, (No. 3,) or that he had not sufficient knowledge of localities to enable him to arrange the whole of his plan of operations beforehand, it would be better for him, after a successful Attack on the External Defences, to throw his Force under any cover he could find for a few moments, whilst he took a glance at the remaining Works, and was making up his mind what was best to be done; otherwise he would have to risk a wild and uncombined Attack, which would probably entail considerable loss and might be a failure. It would therefore be his object, if possible, to Reconnoitre the House all round; but should circumstances induce him to decide on directing his principal Attack against some part that he could see from the situation he had first gained, he might take his chance in trusting a false Attack on the rear, and leave it to be worked as seemed best, for diverting the attention of the Defenders, rather than lose time in being too particular. We will suppose that he is opposite an angle of the house, and under cover of some object within 50 or 60 yards of it, and that a little slope in the ground conceals his men when lying down. He observes that one side of the House is flanked by a window and some Loop-holes which have been made in an angular portion of the same building, (B, FIG. 8,) and that on the other side there is a door in the centre covered by a Tambour, (A,) made of rough logs of timber set upright; the Windows on both sides are low, but a Ditch has been cut

in the front to give weight, and they are well barricaded with stout timber, loop-holes being left for firing through. He has brought with him six Ladders, 12 feet long, two Bags of Powder with Fuses attached, (No. 37,) and some good workmen with Axes, Crowbars, &c.

He resolves to attack the points A and B, because in closing with them he grapples with adversaries that are in a position to do him damage, if he remained at a greater distance. He divides his Force therefore so as to have two real Attacks in front, and one false one to threaten all the rest of the Defences, leaving a proportion as a Support, besides a small Reserve to apply as circumstances may require. (No. 29.)

He observes that if he rushes up in the first instance, directly for the angle of the Building, he will be less exposed to fire than if he faced either side, and he decides that this shall be his line; and as strong measures on these occasions are greatly to be commended, he makes up his mind to expend the two bags of powder, one in breaking up the Tambour at A, and the other in blowing open the Barricaded Window at B;—then to effect an entrance by means of his Ladders, through the Window A, and to force the door within the Tambour by a Liberal use of Sledgehammers, and Crowbars. (No. 55.)

52. It is of course a great object not to expose men to fire, unless their presence or services can secure some corresponding advantage. He therefore determines only to send those men forward in the first instance who will be wanted for fixing the bags of powder and firing them, and a very small detachment to protect them during the operation, by watching any particular Loop-hole that may defend

the points A and B. To provide against accident he tells off two men to carry each bag, and two others with lighted portfires for firing them, each party to be accompanied by six men, so that any Loop-holes which bear upon the situations where the bags are to be fixed, may either be silenced, or at least have their attention distracted. The success of the operation appears to depend greatly on the adroitness of the men who have charge of the powder, and he therefore has selected some smart fellows who know what they are about, and points out to them what is to be accomplished,—how it is to be effected,—and what particular duty each has to perform. The Columns of Assault, too,—the Firing Party, and a Reserve to protect the Flanks, or fall back upon in case of accident, would all be told off, as well as the Party for the False Attack; but no movement should be made till everything was in perfect readiness. He would then explain the general plan of the Attack, and point out the position of the Reserve and Support, &c.; after which the Detachment for the False Attack might move off, going by the least exposed route to the rear of the Building. There they might amuse themselves, vapouring about a little, and would soon become engaged, which would not be without its effect; for the Defenders, from being separated by different apartments and floors, and their only look-out being through Loop-holes, would become unsettled as to the real plan of Attack, from obtaining but very confined and partial views of what was going on; and as their duties require them more or less to conform to the measures that may be adopted in the Attack, anything, even the firing of blank cartridge in different quarters, would tend to disturb them, and, at least keep those at

their posts who might otherwise be advantageously employed elsewhere.

58. A favourable moment would be chosen for commencing operations. If there were any Cover at all, the Firing Party might quietly distribute themselves opposite the two sides of the House to engage attention, rather than with any hope of doing damage ; for a Loop-hole is so narrow that it would require very good and very steady shooting, to fire into them from such a distance as we have supposed.

The Bags of Powder would now be dispatched ;—the two Parties would make a sudden rush up to the angle of the Building, and then dividing, there would be nothing left for it, but to run the gauntlet as best they could to their separate points, either along the bottom of the little Ditch, dug to give height to the lower Loop-holes, or close along its edge. It is so difficult to “shoot flying” out of a Loop-hole, that they might laugh at the fellows grimacing through them as they passed. All this would be the business of a minute or two. The Bag for blowing in the Window would either be propped up against it with a thick stick, or it might be laid on the sill. That for forcing out the timbers of the Tambour, might be hung upon a single nail, driven in at the time, or the loop would be thrown over the top of one of the timbers. The men for watching the adjoining Loop-holes should stand as close as they could to them, not exactly in front, but a little on one side, and keep up a constant fire into them, avoiding exposure as much as possible, either from the Loop-holes on each side, or those which might flank the place where they stood. It would be needless exposure of men, and the worst of two evils

to make a general Attack on Loop-holes, unless under particular circumstances, where there was only one row, or that something had to be done, which would require a party to remain exposed for a considerable time. In cases where there were two or more rows of Loop-holes, and that the Defenders had the means of throwing rolling Shells down from the upper Windows, besides giving their fire, the means of Attack would not be commensurate with those of the Defence, and it would not therefore be prudent to attempt it, but on a limited scale; and when it *must* be done, Loop-holes may be successfully disputed by superior numbers, if you can get near enough to make pretty sure of firing in; the closer you are too, the less you are also exposed to any direct fire from others.

54. When the bags were fixed, the Fuses would be lighted, and if the men could retire some 10 or 12 yards, or lie down in the bottom of the Ditch,—or as Bob Acres says, “by my valour,” “stand edgeways,” close against the wall between any two Loop-holes, till the explosion took place, it might possibly be more agreeable, and would be safer than attempting to go back to the spot from whence they came. At this juncture, the Axemen, the Party with the Ladders,—and one or both Storming Parties should be perfectly prepared for springing forward. The moment the explosion takes place, they should be up and away. If a flash of lightning were behind them, it ought to be “distanced considerable.” The Ladders would either be applied to the Windows, as they would be in an Escalade; or if the Windows were low, they would be of service to form a kind of Bridge for crossing the Ditch, which might form the Obstacle to getting in. A Firing Party would

watch the opening, and the adjacent Loop-holes, and the Storming Party would resolutely enter, the moment passage was ready, closely followed by the Support, which would at the proper moment advance from its place of concealment.

55. With respect to the Attack on the Tambour, some little delay might be necessary, as the Storming Party could not enter till the inner door was forced. The Axemen would therefore ply away, till they had accomplished its destruction, during which time other men sent for the purpose might recreate in firing through the Loop-holes, to assist in clearing the passage. When the door was forced, the Storming Party would advance, and by a vigorous charge through the opening, would overcome all opposition. The entrance gained, a momentary check to collect numbers might take place, and then a determined "cast forward" in pursuit of the Fugitives would be the right thing to do. If the Defenders were of a sort "not to be taken alive," and were "making play" for the upper story, where they would be more strongly posted, a sudden rush after them might afford the Assailants the opportunity of accompanying them up-stairs, and thus finish the affair at once. If the retreat were from one part of the house to another, they should be hotly pursued, without a moment for cogitation or taking breath, and they should be kept going till all opposition had ceased.

56. On the other hand, if the Defenders had succeeded in gaining the Upper Floor, and that the Staircases were either destroyed, or too strongly barricaded to be carried by main force, a pretence at lighting a fire in the middle of the *Dining Room* would not be without its effect, or any

trifling preparations for making a Mine in the angle of the *Library*, if they did not fire down too much through the ceiling, so as to render it impracticable, would be as likely to bring them to terms as any measure which could be proposed. The smell of a little Gunpowder, or a Portfire, is never less attractive, and never has so adverse an effect on moderate nerves, as when it is connected with the idea of a Mine; so we will suppose, after these preliminaries, that the courage of the Garrison "oozes out" a little,—that they think better of it, and save all further trouble by an unconditional surrender.

57. If the lower part of a House were very stoutly barricaded, and that the Assailants were unprovided with Bags of Powder for blowing open the Doors and Windows, an attempt might be made to silence the Loop-holes which bore on any particular point, and workmen might be employed there in forcing open an entrance, either at a Door or Window, or in breaking fairly through the Wall itself. Or if Ladders could be procured, an Escalade of the upper Windows, which are not usually so strongly fastened, might be attempted; but if denied access at these points, we have not done with them yet; as Old Sprightly would say, "The brightest hopes remain for us." There is no just cause why the Roof should not be attacked. Ladders would be brought up and applied in the most convenient and covered situations that could be discovered, and, if possible, the Assault should be made on several points at once. Having gained the roof, Loop-holes might be first knocked through at a single blow, and made use of for driving out the Defenders: these would soon be converted into great breaches;—a few Grenades might take the duty

of a Firing Party in clearing the front a little ; and an impetuous Attack from this perhaps unexpected quarter, °. would be likely enough to succeed. At all events it would be worth a trial, and “no man in England” has a right to turn his back upon a Post he is ordered to attack, from ~~only~~ *thinking* it is impregnable.

58. When people are “run to ground” in this way, nothing short of knocking under “*de haut en bas*” must be listened to on the part of the Conquerors ; and supposing the diplomacy of the affair to have been done in due form, we will leave the Parties to smoke the pipe of Peace and “Caw me, caw thee” a little. If the subject of Attack were a Church, a Prison, or other large Building, the same principles and precautions might be applied, only with this difference, that the offensive measures would be arranged so as to keep pace with the increased means of resistance.



CHAP. IX. — ESCALADING.

59. Escalading differs in many important points from almost any other description of Attack, and as the difference is not so apparent at first sight as to be obvious to those who have neither had experience in the field, nor the advantage of witnessing, or being engaged in the practice of it, at Chatham or elsewhere, a little explanation of the *Practical* working of an Escalade, and of its *Principles*, may be acceptable.

In the Assault of Works, whatever their description may be, and under whatever circumstances, the Troops are usually formed in compact Columns; whether their efforts are directed against the Breach of a great Fortress, when this order is imposed from the front being restricted, or against the more extended Obstacles which cover the Defenders, of Outworks or Intrenchments, which though not breached, may yet be assailable, the Storming Party is launched forth in Column to penetrate the necessarily thin line of Opponents, which are extended in array before it. And if this formation be general, we may fairly infer that experience has proved it to be the most advantageous order that can be adopted.

- If to meet such an attack as this, the wings of the Defenders could be thrown forward to overlap the Flanks of the Advancing Column, it would be deprived of some of its advantages. For example, What occurred at Busaco?
- A great French Column advanced up a steep slope, in the finest possible style, to the attack of a Line posted just out

of sight on the top of it: but it was charged, and as it were, wrapped up in a *winding sheet* by the 43rd and 52nd Regiments: the wings enveloped the mass, and it was almost exterminated by the close destructive fire that was brought to bear upon it. Now Troops drawn up for the ~~Defence~~ of a Parapet are more or less in Line, but they cannot manœuvre to any extent, and may therefore be regarded as Fixtures, and be estimated to the *In-Coming Tenant* as such, and at what they are worth. Starting therefore on the assumption that a Line so posted should be attacked in Column, we will proceed to make arrangements for carrying it into effect by Escalade.

60. For the sake of illustration, a small case may be imagined, so that by going into the details, we shall see better what happens. Suppose an Officer, impressed with the value of a Column, and without experience in Escalading, to receive an order on a sudden emergency to go on with his Company, formed as a Storming Party to escalate an Outwork, having a Ditch bounded by a Scarp and Counterscarp Wall. A heap of Ladders are pointed out to him, and he may take as many as he likes; he finds them 18 feet long, requiring four men to carry them. His Company has been thinned down to 48 Rank and File, but they are all "good men and true." He says to himself, I'll walk into those fellows on the other side the Parapet, like a flash of Lightning into a Gooseberry bush," and he draws up his gallant fellows in Column of Sections accordingly. He has nothing to do with Supporting the Attack: his object is simply to keep his Column together,—to get them into the Ditch,—and plant Ladders so as to enable him to attack the Defenders. His first impulse is

to order the leading Section to furnish themselves with Ladders, by which the Column shall descend into the Ditch, and afterwards ascend out of it. His Sections consist of only six Files, and consequently the 12 men in the leading Section would only carry three Ladders, which, when planted side by side against the Scarp, would only admit of the three men who first got up, charging the Defenders, instead of the shock which he intended to produce by his six Files and their compact Quarter Distant continuations, which was his *beau ideal* of Assaulting in Sections. Another inconvenience presents itself: he finds that the three Ladders when taken up to be carried forward in line, also occupy a greater front than one of his Sections, and therefore the three men who first mounted, and all others who followed them, would be, on a small scale, in more extended order than he expected. He determines therefore not to give up his front of six men, at all events; so, to accommodate matters, he forms Subdivisions, and carries six Ladders in the leading one, which enables him to attack on the Front of a Section at open order; for the six men as they successively go off the Ladders, will be obviously on the extended front of a Subdivision. To pursue this for the sake of argument a little further:—if the Ladders were longer and heavier than we have supposed, it would require six men instead of four to carry them, and he would find in this case that the front on which a line of Ladders can be carried forward, is, as near as may be, that of a line standing two deep behind them; that is, three Files for each Ladder, or about 5 feet. Under this new supposition, to preserve his Front of six men, who would have to advance with 18 Files, carrying only six Ladders; but

he is now supposed to be going on with four men to each Ladder.

61. When all is ready, the two Subdivisions advance, the Ladders being carried in line by the leading one, and we will accompany them to a little Storm of their own. They arrive at the edge of the Ditch, and lower their Ladders into it. The Men who carried them descend,—wait till the rear Subdivision comes down,—drag them across the bottom,—turn them over against the opposite side, and the leading Files begin to ascend, followed by the others in tolerably close order; that is to say, one man's head about on a level with his predecessor's heels. If they have luck they arrive in this order at the summit of the Revetment, and rush off the Ladders in succession, so that if the second man has still to ascend six steps of the Ladder when the first man springs forward from it, as the latter will certainly move over more yards than the former will accomplish feet, he will very soon be far ahead, and in the “thick of it” by himself. This is literally what must happen, from some cause or other, in nine cases out of ten. Here then we have the six leading Men charging over the Parapet, and braving the Bayonets of the Foe, the very worthy Representatives of 18 Files, the rest of whom *are coming*. These leading Men of the four, who carried and are to make use of each Ladder, and of the corresponding four who are to follow from the 2nd Subdivision, jumping down within the Work when the rear Files are only preparing to ascend out of the Ditch!

62. Hence arises a difficulty to contend with, in the loss of that compact form which it is considered so desirable to preserve in the Attack of Works and which shows also the

difference there is in *physical effect*, between the well-supported onset of a massive Column, and the fragments of it, as they would come pattering on from an Escalade! In the one, the bayonet of the sixth man from the front, at the first collision of the hostile bodies, may be within 10 feet of his Adversary's breast, and in the other it cannot well be within 100. Here we are spread out into the worst possible form for making an impression; we have neither *weight* nor *surface*: it is clear, therefore, something is wrong. A Column with a little Head and a long Tail, is like a "Newmarket Weed;" and the one is as bad a thing for making an Attack, as the other is for "charging a Bullfinch."* How its shape is to be modified in the case of an Escalade does not yet appear, but it may be shown that *very* favourable circumstances are required to lend their aid before it can be accomplished, as will be considered further on.

63. But these two modes of Attack are not thus brought into invidious comparison with any view to depreciate an Escalade, but merely to make practice and principles intelligible to those who have not troubled themselves to think on the subject. "Perish the thought" that an Escalade is to be cried down! It is a **SPLENDID ACHIEVEMENT**, in

* There are many Gentlemen's sons, of considerable attainments, who may not be aware what is meant by this expression. In *this* sense a "Bullfinch" is not a Bird, but a growing Thorn Hedge, some 10 or 15 feet high, through which daylight scarcely appears; and yet if a man wishes to keep with hounds in some countries, he must ride at all he comes across, at a full swing, and force a way through: to effect which the *Weight* of his horse will be all in his favour. A thoroughbred Weed would bound back from a good Bullfinch, as it would from the wall of Her Majesty's Jail at Newgate.

every way worthy of the brave hearts who may be sent forward to execute it. It has "*inter alia*" this great advantage, that it disencumbers a Force of a host of trammels, and renders them independent and at liberty to act and undertake operations under circumstances that would otherwise be insuperable. A 'Quarter-Distance Column, charging as such, must wait for a Breach, or it must have Slopes that men can climb with facility; in fact, it must have a very good road made for it before it can act: add to which, the Attack is usually imposed at a *particular point*, which point, a determined Enemy will not only dispute, but will retrench and defend, with tenfold the advantages and obstinacy which he could a more extended and uncertain line of operations.

The successful Defence of the great Breach at Badajos, — on the 6th of April 1812, will forcibly illustrate these remarks. By the work of a very few hours, a handful of French Troops were placed in a position to resist the efforts of the most powerful Column, (certainly as regarded its composition, and probably its numbers) that ever faced a battered wall; with truth might the heroes who composed it have answered the shouts of defiance that reached their ears, "If we can't do it, who can?" Well might they have said so; for if *they* were brought to a standstill, the best Troops that ever trod the earth, could not have accomplished it under the same circumstances. Remember who directed them, and the weapon he wielded! That Breach was rendered impregnable to the Means at hand for forcing an Entrance. Not so the rest of the Defences: they were bravely Escaladed, and on a very limited scale too, and the Fortress was won by the performance of prodigies

of valour, opposed to an heroic resistance. For whether we read the accounts of the British Assault, or the French Defence, we look over a page of Glory from the top to the bottom; and did not living Witnesses bear testimony to the Truth of the History now in our hands, and of what we hear from those who were engaged in it, there were Deeds done on that memorable night which are almost beyond belief.

The following spirited sketch of the Escalade of the Castle by the 3rd Division, given by Captain M'Carty, (late of the 50th Regiment,) who acted on the occasion as Assistant Engineer, will convey a notion of it:—

“ On the 6th April all minds were anxious for the ‘ advance,’ and orders were issued for the attack at 10 o'clock that night. I again, with Major Burgoyne, R.E., attended by appointment General Picton, at 8 o'clock P.M.: General Kempt and several others were there. General Picton having explained his arrangements and given his orders, pulled out his watch, and said: ‘ It is time, gentlemen, to go;’ and added emphatically, ‘ Some persons are of opinion that the attack on the Castle will not succeed, but I will forfeit my life if it does not!’

“ The Division then entered the Trench, and proceeded nearly to the end of it, when the enemy's volcanic fire burst forth in every direction, long and far over the Division, and in every kind of combustible. The grandeur of the scene, as Colonel Jones says, was indescribable. Such was the appearance of the fire, raining from the besieged; it was as light as day.

“ When the Division had advanced some distance from the parallel, the enemy's fire increased considerably; I was

walking between General Picton and General Kempt, when the former stumbled, and dropped wounded in the foot. He was instantly assisted to the left of the column ; and the command devolving on General Kempt, he continued to lead it with the greatest gallantry.

“ On reaching the front of the mound, I cried ‘ Up with the ladders ! ’ ‘ What ! up here ? ’ said a brave officer (45th). ‘ Yes ! ’ was replied ; and all siezing the ladders, pulled and pushed each other with them up the acclivity of the mound, as the shortest way to its summit. The above officer, and a Major of Brigade, laboriously assisted in raising the ladders against the wall, where the fire was so destructive that with difficulty five ladders were reared on the mound, and I arranged the troops on them successively, according to my instructions, during which I was visited by General Kempt and Major Burgoyne ; although this place and the whole face of the wall, being opposed by the guns of the Citadel, were so swept by their discharges of round shot, broken shells, bundles of cartridges, and other missiles, and also from the top of the wall, ignited shells, &c., that it was almost impossible to twinkle the eye on any man before he was knocked down. In such an extremity, four of my ladders with troops on them, and an officer on the top of each, were broken successively near the upper ends, and slid into the angle of the abutment ;—dreadful their fall, and appalling their appearance at daylight.

“ I was forced to the utmost perseverance of human exertion, and cheered to excite emulation. ‘ Huzza ! they are long enough, push them up again ! ’ On the remaining ladder was no officer ; but a private soldier at the top, in attempting to go over the wall, was shot in the head, as

soon as he appeared above the parapet, and tumbled backwards to the ground, when the next man (45th Regiment) to him upon the ladder instantly sprang over!! If he was not killed, he certainly deserved a crown of glory. But so numerous were the intrepid, that the man above-mentioned could only be distinguished as one of the 'Bravest of the Brave.' I instantly cheered 'Huzza! there is one over; follow him!'

"About this time General Kempt was wounded: his exertions had been most arduous in bravely visiting, and directing every point of attack, through the heaviest fire!

"The Escaladers persevered amidst the determined opposition of the Besieged; and the contest at the Castle wall was desperate, the besieged throwing down broken waggons, beams, shot and shells, on the besiegers, and endeavouring to drag the ladders from the men below. •

"Lieutenant M'Alpin, 88th Regiment, supposed to have been the first who mounted the Castle wall, was there killed. Several claimed to have been the first up; but so ardent were all to gain the summit, and spring over to the conquest, that it was difficult for the individuals to decide who the first was, as the intrepidity of our troops seemed to have increased in proportion to their difficulties, and to avenge the fall of their Generals, and of their numerous comrades who lay strewn around. It was indeed delightful to hear our buglers upon the wall near the citadel, sounding the animating 'Advance,' to proclaim their success, and accelerate the distant troops; which consoled the wounded, and ameliorated their pangs. •

"One bold bugler, as soon as he mounted the wall—

determining to be first, when sounding the 'Advance,' was killed in the act of blasting forth his triumphal music.

"Numbers of heroes fell on both sides; at the Castle the bodies of the English and French laid upon each other; but General Picton's division conquered, and was established before 12 o'clock in the citadel, which commanded all the works in the Town, and enabled the other Divisions, which had been powerfully resisted, to enter the Town.

"The first person who entered was the gallant Lord Fitzroy Somerset, then Secretary to the Commander of the Forces, who, to ascertain the state of the 3rd Division, bravely forced his way through the innumerable obstacles and imminent dangers of the Town to the Castle, which he entered, and found the 3rd Division reposing in security."

.. But to revert to the subject; an Escalading Party wants none of the, perhaps impracticable desiderata, of Breaches and Roads, and adventitious aids, to Macadamise its path! It grapples with the Obstacles that separate it from its Adversaries, in all their pristine majesty and perfection, and as an Enterprise, it is out and out, the more sporting thing of the two; which is quite reason enough for its being "first favourite."

64. It may now be asked, if we are so "thrown over" when we attempt to Escalade in Column, what are we to do? Why Escalade in Line to be sure! Suppose an Artilleryman were so circumstanced as not to have a 24-pound shot to fire through an Enemy's Line, but had plenty of Grape and Canister; would not a bucketful of small Balls, directed so as to give a shower of Iron over their whole surface do just as well? It is a question

whether it would not be much better:—the only precaution necessary would be to fill the bucket *quite full* ! We must, however, turn from the Hyperbolic to the Practical, and look into the Details a little.

65. We see that it is impossible to preserve the massiveness and beauty of a Column in this mode of Attack. That no sooner does an Escalade begin, than out goes the Head of it into the Fire, whilst the Tail, flourish as it may, can render but little assistance. In looking for the remedy, it will naturally occur that if the Road across a Ditch were widened, greater numbers could at least be brought into action, and as NUMBERS will tell, in whatever way they may be applied, a partial remedy may probably be found: we will therefore deploy a Column, and try what that will do ! Here we are in a form for really *charging* the Defenders, if they could but be got at ; and though when mounting the Ladders again, the same cause will be found producing a similar effect, in spreading out the Line in open order as it did the Column, yet we gain the advantage of having Numbers to help us through, and the *resistance* to be overcome will not be in exact proportion to the *extent of surface* that is assailed. We have now hunted pretty nearly up to the truth,—for a right good Escalade should be a Charge in Line. When, however, we come to scrutinise the executive part of it, we shall find, that though it is *Theoretically* a Charge in Line, it is *Practically* the rather bold undertaking of a cloud of Skirmishers, making an Attack upon a Force posted in Line on vantage ground, and standing in the best defensive attitude in which they can put themselves.

This looks awkward, and would hardly be attempted in

the Open Field; then what is to conduce to its success under more difficult circumstances? We answer, "*The pressure from without.*" The Fight is won by the resolution and audacity of Numbers, and by the employment of People who can harden their hearts, and keep their heads straight! And though these conditions are more or less essential to the success of any other mode of attack, yet they are all required in larger proportions for an Escalade, than for a dense mass moving forward in the shape of a Column. Some of the advantages of a compact formation are to be found in the human heart; men feel themselves more secure and better supported when *en Masse*, and are consequently less liable to the fatal panic which may attend a momentary check, or a *Coup Manqué*.

In the more open order which circumstances entail upon an Escalade, there is more opportunity of dropping behind, more probability of confusion, or something going wrong. Hence numbers and good will are the more necessary in the one than in the other. We want the *dash* and *activity* of a *Multitude*, to replace the *emphasis* of a *Mass*. If we cannot go through the Line, we must endeavour to knock it to pieces by such a "sprinkling" of blows as it cannot stand under. For better illustration of the subject, we will as before assume a case, but of rather a bolder outline, taking our leave of Escalading in Sections, and enrolling ourselves in the "*Anti-single-gentlemen-running-over-the-parapet Society.*"

66. The Face of a great Outwork, 100 yards in length, is ordered to be assaulted by Escalade, with no restriction as to Men or Means! The Ditch is 18 feet deep on the Counterscarp side, and the scarp, or the opposite side, is 22 feet high; the Garrison 1000 men! "No restriction as

to Men or Means!" Here we are in clover!! Now Mr. Cocker, how many Ladders will that Face hold? putting them as close together as the men can carry them in Line, or as they can be reared all at once! Mind, all at once! And how long must they be?

Why each Ladder, to be carried without crowding, will require a good 5 feet for its own share. The Face is 300 feet: divide by 5;—that gives 60 Ladders to line it; we shall want 60 more to stand opposite to them on the Counterscarp side, in order that the Support may follow on, and the communication be complete. "Tottle of the whole," 120. And the length of each must be 25 feet on the Scarp side, and 21 feet on the Counterscarp side, for the ends should project some 3 feet above the Walls.* Very well! Now for the men to carry them, and who form the Advance of the Assault? Six men to a Ladder gives 360 for each Line, making 720 altogether. So far so good. We must now have another Line of 180 Files in Support, and another to that in Reserve; a Firing Party of 200 men in addition, and we will be content, not only to undertake the operation, but to bet odds on its success.

67. In making arrangements for such an Attack, the Ladders would be laid out in two Lines, with an interval of perhaps 100 or 150 yards between them, if it were in-

* This entails a certain amount of evil, but is recommended as the least of *Two*. The advantages gained by having the ends of the Ladders projecting above a Revetment, are—the increased facility with which men get either off them, or on to them; the better footing they gain; and above all, the *Time* that is saved by men stepping boldly off in an upright position, instead of crawling off on all fours. Against this obvious balance on one side, we must set off, the liability of the Ladders being thrown back by an Enemy, if he makes the attempt. But this the Firing Party ought to take care of; an Enemy coming *outside* the Parapet is a case of trespass.

tended that both Lines should advance at the same moment ; or they might be as close together as was found convenient, if it were considered better that they should move on in quick succession. This latter disposition would be desirable, if the space on which the Party was to assemble were restricted, as it might be, in taking advantage of any little Slope or Hollow of limited extent which might exist within a short distance of the scene of action, and thus favour the operation by concealing the previous movements ; or if a work were to be assaulted from a parallel at a Siege. Each Ladder as it lay on line on the ground, should occupy the same space as the three Files which are to carry it do, when also in Line, which according to the regulation distance or breadth of shoulders, will be a *good* 5 feet (we do not descend to inches).

68. This will do for the Ladders. We must now look to the best way of disposing the men for carrying them, which we shall find mixed up with the more important considerations which relate to the impression they are likely to make in assaulting the Work, and the subsequent formation, which should be attempted for securing the footing they may gain, so as to be in readiness to resist the secondary attempts of the Enemy, with his Reserve, to drive them out again. It will facilitate explanation to anticipate proceedings a little, and imagine the 60 Ladders carried by each Line to be already planted in the Ditch, and that the men who carried those against the Scarp, are beginning to ascend their respective Ladders, to make the Attack, (of course in single file,) whilst the others who carried the Second Line, are descending those on the Counterscarp side : in fact, that we have a noble road of about 100 yards

PLATE . II .

Fig. 14.

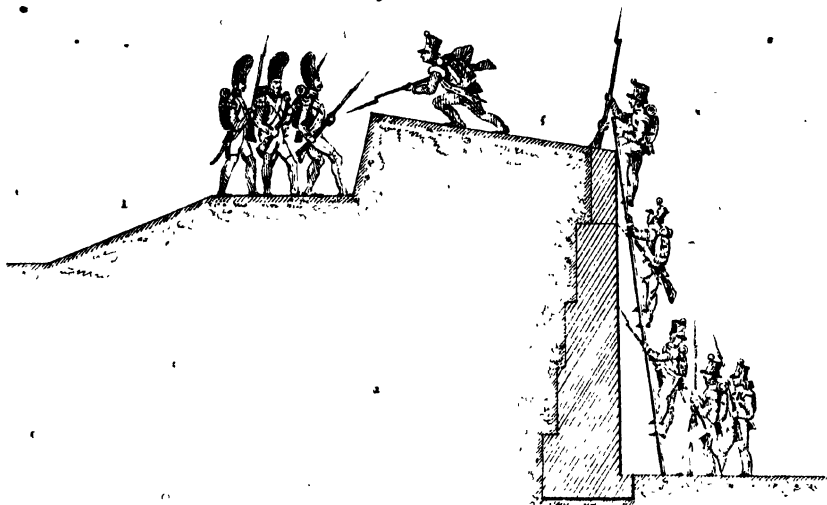
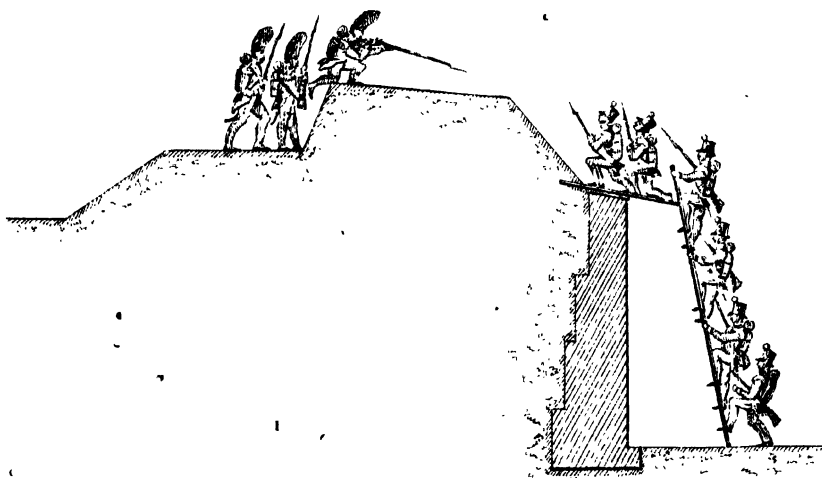


Fig. 15.



in width across the Ditch, and 720 men, "progressing" to the Fight. But in giving the Assault, what happens? Only 60 men out of the whole lot can advance abreast, so as to go over the Parapet and charge the Defenders at the same moment; and if their Opponents are drawn up three deep on the same Front they occupy, those 50 men in going straight to their own Front, with the intention of forcing their way and forming Line, again within the Work, would have to deal with 540—which is fearful odds, however quickly they might be supported. We will suppose, that from the form of the Profile to be Escaladed, (see FIG. 14,) no pretence at a formation can be attempted when the men first get off the Ladders, but that as they successively arrive at the top, they become exposed to a Fire directly in their teeth, and that they therefore rush forward to close with their Opponents as the best chance they have of beating them.

69. Now, without taking any account of confusion, casualties, and unavoidable delays,—and these items would doubtless swell the Bill a little, the very best order in which this Force could be brought to bear, assuming a regular and rapid succession for the sake of argument, would be in single Ranks of 60 men at a time, at extended order of three times their own proper front. The probable intervals between these supposed Lines might be something like 12 or 15 paces; practically it would certainly not be less. It may be estimated thus:—the Ladders are supposed to be 25 feet long, on which as an average it may be said four men are ascending at the same time; when the leading man arrives at the top, and gets a peep at his Adversary, he makes a rush forward, and if his strides are

measured, they will be found of vast dimensions, in comparison with the intervals of one foot between the steps of the ladders ; and he is besides able to take two strides forward, whilst the next File behind him accomplishes one step upwards, from the cramped position in which the latter moves. In fact, we may fairly say, taking all things into consideration, that he would go *six* feet for *one*, or that the Leading File, if he had that distance before him, would be at least 12 or 15 paces from the Ladder when the second File got off it. This then is the distance we may assume between the successive squads that would come rambling over the top of the Parapet ; and if there were not that, or a greater distance to move to the Front, and the intervals between the successive impulses were reduced into minutes or seconds, it would amount to a very appreciable period ; sufficient at least for much to happen where it is “ a give and take match,” and when blows are dealt with a hearty good will on both sides.

70. It has been hinted that favourable circumstances are required for modifying the evil of the formation thus forced upon us, by the extended order in which the Ladders are necessarily placed, and the mixture of slow and quick time that is also entailed. These favourable circumstances will usually be found in the Profile, or form of the Work which is to be attacked ; any footing afforded by a Berm or exterior Slope of a Parapet, not exposed to direct Fire, and on which men could make a momentary halt to collect numbers as they got off the Ladders—which might be done on such a Profile as is represented in FIG. 15, would go far to relieve us of our difficulties. In such a situation, the Berm and the Fraises together would enable the

Assailants to form Line close under the noses of their Opponents, before they became exposed to their Fire, from whence they might charge them with effect; such opportunities, however, "are few and far between," but would be seized upon with avidity, as of obvious advantage.

71. When, however, men become exposed as they get off the Ladders, and that they must go on in succession as they arrive at the top, the difficulty of combatting their Opponents, and at the same time fighting their way into Line, would unquestionably be very great, in the loose order into which from circumstances they had been shaken. If the Defenders were to take to their heels, and allow us to say with Tom Thumb, "Thus far we've been victorious, for though we have not fought, yet have we met no Enemy to fight withal," it would be a different affair; but against a resolute and obstinate Defence, there would be a scramble for it. And sitting as *We* do in *Our* easy chair, speculating upon the issue, it does not appear quite so clear a case of success as it might be desirable to establish.

72. It is evident that in order to throw in *numbers*, the Ditch must be crossed on a very extended Front: in fact we must move in Line. But the question now arises, shall we continue in Line during the further operations that are in hand, or shall we make an attempt to regain the more compact formation of a Quarter Distance Column? The object is to make the Attack with every possible advantage, so as to breaking in upon the Enemy, seize the ground he stands upon, and afterwards to be in readiness to act as a Body in the *shortest possible Time*; either for resisting the efforts of his Reserve, or in following up success by sweeping the Ramparts or Interior to the right

and left, as circumstances might require. A compact formation will appear the more desirable, if we take into consideration the arena on which the struggle would probably take place, to wit, under many circumstances, on a confined narrow Rampart closed in Front, but open on both Flanks; than which a more unfavourable situation for a Line in disorder, being instantaneously applied with effect, either for further offensive measures, or for holding the ground it stood upon, could not well be selected. But we may scrutinise this point a little more closely, under the separate points of view which have reference to the advantages it is conjectured would result from it.

1st. Is it better adapted for breaking an Enemy's Line, and forcing an Entrance, than charging *individually*, and then making the attempt to form a Line among the Enemy?

2ndly. Is the formation of a Column more likely to be effected, than that of a Line under the circumstances?

3rdly. When effected, does it secure to the Troops any advantages in acting offensively or defensively?

73. In reply to the first of these queries, whether a Column is better adapted for breaking an Enemy's Line, &c., reference must be had to the position and circumstance of the contending parties. It has been shown in No. 65 that an Escalade is analogous to a cloud of Skirmishers rushing in upon a posted Force. Now, however severely that Force might feel the quick succession of blows dealt upon its surface, it *ought not* to be overcome by anything like equal numbers applied in the open order, which an Escalade entails. This will be more readily conceded, if we for a moment change places, and imagine ourselves the

Defenders of a good Parapet, assaulted in such a manner. We shall fancy we could give a pretty good account of the aggressors, and "Bag" most of them, before they gained sufficient room to parade on our Rampart. We should laugh in our sleeves, and put a new interpretation on that tempting affiche one sometimes sees stuck up in a dirty window in London: "Single Gentlemen taken in and *done for*!"

• 74. If, however, we assign to the first few Files that rush on, the cheering title of "Forlorn hope;" or, if we regard them as Skirmishers covering the formation of a Column, which may be vomited forth in the confusion, at any moment, we shall cease to feel so very secure of standing our ground. It will be admitted that anything like a Column throwing itself upon a Line actively engaged in skirmishing along its whole Front, would be more likely to force a particular point, and establish itself, than were the same numbers to remain in an open, loose order, endeavouring to fight themselves into Line, when mixed up with a spirited Enemy, resolutely contesting the ground with them. The same remark will answer the second query: for to common sense, it certainly does appear that a Column would be more readily and quickly formed under such circumstances than a Line. With regard to the substance of the third query, of whether a Column established within an Enemy's Work, is in a better form for holding its ground, and being in readiness to act; a general view of the circumstances, and the confined space where the Force would probably be assembled, &c., seem to favour the opinion that a Column would be in every way more suitable for either purpose. It would be more in hand,

could move with greater celerity, and could certainly be applied with more decisive effect.

75. If the Principle be admitted, there is no difficulty in carrying the Details into effect, and in a very simple manner too. Suppose the Storming Party of the Escalade to be such as we have under consideration, viz., a Line of 180 Files, composed of six Companies of 30 Files each. We all know the advantage of *Rallying Squares* under certain circumstances, when men are in extended order: it is suggested to carry out the same principle in a regular manner by the formation of "*Rallying Columns*," on the centre of certain distinct portions of the Line.

The Front on which this system of forming Rallying Columns on the centre could be applied, would be limited by circumstances, perhaps not in any case exceeding the Front of three Companies of 30 Files, or half the Force we have now, in hand, but it would equally apply to the smallest Body. The arrangement of this point would depend greatly on the distance that it was desirable to form the Column beyond where the Ladders were planted; for it must be borne in mind, that with an Enemy in Line, close in front, the outer Files, in converging to a central point, would have to move along a sort of, gauntlet running, *hypothénuse*, to get to their places; and as a Flank march in front of a posted Enemy is not a pleasant operation, it would not answer to have too much of it.

76. In going into the Details for securing this point, and combining it with an arrangement for carrying the Ladders, so that the Companies may be kept together in both the Operations, which is very essential, we shall not do much violence to the principles laid down in "*The*

Fig. 8.

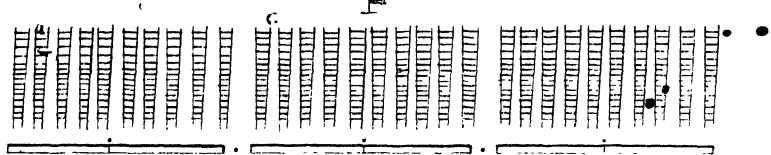


Fig. 9.

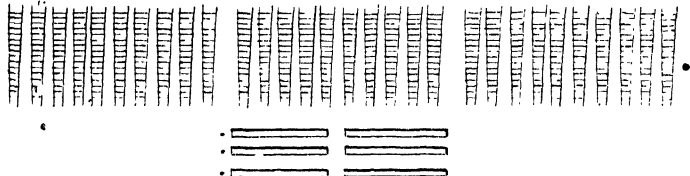


Fig. 10.

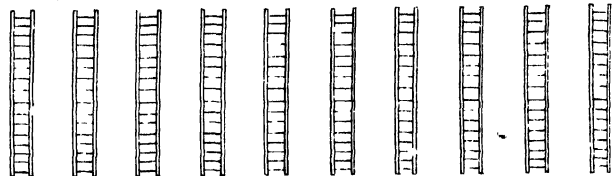


Fig. 11.

Fig. 12.

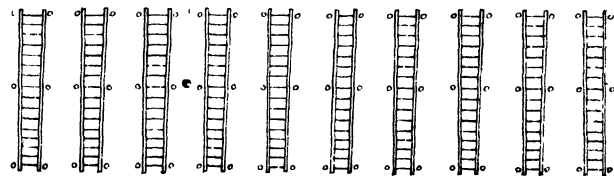


Fig. 13.



Book," which are on such a basis, that apply them as you will, the result will come right; We require a very little elbow room suited to the emergency, and that is all.

77. The object to be attained is already stated: we have three Companies in Line, and we wish to carry the Ladders forward, so that the Front Rank of the Centre Company shall be placed in a position to ascend the Ladders first, and afterwards to stand at the head of a Double Column of Subdivisions formed upon it,—we will say 20 yards in Front of where the Ladders are placed. The Ladders are supposed to be laid out all ready on the ground, in front of the Line (FIG. 8). The Cautions, and Words of Command, might be as follows:—

Form Quarter Distance Co-	} According to Regulation.
lumn, in rear of the two Centre	
Subdivisions. (See FIG. 9.)	

By Files extend from the Centre, and Cover the Ladders.

Outwards face—or Outwards Close—Quick March.

The corresponding Files of the three Subdivisions would Halt and Cover the Ladders in succession; the Ladders and Files having been previously numbered from to Flanks.

The Files would then be in the position shown in FIG. 10, and the Rear Rank men would merely have to step up into the same alignment as the Front Rank, instead of Covering them, (as shown in FIG. 11,) and then being moved forward and filed between the Ladders, (FIG. 12,) they would be ready to advance with them in Line; and by preserving the order

in which they then stood, or something like it, in ascending out of the Ditch, they would be in their places for reforming the Double Column again, in the situation required.

78. It may be said, this is all very fine and regular, but how is such order to be preserved under a heavy and destructive Fire? We answer,—the greater the probability of confusion, the greater is the necessity of taking every possible precaution to lessen the chance of it, and obviate its effects. It is not pretended that in the heat of action, men could exactly keep their places: the impetuosity and keenness of the many, and the *caution* of the few, would of itself prevent it; but every man would be in his *Right Place*, when at the bottom of the Ditch, for securing this formation; and they could not well be much out of it, in a compact Column of three Companies, formed within so limited a distance to their Front.

79. This explanatory digression being ended, we must revert to where it commenced, and suppose the two Lines of Ladders are laid out, and that the men disposed on the above system are in readiness to take them up. The most convenient way of carrying Ladders is on the shoulder, all the same as a coffin is transported, (FIG. 13); when, therefore, they were thus raised, the Line would be in readiness to advance, and in as close order as is practicable, which it may be observed *en passant*, is a point to be attended to.

The Firing Party would precede the Ladders, and act according to circumstances, the object being to keep down the Fire from the Parapets or Embrasures,—to prevent the Enemy showing himself, or making any attempt to throw the Ladders back, or in any way to arrogate to himself the

Fig. 16.

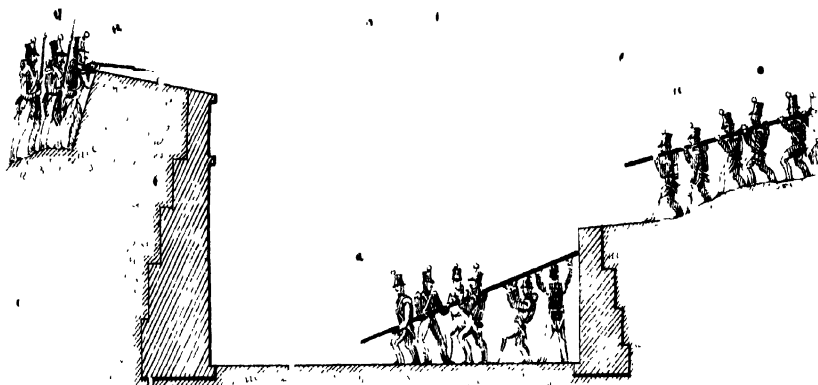
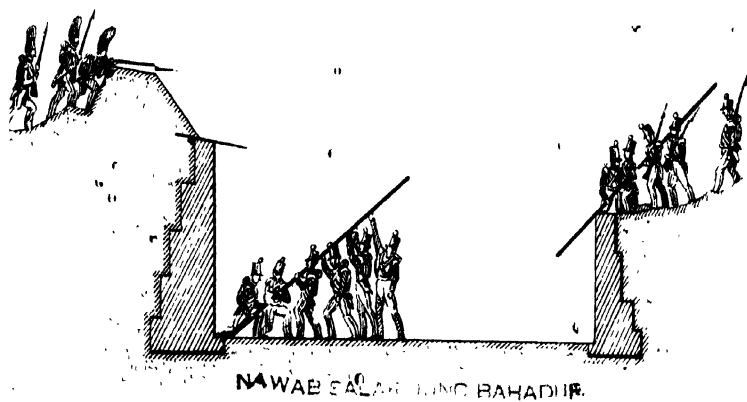


Fig. 17.



right of assuming the offensive, outside the Parapet: any such attempt should be regarded as a decided case of trespass, and should be dealt with accordingly.

The Leading Division, on arriving at the spot, would lower the Ladders into the Ditch, (FIG. 16,) and the men would immediately descend, and when they were all down, would instantly shift them over to the opposite side, planting the foot of each Ladder against the bottom of the Scarp, and then turning the top over (FIG. 17); the foot being afterwards dragged away from the Wall about one pace, to give it a little inclination; but the less it has the better, for the more upright, the stronger it will be; and it is also easier for the men to ascend, than when there is much slope. The moment the first Division of Ladders were out of the way, the second would be lowered into the place from which they had been removed, (FIG. 17,) and the Men carrying them would in like manner descend; but those Ladders would not be shifted across the Ditch, but left where they were first lowered, and thus a complete communication would be established, by which the remainder of the Storming Party, and the Support, could follow in close succession, on the principal before adverted to in No. 6. •

80. Numbers without mercy would thus be poured in; the outside Files still pressing in towards the centre, would consolidate into a Rallying Column, or useful Mass of some sort, in spite of every opposition; and if from the loose order in which the Leading Files became engaged, a momentary check was sustained on the top of the Parapet, it would only have the effect which Skirmishers ought to produce in Covering the formation in progress behind them

and when there was weight and mettle enough concentrated at any one point, the opposing Line might be expected to give way before the moving Mass.

81. If the Front assaulted were extensive, several such Columns being established within a Work at the proper distance for deployment; would be ready to be applied in any way that ever-varying circumstances might dictate, and might be successively detached on separate duties, whilst the same formation was still proceeding, with any additional Force that might follow them.

82. If the supply of Ladders were limited, and it were necessary to preserve this complete communication across the Ditch for the above purpose, it would be expedient to have a greater number of Ladders raised against the Scarp than were left on the counterscarp side, because Troops when unopposed would descend into the Ditch faster than those which were already there, could ascend out of it, to the Attack ; and thus the *supply* would be equivalent to the *demand*. The exact proportion that should reign between the two is not easily determined, and the readiest way of settling the point is to say the "biggest half" in Front, and leave it to common sense and circumstances to decide on the spot, what shall be the precise limits of them both. In this case the larger division would be in the first Line, and the lesser in the second Line, and the Troops for Supporting the Attack would be drawn up on a Front to correspond with the number of Ladders by which they were to descend.

83. With a still more scanty supply of Ladders, or with greater means of resistance to be overcome ; in fact where it would be very desirable to have the *whole* of the

disposable Ladders raised against the Scarp for making the
 • Attack, we must not be deterred from the attempt by
 apparent difficulties. Send them all on in one Line if it
must be so, carried by six men. Let another Division of
 men descend before they are shifted across the Ditch, and
 let the Support jump down upon bags of hay, as they did
 at Badajos! Throwing a Force into confusion, and letting
 men roll one over the other, will signify nothing in an
 Escalade, in comparison of the evil effects which result
 from breaking the ranks of a close Column on the eve
 of rushing forward to assault a Breach; *that* is to be
 avoided by every possible means. But with respect to an
 Escalade, there will always be delay at the foot of the
 Ladders; and if men get there at the time there is room
 for them to ascend, it is quite sufficient, and we must not,
 under the circumstances, expect them to come up in very
 regular order.

84. If we have still *less* than a *scanty supply*—never
 mind! Prince Hohenlohe is a fool to British Troops, when
 miracles are to be wrought, or impossible things are to be
 done! As a Specimen, let us take the Escalade and Capture
 of the French Works of Almaraz, by Lord Hill, in May 1812.
 It was an Enterprise as conspicuous for the wisdom and
 foresight of all the previous arrangements, as it was for the
 boldness of its conception, and the brilliant manner in
 • which it was executed. The following account of the
 operation, extracted from Jones's Sieges, cannot fail to be
 both instructive and interesting, and being most worthy of
 imitation, if ever a sword is drawn again, no apology is
 • needed for stepping a little out of the way, to insert it here,
 as another standard FACT.

“ *Description of the Works.* ”

The Works at that place had been constructed with great expense and labour, by the French, under the view of securing their communication across the Tagus, on both banks. On the right of the River they consisted of a Redoubt for 400 men, on a very respectable Profile, called Fort Ragusa, with a masonry Tower in the interior, 25 feet high, having two rows of Loop-holes for Musketry.

“ This Work being situated so far from the bank of the River, as to admit of the possibility of an attempt being made in the night to destroy the Bridge in its rear, a Flèche had been constructed on the River bank which also served to flank Fort Ragusa.

“ On the Left Bank, a well-flanked Tête-de-Pont, revetted with masonry on a good Profile, secured the bridge ; and as the ground rose immediately from the River to some Heights which commanded the Tête-de-Pont at a short distance, a Redoubt for 450 men, had been constructed on their summit. This Work, called Fort Napoleon, (FIG. 3,) had a Retrenchment across its rear, supported by a Loop-holed Tower in its centre, 25 feet in height.

“ *Reconnoissance.* ”

“ 1st May.—This morning, Lieutenant Wright of the Engineers, was sent out to gain all the information possible respecting the Works, and the ground around them ; whilst the Artillery Officers should renew their search for an opening to get their guns forward. The result of these examinations taking away all hope of forcing the Pass of Miravete, or of finding any other passage over the ridge practicable for Artillery, the Enterprise must have been

abandoned, without some extraordinary decision on the part of its Commander. Happily that was not wanting, as will be seen below.

Movements of the Escalade.

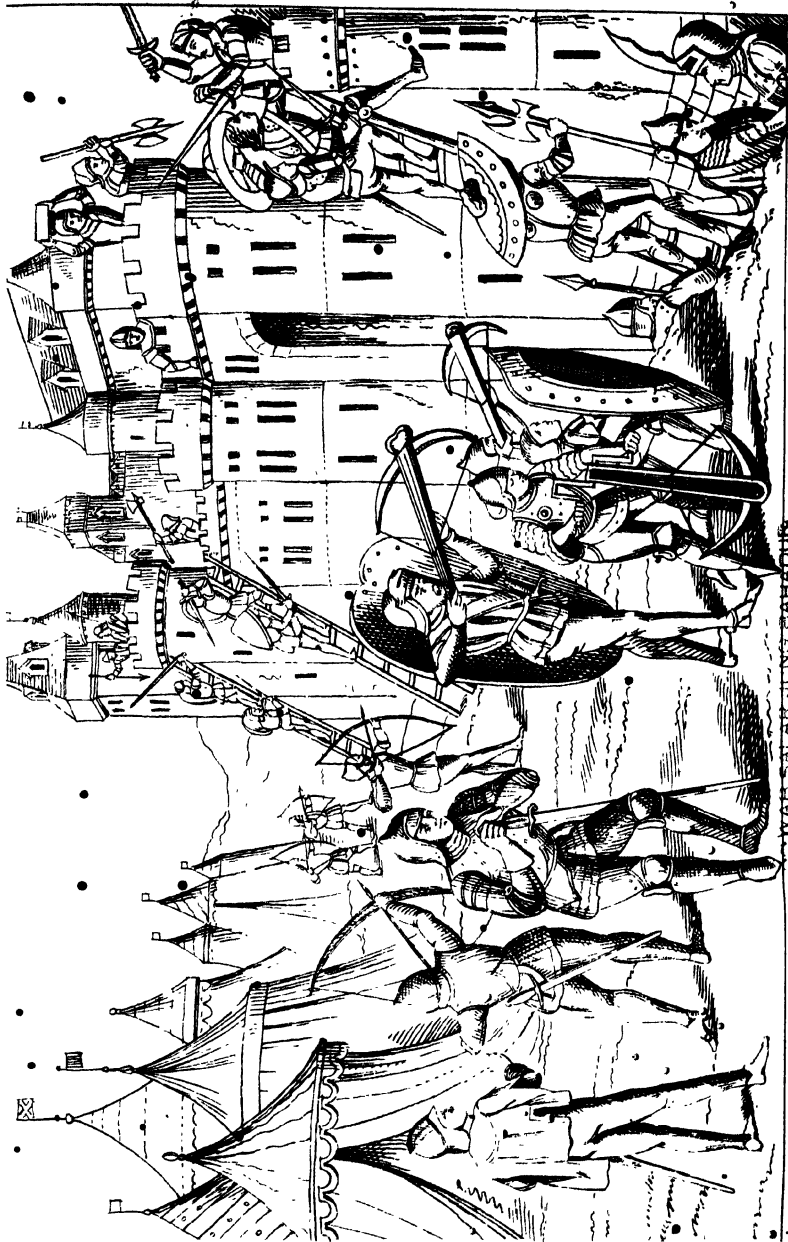
“ At 9 P. M. the Troops began to descend the Sierra and the Head of the Column arrived in the vicinity of Fort Napoleon at daybreak; but from the difficulties of the Road, although the distance from La Cueva did not exceed five or six miles, a considerable period elapsed before the Rear closed up. Luckily, however, some intervening hills admitted of the Head of the Column being kept concealed from the Garrison at about 800 yards distant; and the Troops remained undiscovered till completely formed. Soon after daylight, as had been concerted, under the expectation that it would be almost a simultaneous effort with the Escalade of the Forts, General Choune made a false Attack upon Miravete, and the 24-pound howitzers commenced a distant fire of round shot, and spherical case against the Castle. This Firing naturally attracted the attention of the Garrison of Fort Napoleon, and put them on the alert. They mounted on the Parapet, and watched with earnest curiosity the Defensive efforts of their comrades in Miravete, but did not seem to have the slightest suspicion of the blow about to be struck against themselves.

“ About 8 A. M. the rear of the descending Column having closed up, the 50th Regiment, and one wing of the 71st, moved forward to the Assault of Fort Napoleon, regardless of a brisk Fire that opened on them, as soon as discovered. They descended into the Ditch of the outer

Work, at three points, and immediately reared the Ladders; but from the great breadth of the Berm, the Ladders could not be made to rest against the parapet. Each Party, however, without being dismayed or confused, immediately ascended to the Berm, and took footing upon it; then drew up the Ladders, fixed them on the Berm as a second operation, and almost simultaneously mounted the Parapet, against a vigorous resistance.

"As soon as 15 or 20 Men were on the top of the parapet, the Defenders of the exterior Line gave way, and made for the communication to the Retrenchment. This was by a narrow doorway, through a small Building covered by the parapet of the outer line, from which a narrow Bridge led to the inner defence, and seemed to render it secure; but the Assailants followed the Garrison so quickly, that they entered the doorway together, and a sharp but momentary contest took place, in which the French Commandant was wounded and made prisoner. Overpowering numbers of the troops having now escaladed the Fort, the Garrison abandoned the Retrenchment and the Tower, and fled in the greatest confusion to the Tête-de-pont, the Assailants pursuing them so closely, that both parties pushed together into that Work, when all resistance ceased.*

* After all, "there is nothing new under the sun." (See PLATE 4.) Look at y.^e men of Ghen assaulting y.^e Fortress of Dendremonde. There we see an apology for a Firing Party, attitudinizing with their Bows and Arrows. Here we notice a Lodgment for protection, only that it is *a moveable one*. There are half a dozen Ladders, and as many Men escalading a great Fortress. There are the Defenders ("striking with a deal of meaning,") and the Assailants, like honest men, paying them in kind. Brave hearts on both sides; and the same Principles in play centuries ago, which are now applied with improved details.



See Page 88

The Men of Ghent attacking the Fortress of Breda.

WAS SALAH JUNG SARADUR

Part II.

"The flying Enemy crowded on the Bridge to escape across the River, but those first over cut away three of the Boats, in consequence of which a number of Men and Officers leaped into the River and were drowned; and the remainder, above 250, were made Prisoners.

"The Garrison of Fort Ragusa, seeing what had happened, opened a fire of artillery against Fort Napoleon, but Lieutenant Love most promptly turned the guns of Napoleon against Ragusa, and after he had fired a few rounds, the French Garrison evacuated the Fort, made a hasty formation at the foot of the Glacis, and then marched off towards Naval Moral.

"The reduction of these formidable Works was thus effected by means of the Musket and Bayonet alone, and with the loss of only two officers and 31 Men killed, and 13 Officers and 131 Men wounded."

This is a history of what has been done with a scanty supply of Ladders; when, therefore, we have "impossible things" of this sort to accomplish, let us recollect what Hill did at Almaraz, Picton and Kempt at the Castle of Badajos, Leith and Walker at the Bastion St. Vincente, and our hearts will swell with glorious emulation. The number of Ladders at the command of any of them was next to nothing; we have, therefore, only to follow the track that they have traced, and profit by the moral effect which the remembrance of such daring Deeds should inspire in the heart of a British Soldier, and we may then hope, not only to do our Duty, but to have our efforts crowned with the same Success.

