

they have made another battery to dismount them a second time, they must be brought back to the first place or some other, where they may be out of danger of being dismounted. This way of shifting the guns from place to place, whenever they are in danger of being dismounted, will give the enemy much trouble, and make them lose much time, which is all that is wanted or can be expected.

As mortars may be placed in any work without the enemy's knowledge, they may be used to very good purpose to destroy their batteries, especially those for battering in breach, or to dismount the guns in the flanks; for the distance being so very short, the bombardier must be very unskilful not to throw almost every shell upon them.

The best method of firing for the Batteries of the Besieged is not in salvo's, or all at a time, for the Besiegers place centries in the Trenches to look out and observe which way the guns are pointed, and give notice accordingly to those who are in danger, that they may cover themselves whilst the rest continue to work; but as this can only be done when there is an interval between the firings, whereas if the guns continue firing, though by single pieces only, yet so as to leave no intermission, and shells are thrown at the same time; the Besiegers centries will not so readily venture to look out, and make their Observations which way the guns are pointed, by which means the workmen will work in fear.

Of SALLIES.

SALLIES, when made with due precaution and judgment, are one of the principal means to lengthen a Siege; whereas, when they are made
without

without sufficient care, or on unseasonable occasions, they rather advance than retard the taking the Place; for which reason the utmost precaution should be used in the execution, as well as great judgment in the choice of time and opportunities.

Sallies are proper when a Garrison is numerous, or the Army of the Besiegers is weak; for in such cases the keeping off the enemy from the Place as long as possible, may either dispirit them, or retard the Siege to such a degree, that they may be obliged to raise it, if the season is far advanced, and the weather grows bad.

Sallies are also proper to be made when the Fortification is bad, or the garrison ill-provided with ammunition and provision; it is best, in those cases, to keep the enemy at a distance as long as possible, to make the better terms with them, lest coming too near the Place, and discovering either the wants of the garrison, or the defect of the Fortification, they may have a chance to be made prisoners of war.

On the contrary, when a Place is well fortified and provided with every thing, Sallies are not so proper to be made, as the Garrison may defend themselves with greater advantage behind the works than in the open field; and what precaution soever may be taken to success, yet some men must be lost, and the Governor may be deprived of a sufficient number to sustain an assault, or to defend the works so well as they ought to be.

Sallies are dangerous when the enemy is at too great a distance, they may cut them off from the Town with their horse; but when their Approaches are advanced between the second and third Parallels, then is the time for the garrison to sally without

out much danger, the covert-way being at hand, from whence they are protected; they may even fally whilst the second Parallel is making, though with great caution not to be intercepted by the enemy.

But the most favourable opportunity for fallying is after the third Parallel is begun, and before it is finished; at that time the enemy can have but a small number of men at hand to sustain the workmen, who may easily be driven back, and their work destroy'd.

It is to be observed in general, that the most favourable time for fallying is when the works, which are to contain the guard of the Trenches, are imperfect, that is, before the second or third Parallels are finished, or the Places of arms between these Parallels are in a condition of receiving a sufficient number of troops to protect the workmen at the head of the Trenches. There are few actions in the whole Art of war, that require greater diligence, courage, and conduct than this; by diligence and courage the enemy are surprized and put in disorder or confusion, and oft obliged to abandon their works, which when once destroyed they can hardly ever regain, and re-establish; and by good conduct the enemy's own works may be turned against them; and when all the mischief that can be done is effected, a good and safe retreat is made; in short, good conduct secures from all the dangers which attends a contrary one.

Sallies may be made, either with a small or great number of men, that is, with ten or twelve men only, or with six, eight, or ten thousand; the intent of great Sallies should be to destroy a considerable part of the enemy's works, and thereby oblige

oblige them to repeat their labour to re-establish them, to nail up their guns; to retake some post which had been lost; and lastly, to obstruct and retard the enemy's works so much as possible.

As to small Sallies, they serve to interrupt frequently the workmen at the head of the Trenches, who are ever ready to run away upon the least alarm, desiring no better pretence to leave their work; and as this is usually done in the dark, most of them will get away if they can, and the rest require some time to be brought back: if the enemy, after several alarms grow secure, and take no notice of them, they should be followed by a more considerable one, well supported, which coming unexpected, will not fail having a good effect.

The best time for large Sallies is about two in the morning, as the troops being then much fatigued and sleepy, are less capable of making any considerable resistance, especially against a vigorous and well-conducted Sally; and if it should happen to rain so hard, as the guard of the Trenches should not be able to make use of their fire-arms, the conjuncture would be too favourable to be neglected; in short, no opportunity should escape a sagacious Governor to surprize the enemy, Sallies seldom or ever succeed in any other case.

Mr. *Vauban* would have the following Order observed in large Sallies; there should be a detachment of 90 men drawn up, so as to have 30 men in front and three deep; to these are added a fourth rank of 30 grenadiers; the three first ranks should be armed with breast-plates, and for weapons, a sword and pistol at their sides, and a partizan or long iron-fork with a hook in their hands; this detachment should be followed by another of

180 men, thirty in front and six deep; the first rank of which to be armed as the former, and the rest as usual; after these 200 workmen are to follow with the proper tools to demolish the enemy's works, some with combustibles and fire to burn what can no otherways be destroy'd, and some with long nails and hammers to nail up the cannon if an opportunity offers.

There should be another detachment of 3 or 400 men ordered to support the first in case of any attac from the Besiegers, and to secure their retreat; these last are to follow the former in a slow pace as far as the head of the Trenches, where they halt, and stand ready to assist the others upon the first occasion.

So soon as the guard of the Trenches are overthrown, the workmen fall to demolishing the works as fast as possible, and if these troops can penetrate so far as the enemy's batteries, they nail up their cannon: when they have done all the mischief that the time will permit, they retreat in good order; and if the enemy should pursue them to the works of the place; then so soon as the Sally is got within the covert-way, all the cannon from the place should fire briskly upon them, whilst the troops in the covert-way and adjacent out-works, pour in their small shot amongst them, this will soon oblige them to retire, with considerable loss.

In all actions performed by night, the troops should have a mark to know one another, a white paper or handkerchief in their hats.

The troops designed for a Sally are drawn up in the covert-way, or in the ditch if it is dry, or else in some of the out-works, from whence they may be able to march out in great order.

If

If there is more than one attac, as there generally are, then Sallies may be made upon each of them at the same time, that the enemy finding themselves suddenly attacked in several places at once, added to the terror heightened by the darkness of night, may throw their troops into confusion, which the assailants observing, are to make their best advantage of: It would not be improper if some small parties were sent out several different ways, making a great noise to draw all the attention of the troops toward them, and then the great Sallies to fall on suddenly some other way, which seldom fails of having a good effect.

When the Besiegers works are yet far off, two detachments of horse are ordered, besides the foot, on the right and left, to support the Sallies, and prevent the enemy's horse from cutting off their retreat; but after the third parallel is finished, the sallies are then made with foot only, and should be strong and frequent, provided the garrison is numerous enough to dispute every part of the ground.

So soon as the troops are retired into the covert-way, fire-balls should be thrown into the Approaches, to discover the workmen, as they are then busy in repairing the works, which were destroyed, and are, for the most part, uncovered, the fire of the place, well served, at that time, may do them great mischief, and retard the Siege considerably.

The small Sallies, whose object are to disturb the workmen frequently, without being in a condition to do them much hurt, are made by parties of ten, fifteen, or twenty stout men only, as said before, who advance in great silence to the head of the
Trenches,

Trenches, jump suddenly into them, making a great noise, and throwing some hand grenades, this done they retire, making the best of their way, for fear their small number should be discovered.

Of the LINE *of* COUNTER-APPROACH.

THE Line of *Counter-approach* is a kind of Trench, of 12 or 15 feet wide, which the Besieged make from the covert-way, such PL. XXI. as a, a, at the right and left of the attacks, to enfilade the Trenches of the Besiegers.

This Line has been neglected of late, not so much on account of its lengthening the Siege, as from the indolence and inactivity of the Governors, who think it sufficient to secure their reputation if they keep a brisk firing with their great and small arms, and make a few sallies; and so soon as the covert-way is taken capitulate, to have the honours of war allowed them.

As this work is intended for those brave officers who are desirous to use their utmost endeavours to defend the Place, for their sake I shall explain the use of these kind of Lines.

They are to be made in such a manner, as to be enfiladed by some of the works belonging to the Town, and produced so far as to enfilade some part of the Trenches.

They may begin either at the salient angles of the covert-way, before the adjacent ravelins to the Attac, or from the place of arms, as represented here, next to the ravelins; small guns should be placed next to them, to defend their approach by the enemy, and large ones upon the works that see in them to enfilade them, in case the enemy should attempt