DEFENSIVE EXERCISES;

COMPRISING

WRESTLING,

&c.
DEFENSIVE EXERCISES;

COMPRISING

WRESTLING,

AS IN CUMBERLAND, WESTMORELAND, CORNWALL, AND DEVONSHIRE;

BOXING,

BOTH IN THE USUAL MODE AND IN A SIMPLER ONE;

DEFENCE AGAINST BRUTE FORCE, BY VARIOUS MEANS;

FENCING AND BROAD SWORD, WITH SIMPLER METHODS; THE GUN, AND ITS EXERCISE;

THE RIFLE, AND ITS EXERCISE;

&c. &c. &c.

WITH ONE HUNDRED ILLUSTRATIONS.

BY DONALD WALKER.

LONDON:

THOMAS HURST, 5, ST. PAUL'S CHURCH-YARD;

MACHIN AND CO. DUBLIN;

SOLD ALSO, BY WILLIAM F. ORR, AND CO. PATERNOSTER ROW;

AND J. THOMAS, FINCH LANE, CORNHILL.

1840.
LONDON

Palmer and Clayton, Printers,
9, Crane-court, Fleet-street.
ADVERTISEMENT.

I am not a less ardent lover of peace than those who inculcate non-resistance. I only differ from them as to the means of ensuring peace.

All we have yet seen of men, proves that they ever seek to aggrandize themselves at the expense of their neighbours. The individuals of a society are indeed tolerably obedient to the law; but, even in it, when power is given to a particular class, it always robs its neighbours. Governments also find, in the fact that the people have submitted to spoliation, the most conclusive argument that they ought still to submit to it. And, as to contiguous states, the feebleness of one constitutes its neighbour's right of invasion.

The power of resistance puts an end to spoliation. No man robs another who is equally strong, and possesses both arms and art to use them. Still less will a small class think of robbing a vastly greater one thus prepared: by the former, therefore, are arms entrusted only to hirelings. As
little will an army, or limited number of men of one country, attack the millions of another, all prepared for defence: governments know this, but willingly hazard national destruction rather than resign the power of robbing while they may.

Universal skill in the arts of defence, and the protection of a country entrusted to all its males from the age of eighteen to nineteen, are, therefore, in aid of knowledge, the surest means of freedom, and perpetual peace.
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DEFENSIVE EXERCISES.

PRELIMINARY REMARKS ON MEASURES OF FORCE.

The instruments to measure force, are termed Dynamometers.

The Dynamometer of Repulsive Force is represented by figures 1, 2, 3, 4.

Fig. 1, exhibits its external appearance, with a scale marking the weight moved; fig. 2, the interior spiral spring; fig. 3, the base or lower half, constructed of wood; and fig. 4, the handle used in pressing the instrument against the breast. A well-stuffed cushion, on the upper part of fig. 1, is intended to preserve the fist from injury in striking the instrument.
The dynamometer of Compressive Force is represented by figures 5, 6, 7, 8, 9.

Fig. 5, represents its front; fig. 6, a perspective view of the rack used to measure the strength of the loins; fig. 7, another view of the same; fig. 8, the hook necessary to bring the dynamometer towards the body; and fig. 9, another view of the same.

Dynamometers of compressive and repulsive force should be kept in all gymnasia, for the purpose of testing the strength of the pupils.

In ascertaining the strength of the hands, the dynamometer of compressive power is grasped by them, and kept at first on a level with the hips, the hands being placed nearly in the middle of the instrument, and the fingers closed tightly, though not forcibly. From this position, the arm extended is raised as high as possible, and again lowered to the level of the shoulders, as shewn in fig. 10, the fingers being then forcibly employed so as to drive the index round the greater part of the circle, which exhibits the power of each effort by pounds marked upon it.

This essay should be succeeded by trying the force of the loins by the same instrument, with a caution to the pupil not to overstrain himself; for the object in view is to teach him the
proper use of his powers, and the means of hoarding and restraining them when their full exercise might be injurious. He must be taught, that however useful strength may be, it must always be regarded as of secondary importance in gymnastic exercises.

The strength of the loins can be tested in two ways, either by supporting the body and loins against the wall or a strong door, or without any support whatever.

Fig. 11, exhibits a trial of the strength of the loins, in
the middle of a room without any support to the back. Between the legs is placed the rack, the feet being firmly placed on the flat branches of the stand, close to the support. The dynamometer is fastened by one of the extremities of the great axis to one of the notches, and the hook applied to the other extremity of the dynamometer, to raise or depress the instrument more or less, till it is so placed as to be most convenient for the effort and the raising of the arms, in order to produce the greatest possible effect.

The master who presides over this operation, will watch the muscles and veins of the pupil's neck, which must be uncovered; and when he perceives it to be too much swollen, or the face too red, he will order the pupil to cease: he then enquires the weight as shewn by the instrument, and enters it in his book.

The next step is to find the tractive power. This is done by making use of the dynamometer, as shewn in fig. 12. The pupil being seated on the ground, hooks the instrument to the beam, places his two feet against it, stretches his legs out, and draws the instrument towards him by means of the handle. This exercise is very similar to the preceding; but the position is more convenient: the legs, by pushing horizontally against the beam, tend to increase the pressure, and generally a greater weight is marked. The teacher should observe the effect pro-
duced by this effort upon the neck and face, so as to stop the pupil at the proper time, as in the preceding exercise.

This should be succeeded by the fourth trial, or vertical blow with the right arm, exercised on the dynamometer of repulsive power. Fig. 13, represents the action of striking against the upper cushion of the instrument, with the fist firmly closed, and care taken to deliver the blow upon the middle or axis of the dynamometer; for the blow would be ineffective unless the spring received the full power of the arm, inasmuch as it would not yield sufficiently, and the result would be trifling. If a false blow has been given, it must be again tried, and the most successful noted.—The vertical impulsive power of the left arm is to be noted in the same way.

Horizontal impulsion with both hands is practised by placing the dynamometer or repelling power in advance, as shewn in fig. 14. The instrument is pushed with the two fists, or the hands locked together, and the effect produced is entered as before.
Horizontal impulsion with the right fist is practised as represented in fig. 15, and the weight moved is noted. Horizontal impulsion with the left is practised in the same way.
The power of pressure against the chest is tested by placing the same dynamometer between the chest and the hands in the position shewn in fig. 16. This pressure is most conveniently practised by means of the double handle, but can be exercised by the hands if the handle be wanting. When children are young, and their arms not sufficiently long to go round the dynamometer and cross hands, they may be instructed to seize the ends of a handkerchief passed over the extremity, and thus draw the moveable part of the instrument towards them.
WRESTLING IN GENERAL.

The art of wrestling was highly esteemed by the ancients, and constituted an important portion of the Olympic Games. In the ages of chivalry, also, to wrestle was accounted one of the accomplishments of a hero.

Of the principles of wrestling different views have been taken.—In England, its rules have been rather restricted.—On the Continent have been admitted, not only what have here been deemed more or less unfair, but what is positively so, as well as what is unseemly and disgusting.

Mr. Clias has, it seems, introduced some of these practices into our public schools; and the following are the observations of one of their ablest opponents, a clever writer in 'Blackwood's Magazine.'

"We have been too long accustomed to the simple, straightforward, manly, close-hugging, back-hold 'worstle' of the North of England, to enter into the Captain's cantrips; and we devoutly wish that we could see himself, or his best scholar, try a fall with any one of the fifty of the Cumberland and Westmoreland Society in London."—"In order to prepare his scholars for wrestling, the most complicated of gymnastics, both with respect to the diversity of its movements, and the different situations in which wrestlers are often placed, Captain Clias explains a course of preparatory exercises, which serves as an introduction. They have a somewhat quackish character, and a few of them seem to us better fitted to make a mountebank than a wrestler."—"The essential difference between Captain Clias's system of wrestling and that of the
North of England, is this, that in his, the wrestlers catch hold in any way they choose; whereas, in the North, each party has an equal and similar hold before the struggle begins. Who can doubt which is the better system? The Captain's is radically savage and barbarous, and more congenial with the habits and temper of African negroes than European whites. The other is fair, just, and civilized. To us the sight of one man catching hold of another round the waist, and, consequently, throwing him at his pleasure, without the possibility of his antagonist making any effectual resistance, would be sickening indeed. Thus, what true cock of the North can read, without disgust, Exercise XIII. entitled, 'Of the First Fall?' The following exhibition must resemble dog-fighting more than man-wrestling:—'In this exercise, the two wrestlers are lying on the ground, one on his right side, and the other on his left, two feet apart, and opposite to each other,' &c.'

While I concur in these views as to all that, independent of mere national habits, is really unfair, and as to all that is in any way disgusting or even unseemly, I think the rules of English wrestling might be advantageously extended. Wrestling ought, perhaps, to be considered not merely as a pastime, which may be subjected at pleasure to the narrowest rules, but as a means of defence, in which all that can properly be called wrestling, and is capable of conferring an advantage, is admissible, because, when used in defence, such advantages would be taken.

If here it be objected, that what is positively unfair or unseemly might be equally advantageous, and should, therefore, be taught,—we answer, no; because that which is here unfair, as the giving a blow, belongs to, and is taught by another art, and ought not be confounded with this one, and because that which is unseemly need never be taught.

The first care of the wrestler should be quickly to discover the weakness of his adversary; always remembering, that weight and strength are of greatly diminished value, when experience and skill are defective.
Wrestling should always take place upon a flat surface, free from stones, and covered with turf.

The men of Cumberland and Westmoreland, and those of Devonshire and Cornwall, are famed for their skill in this art. We shall commence with the

CUMBERLAND AND WESTMORELAND STYLE.

THE DRESS.

The shoes are taken off; the trousers are tucked up to the knees, to prevent the adversary's feet getting entangled with them; and both wrestlers strip to the shirt.

THE HOLD.

The feet should not be in a direct line before the adversary; but should be placed, as it were, on the two opposite corners of a parallelogram, double the length that it is wide; for it is necessary that the position should be firm against pulling or pushing, backward, forward, or to either side. The left foot should in general be nearly two feet before the right.—Fig. 17.
The legs should be almost straight, and the weight should be entirely on the right one.

The back should be rather convex.

The shoulders should be squared; and the breasts of both should be so laid against each other, that their collar bones may be in the same line. Thus, each has an equal use of his arms, which would not be the case if the breast of one were below that of the other. For if one shrink his breast under the other’s, and take hold in that position, he has a decided advantage, in so far as he deprives his adversary of the use of his right arm, in bending it down by the pressure of his left arm.

Each wrestler has thus his head over his adversary’s right shoulder.

In the hold, each party has the right arm inside his adversary’s left, and the left arm outside his adversary’s right.

The best way of clasping the hands round the back of the antagonist, is, as it were, to make of the two hands a couple of hooks, by placing all the fingers of one hand, held together and bent at the first and second joints, into the other hand held in the same way. In this manner, the back of the left hand should be brought to press on the antagonist’s right loin, just between the hip and the small ribs; for the back of the hand, sinking in between these, makes the hold very firm.

This method of clasping the hands gives more play to the wrists, than the method of laying hold of one wrist with the other hand; or than clasping the hands so, that between every two fingers of one hand there is a finger of the other.

The most scientific wrestlers generally prefer slack holds, that is, to take hold without pressing more upon the antagonist than is necessary to prevent his getting more than a fair hold.

**IMPROVEMENT OF THE HOLD.**

By improving the hold, is meant getting the breast more under the adversary, and the arms tighter and closer about his loins.
The moment the umpire has given the word to begin, each is at liberty to improve his hold in the best manner he can, without altering the grasp of his hands.

It is then quite fair to shrink under the breast, and pinion the right arm of the adversary by the pressure of your left close to his elbow. If this can be done, it is a very great advantage.—Fig. 18.

FALLS IN GENERAL.

In order to constitute a fair fall:—

1. The man who throws must have held his hands or fingers clasped in exactly the same manner, and without letting go, from the beginning of the wrestle to the end of the fall.

2. He must either fall on his adversary, or not at all.

3. He will be considered as falling on the adversary, if he fall with only one leg across him.

PARTicular FALLS AND THEIR STOPS.

As the different falls in wrestling are generally quite distinct and unconnected with each other, there is consequently no particular order in which to describe them.
THE HYPE.

The hipe is one of the most difficult things to execute well, on account of the variety of movements requiring to be performed at the same time.

I may describe the hipe as executed with the left leg, which is mostly the case.—Fig. 19.

Suddenly lift the adversary off the ground, and swing him and yourself round to the right; at the same instant striking the inside of his right thigh with your left knee, and pitching him with your hip. Thus, his upper parts swinging round to the right, and his legs being kept off the ground by the action of your left knee, he will be thrown out of balance, and must therefore, fall. You will fall upon him.

To apply the above description to hipeing with the right leg, read throughout right instead of left.

To stop the hipe,—when the adversary attempts to lift you up, in order to swing you round, you must endeavour to keep yourself to the ground by shrinking your breast under him; and, if he strike at you with his left leg, you must meet it with your right. If he succeed in lifting you, you will be thrown; but if you succeed in shrinking your breast under him, your
hold will be thus so much improved, that you will have by far the best chance.

It is sometimes possible to stop the hipe by clapping the knees instantly together; thus preventing the adversary getting his leg between them.

Be careful when you attack the adversary, in whatever way it may be, to keep your right arm well up; for otherwise, if you do not succeed in throwing him, he will so much improve his hold that your chance will be lost.

THE BACK HEEL.

The back heel, sometimes called "catching the heel," is effected by throwing one of the heels behind the adversary’s heel, with such strength and quickness as to force his foot forward; while, at the same time, the whole weight of the body is thrown forward upon him, so as to force him backward. He thus falls on his back, with the antagonist upon him.—Fig. 20.

It sometimes happens, though you cannot at once throw the adversary with the back heel, that, by keeping the heel behind him, and pressing forward, you will be able to throw him by gradually getting him out of balance. It is then called "hankering the heel."
THE CROSS-BUTTOCK.

There is no way of stopping this attack, when made with spirit, but slackening the hold, planting the feet firmly upon the ground, and keeping the weight forward. But one very superior in quickness to his adversary, may find time to hipe the leg put forward to back-heel him.

THE BUTTOCK AND CROSS-BUTTOCK.

As in both these movements it is necessary to twist the body sideways so as to get one of the hips under the antagonist, they are easier performed with slack holds than with close ones.—They may be performed with either side, but the left is most common.

To take the buttock with the left hip, twist your left side round, so as to get your left hip under your adversary's belly, and pull strongly with your arms, so as to keep him on your buttock. Thus, as you twist yourself suddenly round to the right, he will be hoisted off the ground; and, as both of you keep turning and falling at the same time, he will fall under you.

In the cross-buttock, the side is twisted in; but it is so twisted round, that the back is almost turned to the adversary, and the leg of the same side (for instance the left) is placed entirely across his (left) leg.—The result is shewn in fig. 21.
These movements, when well performed, are very difficult to stop, because in them you are at once lifted off the ground and upon the adversary's back; but they may be stopped by instantly taking the lock from behind, at the same time crouching and drawing the head from under his arms.—Fig. 22.

THE LOCK.

The lock may be taken with either leg. I may may describe it as performed with the left leg.

Pass your left leg between those of the adversary, and twist it round his right leg by passing it backward, outward and forward, so that the toe comes as much as possible to the front of his shin, thus actually locking these legs.—Fig. 23.

Be careful when you take the lock not to bend too much forward, but to hold yourself back; for if you once lean forward, the adversary will try to prevent you rising again, and, perhaps, even throw you forward.

Having obtained this position, in which you will be standing almost by the side of your adversary, you may endeavour to throw him backward, by turning yourself forcibly to the left.
If, on the contrary, the adversary take the lock upon you, you must endeavour to prevent him throwing you on your back, by keeping your weight forward, taking care, however, that you are not thrown in that direction; for, in this situation, both parties have the power of throwing forward.

THE BLOW WITH THE KNEE ON THE OUTSIDE OF THE ADVERSARY'S KNEE.

If after taking the hipe with the left leg, you find your man will not come down, you may strike the outside of his left knee with your right knee, and keep turning to the right all the while. The same may be done on the other side.—Fig. 23.

The blow with the knee is very useful in many other cases, and is also an effective movement in itself when executed with force and quickness.

IN AND OUT.

The movement termed in and out, is performed by striking the opposite leg of the opponent in such a manner that the knee is outside his knee, and the foot inside his ankle; thus the shins cross.—Fig. 24.

It is very useful as an auxiliary to the other attacks.
THE CHIP.

The chip is performed by striking the hollow of the foot against the outside of the antagonist's ankle, at the same time that you swing him round to the same side as the leg you strike.

THE STROKE WITH ONE LEG AND THEN WITH THE OTHER.

This, it is very difficult to execute well; but, when well done, it is one of the prettiest movements in wrestling.

It consists of two actions. The first of these is the blow with the knee, the chip, the in and out, or some such movement. The second is a blow across the other shin with the leg.

Suppose you have performed any of the beforementioned movements with the right leg or foot, you must immediately place it on the ground, strike across the antagonist's right shin with your left leg, and swing him round to the right.

The same may be done on the other side.
HAMMING

Differs from "catching the heel," by the attack being made behind the knee of the defendant, instead of behind his ankle; but both of these are opposed in the same way.

Though it may not be possible to take the hipe as a defence against this, yet it may be possible to overthrow the adversary to the same side as the leg he puts forth to ham with.

GRANDY-STEPPING

Consists in getting one of the legs behind both of the adversary's.

RULES OF WRESTLING.

The following are the rules as given by Mr. Litt. They are adopted here, both because they are extremely judicious, and because uniformity on this point is very desirable.

Rule 1st.—The umpire, writer and crier, appointed by a majority of those who give the prize, or by the person to whom it is entrusted, having taken their stations within the ring, every wrestler shall come forward to the writer, enter his own name, and immediately retire to some allotted station, where he will be expected to be found when called upon.

The wrestlers are generally permitted to lie down inside the ring; which many of them are anxious to do, that they may witness the sport, and notice the methods of those with whom they may have to contend.

Rule 2nd.—All the names being entered, the writer shall mention the first and the last on the list to the crier, carefully placing at the same time the figure 1 before the names, to denote that they are the last called; and to instruct him to find, without danger of a mistake, the two next in turn. The crier shall go to that part of the ring allotted to the wrestlers, and repeat the said names loudly and distinctly. The men shall immediately answer, and come forward; which, if they shall neglect to do in such time as the umpire shall deem rea-
sonable, the defaulter shall lose the fall. On their meeting, leaving them to the umpire, the crier, furnished with the names next in turn, shall call upon the owners of them to get ready, while those preceding them get hold and wrestle. On the termination of every fall, the umpire shall give in to the writer the names of the winner and loser, which he shall write down opposite to each other, placing the figure 2 before the winner’s name, which will always be the first written. The writer taking the names next to those marked, marking them in a similar manner, and writing the names given in by the umpire, shall proceed till the whole are called. If there prove to be an odd name in the middle of the list, it shall be called to the first winner; but if the odd man prove the conqueror, his name, though of course written opposite to the man’s he has thrown, shall retain the figure 1 to it, which will then become indicative of the falls he has won. The writer thus marking and calling the first and last winning names together in every round, which he must take care to distinguish; and in like manner, still writing the names of those who contend opposite to each other: it will appear that the odd man has wrestled one fall fewer than those in the same list, as every other name will be marked with the figure 2; and if he win the next fall, his name advancing one every fall, will have the 2 prefixed to it, while the others on that list have 3. Thus his name being at the head of the list, he will meet the odd man in the previous round; if he win, he will still remain one behind upon the next list; and if he lose, his conqueror exchanges situations with him. By this method, when few are left, the umpire will have it in his power to place them on an equal footing. Thus, when three are left, if the first has thrown only three men, and the other two have thrown four each, they may toss, draw cuts, or ticket, which is to wrestle him first; but if all three have wrestled equally, they may in like manner decide which two shall wrestle first.

Thus, while men who do not wish to come together, may prevent it by entering their names immediately following each
other at any time but in the exact centre; they can have have no possible guess who will be their opponent. For as the low and high numbers are called together in the first round till they meet in the centre; the centre names are, consequently, after that round, thrown to the last, and will, in the second round, meet a high or a low number indiscriminately, which will cause them to be scattered in the head of the list in the third round. Thus, supposing forty enter at first, the numbers 1 and 40 are called together, and so on, till 20 and 21 meet in the centre; then it is quite uncertain, whether the centre victor, 19 or 22, will meet the conquering number of 2 and 39, one of which must be the second victor in that round; and so on progressively.

If the umpire and writer are at all careful, no mistake can arise, as the writer will perceive, at a single glance, what names are next the marked ones which have been called; and if any dispute arise, the list is still there to rectify it. Therefore, while this method preserves all the uncertainty of ticketing, the list will be ready for publication the moment the wrestling is over; and, on perusing it, every man may convince himself he has been fairly treated. As it is a very great chance that a number, dividing equal to the last, such 32, 64, or 128, will be the exact number entered, it is desirable it should be one doing so till very few competitors remain. Thus, 96 will leave three, and 80, five, &c. In such cases, the umpire, having the power of equalizing the chance, should then ticket them, as the small number, and the men having become conspicuous, would then prevent any confusion; and we would recommend the umpire to call them forward to witness their own names drawn. Whenever an odd number occurs, the prizes should not be definitively settled till the last fall, as the wrestlers cannot be on equal terms.

It may be necessary to remark, that, after the first round, the numbers, except the marks 1, 2, 3, 4, 5, 6, indicative of the rounds and falls the names before them have won, may be laid aside; their principal use being to ascertain the number
entered, which, as it occupies little time, and may be done beforehand, is well worth the trouble.

Rule 3rd.—When two men cannot soon agree in taking hold, the umpire shall place them at such a distance as the size of the men may render proper for ulterior proceeding. He shall then cause them to square their shoulders, and the higher part of their breasts against each other, in such manner that the right and left shoulder blades of both are perfectly level, and the arms stretched out so that the hands are in a line with the pap of the breast. He shall then direct one of them to take hold without shrinking his right breast and shoulder underneath his opponent’s, and so as to preserve a perfect equality in the use of the right arm: when this is the case, making proper allowance for contracting the arms by grasping the back of his opponent, the hold will be something below the level of the paps. If the umpire is satisfied the hold is fair, he shall cause the other to take hold likewise without shrinking, or swerving to either side; which being done, he shall immediately give the word. If the umpire perceives that either party is striving for an advantage, or will not take hold, he shall decide the fall against him; and if neither party will implicitly obey his directions, he shall cross them both out without further loss of time.

Rule 4th.—If the man who takes the latter hold, makes play at the same time, and either throws his opponent immediately, or obtains such an advantage by it as in the judgment of the umpire occasions the ultimate termination of the fall; or, if the first taker-hold strike before it can be clearly ascertained that the other has hold, and obtains a similar advantage by doing so, the fall shall be wrestled over again; and if the same conduct be repeated, the offender shall lose the fall. It shall likewise be allowed fair for either party to quit his hold, if his opponent strikes, or makes play, in the above improper manner.

Rule 5th.—If either party, when endeavouring to take hold, shall throw, or attempt to throw his opponent down, when he
is conscious that they have not both hold, the fall shall instantly be decided in favour of the injured party.

Rule 6th.—If, when wrestling, the men get disengaged by their hands slipping over each other's head, and they remain opposite each other on terms of perfect equality, it shall be in the option of either party to leave go, and take hold again, as at their first meeting; but if one of the parties only lose his grasp, it shall be deemed perfectly fair for the other to continue the wrestle till he does so likewise, or the fall terminates. If both the parties during a struggle become disengaged, if one throw the other before they remain stationary or fronting each other, it shall be deemed a fair fall.

Rule 7th.—After the men have both taken hold, if either of them quits it, either in endeavouring to save himself, by accident, or by attempting to throw his adversary, he shall lose the fall, provided his adversary retains his own hold, and does not go down by that effort or manœuvre, which is the immediate occasion or object of quitting the hold; but if his adversary, though retaining his hold, goes to the ground without recovering himself, if it be not immediately, yet in such a manner as is obviously the consequence resulting from such manœuvre, he shall win the fall. If the effort occasions both parties to lose their hold, and both or neither go down, it shall be deemed a wrestle over again.

Rule 8th.—If both the men go down in such a manner that it cannot be clearly and distinctly ascertained which of them was first on the ground, it shall be deemed a wrestle over, or, as is provincially termed, a dogfall, and the decision shall be given without any regard to the circumstance of making play. A man's knees or hands, or either of them, touching the ground, shall be considered conclusive of his being down in all cases except he is fairly covering his man, and it is occasioned by the desire of making the fall easier to himself or his antagonist; when such is the manifest intention, it shall not interfere with his claim to the fall.

Rule 9th.—When the men are called into the ring, no agree-
ment shall be allowed to take place between them relative to one of them yielding the fall, without the sanction of the umpire; but if they wrestle fairly, they shall have liberty to divide what the conqueror shall win, as they think proper.

Rule 10th.—If it is apparent that there is a private agreement between two wrestlers, and that the contest is not a fair one, the umpire, if it appear to him that the stander has promised any remuneration to the other for lying down, may call him against the odd man; but if there be no odd man, or if there be two standers only, the umpire may regulate the distribution of the prize as he deems proper; or, in other words, so as to prevent any set of men making a mere property of the sum to be contended for.

THE CORNISH AND DEVONSHIRE METHODS.

The principal difference between these methods is, that kicking the shins is a part of the Devonshire and not of the Cornish.

The Devonshire men, therefore, wrestle with their shoes on, in order not to break their toes in kicking; and each takes advantage of this to bake the soles of his shoes, and thereby render his kicking as severe as possible. Thus, he who happens to have the hardest shoes has a decided advantage.

Each has also the privilege of bandaging his legs, which is liable to a similar objection. It often happens, however, that, after a severe match, the wrestlers leave the ring with the skin off their skins, almost from top to bottom.

In other respects the two methods are the same: I need, therefore, describe only one—the Cornish, which the reader can convert into the Devonshire, according to the previous observations.

THE CORNISH STYLE.

The Cornish wrestling depends rather more on strength and endurance than the Cumberland. Nevertheless, great art and
quickness are required in it; and a moderate degree of strength, seconded by art, will be surer of success than much greater strength without it.

No fall is "counted," unless both the shoulders come to the ground together.

Dress.

After stripping to the shirt, taking off the shoes, and tucking up the trousers (to prevent them getting entangled with the adversary’s feet), the wrestlers put on a loose jacket, made of canvass, tied in front with two strings, and reaching as far down as the hips. The sleeves are made very loose for the convenience of both parties in taking hold at the elbow or wrist.—Fig. 25.

The strings, which are of the same length in all jackets, should be tied so as to leave the front of the jacket open, as this prevents the adversary taking so firm a hold as he could do if it were not quite so loose. Some wrestlers, in order to make the jacket as loose on them as possible, tie the strings only at the very ends.
CHALLENGING.

The usual mode of challenging is for one of the wrestlers to throw his hat into the ring, and any one who intends to wrestle him answers it in the same manner.

POSITION BEFORE TAKING HOLD.

Stand with the feet as wide as it is possible to do without losing strength; the right being foremost. Bend the knees well, &c., and lean forward. Hold your hands up before you; and keep a sharp look out, so as to be ready to take the most advantageous hold.—Fig. 26.

THE HOLD.

The wrestlers hold each other by the jackets, and by nothing else; but they are at liberty to alter their hold as often as they please.—Fig. 27.

There are two principal holds, that for the "forehand-play," in which you are almost before the adversary, with your back
turned to him; and that for the "after-play," in which you are behind the adversary.

Most wrestlers prefer the forehand-play.

To get the hold for the forehand-play, you must, from the position before described, dart out your left hand at the adversary's right elbow or wrist, and hold fast by the jacket, and at the same instant fasten your right hand to the right side of his jacket, close above the hipbone, or put it round by the left side of his neck to his right shoulder.

These movements of the two hands must be instantaneous; and the moment they are executed, you must, keeping a firm hold, and throwing your weight forward, turn yourself round to the left, so as almost to get your back to your antagonist. Thus you will have the forehand-play, and he will have the after-play.—Fig. 28.

Supposing that the adversary also attempts to take the forehand-play, and that you are both equally quick, he will lay hold of your elbow and side in the same time that you take hold of his, and you will be trying to turn your backs to each
other at the same moment. This must be decided by strength and quickness.

To get the hold for the after-play, seize the adversary’s left collar with your right hand, and get your left hand round his back to his left loin.

It will seldom happen that the adversary will oppose this.

Whatever hold you take, the grasp of the hands should be firm, yet not so as to fatigue or prevent its being increased when necessary.

**MOVEMENTS TO BE TAKEN FROM FOREHAND-PLAY AND AFTER-PLAY.**

There are some movements which can be taken only from the forehead-play, and others only from the after-play.

From the forehead play may be taken the outside-lock, the inside-lock, the cross-heave, the cross-lock, and the cross-buttock.

From the after-play come the back-clamp, the heave, the cross-heave, the double-lock, the pull-under, and the home-tang.
We may suppose the reader to have the forehand-play; and may describe those movements which come from that position.

To take the outside-lock.—After having twisted yourself round, so as to turn your back to your adversary, throw your right leg over the outside of his right leg, and twist your foot round it, so that your toe comes to the inside of his ankle; and while you hold so close with your hands as almost to lift him off the ground with your right hip, pull him over his right side by twisting yourself to the left. As both of you keep at once turning and falling, he will come to his back, and you will fall upon him.—Fig. 29.

If you do not succeed in your attempt to throw the adversary, you can rest with your leg hanging over his.

To stop the outside-lock, the adversary, if his head be under your arm, will take the inside-clamp, by striking the inside of your left shin with the outside of his left foot, pushing your's forward, and twisting you round, so as to make you fall on your back. But if his head be not under your arm, he will mostly prefer taking the outside-clamp, by throwing his left leg over your left thigh, and pressing you either backward or forward.
If he throw you backward, he will try, as you both come to the ground, to turn himself so as to fall on his left side, and make you fall on both your shoulders. If he throw you forward (which may be done with either the outside or inside-lock), he can, by pressing the back of your neck with his left hand, oblige you to fall on your head.

The inside-lock may be taken so as to throw either backward or forward.

To take the inside-lock forward, twist your right leg round the adversary's left by passing it between his legs, and bringing the toe round to the front of his shin, and then proceed as in the outside-lock.—Fig. 30.

To stop the inside-lock forward, the adversary will either pull strongly with his left arm round your loins, or will press against the back of your head with his left hand, which will bring your head to the ground.—Fig. 31.

If you find you cannot throw your antagonist with the inside-lock forward, slip the lock, and take the cross-buttock.

To take the inside-lock backward, after twisting your right leg round the adversary's left, turn yourself forcibly to the
right, and you will both fall backward; he on his back, and you on your right shoulder.

The way to stop this, is with the double-lock, which the adversary will execute by throwing his right heel inside your left, and pressing you backward (fig. 32); or, with the heave,

which may also be used as a defence against the inside-lock forward, and the outside-lock.

The hip is the same as the cross-buttock.
To take the cross-heave from the forehand-play, slip your right hand round your adversary's right side, to his left loin, so as to have him under your right arm; and slip the left hand along his belly, so as to get hold of his left elbow. You may thus throw him heels over head.—Fig. 33.

This is the only throw in which both parties are in exactly the same position. All, therefore, depends upon the promptitude with which the position is made available.

To stop this, the adversary will take the hip or cross-buttock, by throwing the right leg over yours, as before described; or, the cross-lock, which is performed by putting your right heel round the inside of the adversary's right heel, pulling his right arm, and pushing him backwards.—Fig 34.
There is no regular way of stopping this.
I may now suppose the reader to have the after-play.
I have described the back-clamps as guards against the outside-lock, cross-buttock, and hip. But they are also used as throws, of themselves.
There is no regular way of stopping the clamps; but if the outside clamp be taken below the knee, it may be stopped by walking one step forward.
To take the heave from the after-play (by which is meant throwing your adversary backwards over your left shoulder, and falling on it, while he falls on both of his), you must hold firmly with both hands, lift your adversary well up, pull strongly with your right arm, and, as you come to the ground, turn yourself so as to fall on your left shoulder, and make him fall on both his.—Fig. 35.

To stop the heave, the adversary will take the cross-lock, strike your standing leg,* or take the hip.

* In the after-play, the right leg is called the standing-leg; in the forehand-play, the left leg is so called.
To take the cross-heave from the after-play, remove your right hand from your adversary's collar, and pass it round behind his back to his left loin, as was described for the forehand-play. But you cannot take it from the after-play if the adversary hold your elbow.

The pull-under is performed as follows:—Move your right hand from his collar to his left elbow, pass your left hand under his chest to his left loin, and make him take the inside-lock.

To stop the pull-under, remove your right hand.

The home-tang is taken by getting both the hands round under the adversary's chest to his left side.—Fig. 36.

To stop the home-tang, withdraw your right hand, or, if you wish to throw, take the hip.

To take the double-lock, turn round, and take the left-forehand-play.
The art of boxing is analogous to the use of the cestus among the Greeks. That, however, was a leathern gauntlet, plated with iron to render the blows heavy, and constituted a dangerous and cruel practice. As the victory was often stained with blood, it was never held in high esteem by the Greeks, who had none of the sanguinary ferocity of the Romans.

The Greeks, as well as the Romans, found the encouragement of gymnastic exercises essential to their national security and honour. They found in it also an invigorator of the public mind, by creating in it a love for whatever is athletic, manly and brave.

Self-defence, indeed, is essential to the safety of man as a social being; nor is it less requisite to him as an individual.

Now, there is a saying, no less old than true, that "nothing is worth doing that is not worth doing well." If self-defence be at all requisite—if it tend to the protection of life or property—then it is worth acquiring in its natural form, together with all the art it will admit of.

A man's bare arm is his natural weapon, at all times by his side, ready for his protection; and where art is united to muscular strength, it is extremely powerful and efficacious.

That any sanction given to its use will make that use more frequent, is probable: but then it will only substitute it, in common cases, for some more dangerous practice or weapon.

Let a contrast be drawn between the fair contest with the fist, and the modes of fight prevalent even in some parts of this country; or let us contemplate the offensive and defensive
forms of attack in foreign countries; and then it will be seen whether a knowledge of pugilism is not a public benefit, as well as an individual security.

In our northern counties, where boxing is but imperfectly understood, and its laws are unknown, they fight up and down; that is, when one gets the other down, he who is uppermost throttles, kicks, or jumps on him who is down, till he has disabled or killed him. This, too, is pretty much the case in Ireland; and, indeed, all over the world, except in those parts of England where regulated boxing is in use.

In Ireland, men usually fight with sticks. In this mode of combat, a man may, at the onset, receive a mortal blow; whereas, in boxing, exhaustion frequently causes the weaker party to yield, and "give in;" and thus disputes are settled by a less dangerous, though more protracted, mode of fighting. In the same country, owing to ignorance of the generous rules of boxing, and the spirit it inspires, a man, who conceives himself aggrieved by another, does not scruple to waylay him, and murder him with a bludgeon or a pitchfork, or to set fire to his cabin, and burn him or his family in their sleep.

Not less repugnant to humanity are the barbarous contests in some parts of the United States of America. Kicking, biting, and even gouging, disgrace their inhuman fights. The latter is perpetrated by grappling the head of an opponent, and with the thumbs forcing his eyes out of the sockets. Nor is this all. The following is a short narrative of an American combat. —"A. one morning met B. coming from a fight. 'Heyday! man,' he exclaimed; 'your eye is hanging on your cheek.' 'Yes,' replied B.; 'but I guess I've been a match for the rascal.' And holding forth his hand, he exhibited an indubitable proof that, with a gripe and a wrench, he had unmanned his adversary."

In order further to form a correct judgment on this subject, it is also necessary to reflect on the different modes of assuaging the revengeful passions adopted by the lower orders on the Continent. There, it is not unusual to behold the long knife,
or the stiletto, carrying with it the mortal castigation of an offence.

What a contrast exists between all these barbarous modes of fighting, and the order which prevails whenever a fight occurs in this country! Here a ring is immediately formed,—seconds to each of the combatants step forward,—the surrounding throng maintain “fair play,”—and the business is settled with as much order and propriety as the circumstances of the case will admit of.

Thus boxing is really useful to society as a refinement in natural combat.—In England, it is curious and interesting to see the beneficent rules of boxing affecting all the contests even of children. In passing a field at Paddington, I one day observed a juvenile fight. It was a serious affair: for there they were—the four alone, and no spectator, but I myself, who came upon them accidentally. They were above being disturbed by an intruder: they did not even notice me. Each little antagonist had his little second, who, after a round, fell on one knee, and presented the other in the rectangular form adapted for a seat, to which, at the close of each round, he perseveringly pulled his principal, who sat there, puffing and blowing as if he had been engaged in mortal combat. In one of the rounds, one of the principals fell, when the other was instantly withdrawn by his second, and the prostrate one lifted from the ground, and placed on the knee of his second. The amusing part of the battle was, that the fighters seemed to be more worn out by the perpetual and determined interference of the seconds, than by the fight itself; nor, though they most exemplarily submitted to it, did they seem to be much comforted by each having his face ever and anon wiped by his second’s wet and dirty pocket-handkerchief!

Immoral effects have, however, been imputed to boxing. The gallows, it is said, has been supplied from the ring. But this, it has been well observed, means nothing more in substance than that these venerable institutions are contemporaneous. Pugilism includes nothing essentially vicious or im-
moral; and, if we may reason and decide from abuse, where are we to halt?

It is true, that boxing-matches, being proscribed meetings, unattended by any peace-officer, are particularly favourable to the congregation of thieves and other ruffians. But this is evidently not the fault of the boxing-match, but of the circumstances attending it. Boxing-matches, however, are not advocated, but deprecated here.

I will not answer, says a friend to boxing, for the purity of a congregation even at a gymnasium or five's-court (where boxing is merely an instructive display); but I am bold to risk the opinion, that a blackguard is as likely to acquire a sense of justice and fairness there, as at a love-feast in the recesses of Methodism.

In fact, it is to pugilistic schools, and their displays, that we owe "the whole of that noble system of ethics—fair play, which distinguishes and elevates our commonalty, and which stern and impartial reason herself must hail as one of the honors of Britain." Hence it is that, in regular combats, may be witnessed the most noble forbearance, in one or other, or in both of the contending parties—a forbearance which would do honour to combats of another rank.

"The display," says Payne Knight, "of manly intrepidity, firmness, gallantry, activity, strength, and presence of mind, which these contests call forth, is an honour to the English nation, and such as no man needs be ashamed of viewing with interest, pride and delight; and we may safely predict, that if the magistrates, through a mistaken notion of preserving the public peace, succeed in suppressing them, there will be an end of that sense of honour and spirit of gallantry, which distinguishes the common people of this country from that of all others."

To those who decline boxing as vulgar, its advocates sarcastically reply:—There can be no objection to restrict boxing to the vulgar and inferior classes of society, where sensibility and resentments cannot be supposed so refined, so rational, and so
permanent, as those of their high-born and educated superiors. In regard to them, we submissively give our assent to the indispensable use of the pistol and small sword, and to the unquestionable rationality of affording, to that man who has injured another in the highest degree, the opportunity of conferring on him the inferior injury of depriving him of life.

There is another view of this subject, which deserves serious consideration.

Though agriculture, manufactures, commerce, the arts and sciences, constitute the best pursuits of human life, yet a nation exclusively devoted to these, and without the means of defence, would exist in an uncertain, dependent, or slavish state. From the inhabitants of every country, therefore, a portion is selected, whose duty it must be to defend the liberties and secure the property of the whole. Hence the military and naval professions.

But, in order to fit the people for these, and to prevent the too general indulgence of effeminacy and dread of enterprise, it is necessary to encourage the manly and athletic sports and contests, which invigorate the human frame, inspire contempt of personal suffering, and enable men to defend that which they could not otherwise enjoy.

There can in fact be no better preparation for making effective combatants in our army and navy, than the national practice of boxing. "It teaches a man to look his adversary in the face while fighting; to bear the threatening looks and fierce assaults of an antagonist without flinching; to watch and parry his intended blow; to return it with quickness, and to follow it up with resolution and effect: it habituates him to sustain his courage under bodily suffering; and, when the conflict has ceased, to treat his enemy with humanity. The feeling of superiority which the practice of boxing gives an Englishman over a foreigner in private quarrel, is carried into the field of battle; for the boxer cannot think of turning his back on a foe whom he has always deemed his inferior in combat." To this feeling, and to the habit of fighting from boy-
hood, hand to hand and face to face, more even than to
superior bodily strength and courage, may be reasonably
attributed the superiority of English soldiers at the charge,—
of English sailors in the act of boarding.

PHYSICAL QUALITIES OF BOXERS.

The frames of boxers in general differ, in appearance, from
those of most other men. They are formed both for active
exertion and for the endurance of suffering in a severe degree.
It might indeed almost be said of boxers, as it has been of
poets, that a man must be born one. Certainly, if he be not
in possession of certain physical peculiarities, he cannot excel
in his art.

The eyes of professed pugilists are generally small. Their
necks are large. Their arms are muscular, with strong well-
turned shoulders. Their chests are in general expanded; and
the backs and loins of some not only exhibit an unusual degree
of strength, but a great portion of anatomical beauty. The
hips, thighs and legs of a few are remarkable for symmetry.
When boxers do not stand firm on their legs, and are thin
about the loins, it indicates weakness; and where anything
like struggling occurs in a contest, they frequently lose the
battle from want of strength. The hands of pugilists in
general are large, and should be firm.

ART ESSENTIAL IN BOXING.

Many intelligent persons have been of opinion that boxing
depends more on strength than does the use of the sword; but
it is certain that art is here still more important than strength.
Strength, undoubtedly, is what the boxer ought to set out
with—it is the fundamental quality; but, without art, he will
have little success. A less degree of art will prove far more
effective than a considerably greater degree of strength. Defficieny of strength may be greatly supplied by art; want of
art will have but heavy and unwieldly succour from strength.

The strength of man chiefly consists of the power of his
POSITION OF THE BODY.

muscles. These, with the bones, form the strings and levers which execute the different motions of the body. Now, by art, a man may give additional force to them, as will be shewn in the sequel.

We proceed to more minute details, which will be found to be perfectly illustrated by the Plates. That entire confidence may be reposed in the guidance which they afford, will readily be believed, when we state that Harry Holt, by far the most intelligent and skilful boxer of his time, stood, during two successive days, for the drawings from which they were made. I owe it equally to this able man and to the reader to say, that if the latter desires instruction in this branch of exercise, he cannot do better than apply to Mr. Holt.

POSITION OF THE BODY.

The position of the body is of the greatest consequence in boxing. Here, the centre of gravity must be well considered; for if, conformably with that, the weight of the body be adjusted, and its proper equilibrium preserved, it will stand much firmer against opposing force.—Fig. 37 (plate.)

This, in the first place, depends upon a proper distance between the feet; which is, therefore, the first thing a boxer ought to regard. Without it, indeed, all his efforts will prove abortive.

In order, then, to obtain the true position, the left leg must be advanced to some distance before the right; and this carries also forward the left side and left arm.

This is the true position for the right-handed man, in order that, after having, with his left arm, stopped a right-handed blow from his opponent, he may have equal readiness and greater power of stepping in with his right hand’s returning blow.

The feet should, for this general position, be about two feet apart, and one foot should be placed at somewhat less than a right angle in relation to the other.
The left foot is to be kept straight, that is, pointing to the adversary. The right toe is to be sufficiently turned out, to resist any shock the adversary may give, and yet sufficiently in, to allow the body to be thrown forward, by bending up the instep.

The knees must be kept slightly bent, and very pliable, that advances and retreats may be the quicker.

The body, for this general position, should be erect; that is, the weight should be thrown equally on both feet.

The neck should be sunk.

The head is to be kept backward, and the eyes on the enemy's.

The elbows should be kept as close to each other as is consistent with their free action, in order to cover the body. The boxer, however, must be careful not to force the elbows together by muscular exertion, as this would soon tire the muscles of the arms.

The arms should be extended about half their length.

The left arm, as already said, must be most advanced, and the right arm kept closest to the body.

The fists should be raised about as high as the chin, the left being a little the highest.

They should be so far apart as to allow them to pass each other freely without touching, and no further.

The fists are formed by laying the tips of the fingers in the principal cavity of the palm, formed by shutting the hand. The thumb is then laid over the first joint of the first finger, and its tip comes nearly up to the second joint of the second.

The fists should not be very firmly shut till they are to be used.

In this position, then, advancing is effected by a step forward with the foot which is before, and by following it with that behind.

Retreating is effected by a step backward with the foot which is behind, and by following it with that which is before.
Position  

Left Hand Blow  

Right Hand Blow
MODE OF STRIKING.

Give your antagonist as little time as possible to direct his aim.

For this purpose, and to procure an opening, it is sometimes useful to confuse your antagonist, by making feints where you do not intend to hit.

When you are not striking, it is advisable to move the arms to and fro (not to their utmost distance), so as to render them supple, and to enable you to throw in a blow more unexpectedly.

The moment you see any part of your adversary's body open, strike at it; for it is of course an object to hit your adversary oftener than he hits you.

It is of the greatest importance to avoid giving to your enemy the slightest notice where you intend to strike him.

For the left and the right-hand blow, see Figs. 38 and 39 (plate.)

To get a blow in, make a step forward with the left foot, and throw the weight on it; at the same time propping the body up from behind by means of the right toe.

The instep of the right foot is bent up at every blow, though more for the right-hand blow than for the left.

The whole body, however, must be thrown forward when a blow is struck, as though the intention were to throw a weight off the shoulder of the fist that strikes; at the same time swinging the shoulder and hip round with great velocity.

In this attitude, the whole body inclines forward; so that we find, from the outside of the right ankle to the shoulder is formed a straight but inclined line. Thus, the right leg and thigh, in a slanting line, strongly prop up the whole body from behind; and this is the strongest position a man can contrive. It is such as we generally use in forcing doors, pushing forward any weight, or resisting strength; for while we have all the direct force of the right side, the muscles of the left side,
which bend the body forward, bring over the left thigh the gravitating part which thus augments the force.

It is usual, in attacking, to lead with the left first, and let the right follow: but too frequent a repetition of this prepares the enemy.

A blow should be struck as straight and as quickly as possible.

Straight blows come quicker than round ones, because they have not so far to come; and they are stronger, because they come directly from the centre of gravity. The quickness of the blows adds greatly to their force.

At the moment of striking, the fist should be clenched as firmly as possible. By this means the muscles of the arm will be braced, and this will strengthen the wrist. The velocity of the blow will also be greatly augmented by it. Thus, the power of the arm will be considerably greater than if the hand were but slightly closed.

The muscles which give this additional force to the arm, in shutting the hand, are the flexors of the fingers; the extensors being the opposite muscles, as they open or expand the same.

In striking, however, or using any violent effort with the hands, these two kinds of muscles contribute to the same action. Thus, if any one close the left hand forcibly, and clap his right hand upon the left arm, he will feel that all the muscles of it swell more or less.

Hence it follows, that muscles, calculated for different offices, yet aid each other in great efforts. This is of much advantage toward that artificial force in boxing, which beats much superior strength where art is wanting.

The fist must not, however, be clenched in the firmest manner till the moment when you intend to use it, as such a degree of exertion cannot long be continued.

It is proper also to bear on the heel, at the same time drawing under the toes, so as to brace all the muscles of the leg; but not till the moment when you intend to strike a blow, or expect to be attacked.
By thus delivering up the power to the muscles of the advanced side, which, in a strong contraction, brings the body forward, the motion communicated is such, that, if the hand at that moment be firmly shut, and the blow at the same instant pushed forward in a straight line with the moving body, the shock given by the stroke will be able to overcome a force, not thus artfully contrived, twenty times as great.

Thus, it is in our power to give additional strength and force to our bodies, so as to render us far superior to men of more natural strength, not seconded by art.

It is necessary to be instantly collected after you have struck, and to recover your guard.

A blow should never be struck without its sequel being thought of. This may, indeed, be necessarily a guard; but it may be a second and far more advantageous blow.

MOST EFFECTIVE BLOWS.

We may now consider what are the most hurtful blows, and such as, consequently, contribute most to gaining a battle. This is a most important consideration to boxers, and claims their particular attention.

Very few of those who fight know why a blow on any particular part has such effects; yet, by experience, they know it has these effects, and by them they are directed to the proper parts,—under the ear, between the eyebrows, and about the stomach.

The blow under the ear is considered to be as dangerous as any that is given, if it light between the angle of the lower jaw and the neck; because, in this part, there are two kinds of blood-vessels—arteries and veins, of great size; the former bringing blood immediately from the heart to the head, and the latter carrying it immediately back.

Now, it is evident, that if a man receive a blow on these vessels, part of the blood proceeding from the heart to the head must be forced back, whilst the other part is driven for-
cibly to the head; and in the same manner, part of the blood returning from the head to the heart must be forced into the latter, whilst the other is driven forcibly to the head.

Thus the blood-vessels are immediately overcharged, and the sinuses of the brain overloaded. The man accordingly loses sensation, and the blood often runs from his ears, mouth, and nose, owing to the quantity forced with impetuosity into the smaller vessels, the coats of which being too tender to resist such a charge, instantly break, and cause the effusion of blood wherever the superficial skin is thinnest.

This is not at all: the heart, being overcharged with the blood forced back on the succeeding blood ascending from its left ventricle, stops its progress; whilst the blood returning from the head is violently pushed into its right auricle, so that the heart labours under a violent surcharge of blood, which, however, goes off as the parts recover themselves, and are able to push the blood onward.

Blows between the eyebrows contribute greatly to victory. This part being contused between two hard bodies, viz. the fist and os frontis, there ensues a violent echymosis, or extravasation of blood, which falls immediately into the eyelids; and they, being of a lax texture, incapable of resisting this influx of blood, swell almost instantaneously, and this intumescence soon obstructs the sight. The man, thus artfully hood-winked, is consequently beat about at his adversary's discretion.

Blows on the stomach are very hurtful, as the sympathetic nerves, their ganglia and plexuses, the great artery called aorta, the diaphragm or midriff, and the lungs, share in the injury.

The injury which the diaphragm suffers from blows under the breast-bone is considerable, because it is thereby brought into a strong convulsive state, which produces pain.

Thus excited, the diaphragm also lessens the cavity of the thorax, whereby the lungs are, in a great measure, deprived of their liberty, and the quantity of air retained in them is so
forcibly pushed from them, that it causes a difficulty of respiration, which cannot be overcome till the convulsive motion of the diaphragm ceases.

Violent blows or contusions in this, which is called the epigastric region, when they do not immediately destroy the individual, depress, in a remarkable degree, the vital energies. The animal heat is uncommonly diminished, the surface is cold and pale, the pulse scarcely perceptible, and the breathing feeble and very slow.

An effect is produced by concussion of the semilunar ganglion, in some respects similar to that which follows concussion of the brain; in the former, the vital actions are either exhausted or destroyed; in the latter, the mental operations are suspended.

A blow on the stomach "doubles up" the boxer, and occasions that gasping and crowing which sufficiently indicate the cause of the injury; a little more severe, and it is instantly fatal. A man, broken on the wheel, suffers dreadful blows, and the bones are fractured, but life endures: the coup de grace is the blow on the stomach.

It is, therefore, recommended to those who box, never to charge their stomachs with much food on the day of combat. By observing this precaution, they will avoid the extraordinary compressing of the descending aorta, and, in a great measure, preserve the stomach itself from the blows to which it must be the more exposed, when distended with food, and the consequence of which must be a vomiting of blood, caused by the rupture of blood-vessels; whereas, the empty stomach, yielding to the blow, is much less affected by it. Hence it is recommended rather to take some slight stimulant into the comparatively empty stomach, which, by its exciting the fibres, may contract it into smaller compass.

The boxer may render blows on this part in some degree less hurtful by drawing in the belly, holding the breath, and bending the thorax, or upper part of the chest, over the navel, when the stroke is coming.
GUARDING.

Watch the inclination of your adversary's head, and the direction of his eyes; as upon these depend the aim of the fit.

If the enemy aim with his right hand, the guard is generally with the left, and vice versa.

Blows aimed at any part higher than two or three inches above the pit of the stomach, are parried by striking upward and outward.—Fig. 40 (plate.)

Blows aimed any lower than two or three inches above the pit of the stomach, are guarded by so covering the side with the elbow, that it shall secure the ribs and loins, while the fore-arm protects the stomach.—Fig. 41 (plate.)

In other words, blows aimed above the arms when in the general position, are parried by striking upward and outward; and blows aimed below the arms, by laying the arms as above described.

In stopping blows aimed at the lower part of the body, some recommend to strike them down. The advantage of this is, that it is not so much out of the common way of guarding as the preceding; but the disadvantage is that you may guard too soon, and thereby leave yourself open, which is never the case with the other method.

CLOSING.

If your enemy be more powerful than you are, you should not close with him, unless you are very expert at the cross-buttock, &c. To prevent his closing with you, as soon as you expect him to do so, you must instantly strike at him in the face or body with great quickness, by way of keeping him busy,—and retreat;—then advance again,—and so on, to perplex him.

All this, however, may not succeed in keeping him out; in
Blow at the Head and its Guard.
Blow at the Loin, and its Guard.
which case, if you cannot slip down, you must not throw away your strength by struggling with him for the throw, further than endeavouring, as hereafter described, to prevent his getting you in dangerous positions for the cross-buttock or outside lock.

The cross-buttock may be performed when you and your antagonist happen to come into contact with your sides together,—no matter which, provided you look the same way. —Fig. 42 (plate.)

Suppose that your right side comes in contact with his left; you lay your right arm over his neck, and take hold of his right shoulder; seize his right wrist with your left hand, and draw it as forcibly down, and to the left, as possible; place your right hip under his crutch, and your right leg close to his right leg; hoist him up as though you were going to throw him over your head; but when you get him a sufficient height, swing him right round on his back, and fall upon him.

If your adversary is so heavy that you cannot easily lift him from the ground to throw him over your hip (which, however, will very seldom be the case), you had better give him the outside lock. This (supposing you still have your right side to his left) is accomplished by swinging your right leg against the outside of his, and throwing him over it. This fall, however, is not so effective as the cross-buttock.

If he attempt this with you, you must (supposing you have still your right side in contact with his left) place your left knee in his ham, throw all your weight backward, and attempt to pull him over in that direction. But if this is to be done, it must be done before he hoists you on his back; for when he has done this, all is done.

**BOTTOM.**

Strength and art have been both mentioned as the principal requisites for a boxer; but there is another, which is equally necessary, and without which no pugilist can be complete. This is denominated bottom.
In constituting bottom, there are required two things—wind, and spirit or courage. Wind, indeed, may be obtained by a proper attention to diet and exercise; but it is spirit that keeps the boxer upon his legs. Without this substantial requisite, both art and strength will be of little avail.

The following rules are nearly those which were drawn up by Mr. Broughton, and which continue to be generally acted upon.

1. That a square of a yard in extent be chalked in the middle of the stage; and at every fresh set-to, after a fall, or being parted from the rails, each second is to bring his man to the side of the square, and place him opposite to the other; and, till they are fairly set-to at the lines, it shall not be lawful for one to strike the other.

2. That, in every main battle, as soon as the men are stripped, no person whatever shall be upon the stage, except the principals and their seconds; the same rule being to be observed in by-battles, except that in the latter, a gentleman is allowed to be upon the stage to keep decorum, provided always he do not interfere in the battle; and whoever presumes to infringe these rules is to be turned immediately out of the place.

3. That no champion is to be deemed beaten, unless he fail in coming, or being brought up by his second, to the side of the square, in the limited time of half a minute; or that his own second declares him beaten; but no second is to be allowed to ask his man's adversary any questions, or advise him to give up.

4. That, to prevent disputes, in every main battle, the principals shall, on coming on the stage, choose, from among the gentlemen present, two umpires, who shall absolutely decide all disputes that may arise about the battle; and, if the two umpires cannot agree, the said umpires are to choose a third, who is to determine it.

5. That no person is to hit his adversary when he is down,
or seize him by the ham, the breeches, or any part below the waist; a man on his knees being to be reckoned down.

These rules form the code of boxing.

SIMPLER METHOD OF BOXING.

The foregoing is one of the most usual methods of boxing, and is used by most of the principal boxers. I shall, nevertheless, subjoin the more simple method, which, though not quite so complete as a means of defence, is far easier of acquirement. It indeed renders a man’s strength more available in one month than other methods do in two—a proportion, however, which gradually diminishes, though not very quickly.

The difference of position according to this method, consists in the legs being much further apart; the knees, more bent; and the hands, closer to the face.—Fig. 43.
When a blow is struck with one hand, the other is held opposite the nose.—Fig. 44 and 45.

There is only one position of guarding in this method. It is formed by throwing back the body, raising the right elbow and throwing it across (Fig. 46), so that the point of it is
opposite the nose and mouth; laying the left arm over the pit of the stomach; and throwing the head over the right shoulder. The great distance between the legs permits the body to be well thrown back.

This guard admits of a capital return in the Mendoza style, by instantly throwing the body forward, and chopping down with the right fist.—(Fig. 47.) To avoid this, it is always advisable to fall back to the position of guarding, the instant after striking a blow.

In rallying, or, in common words, when one attacks the other with a quick succession of blows, right and left, first advancing one side and then the other, the plan of guarding is a little changed. To guard against the right hand blow in rallying, the left leg is thrown back; the right arm is thrown out at full length, and rather across the body, the first being as high as the face; and the left arm protects the mark.—
(Fig. 48.) As the adversary again advances the left side, the right leg is thrown back, and the hands change their offices.

(Fig. 49). Thus you continue to retreat until you find a favourable opportunity of returning a blow.
METHODS OF DEFENCE AGAINST
BRUTE FORCE.

As in this work it is my object to teach the complete art of
defence, I shall introduce the following method, by which a
gentleman may protect himself against ruffianly attacks.

In an encounter with a countryman, it is advisable not to
close and wrestle with him, but to keep him at a distance; for
the generality of countrymen are much better wrestlers than
boxers.

It frequently happens that they strike round, or in a semi-
circular sweep from either side; and that with such violence,
that, if they miss their aim, they throw themselves to the
ground. A good boxer, therefore, may always take advantage
of the notice which, by his slow and awkward movements, a
countryman gives, that he intends to strike him, and with
which hand, in order to step back (Fig. 50); and while he
permits the countryman to throw himself forward in a semi-
circular direction, he may strike out straight at his head.—
Fig. 51.

If it should be necessary to stop his blows at all, it should
be done as represented in Fig. 52. There the countryman is
supposed to have struck a blow with his right hand, and the
boxer to have guarded it with his left hand, by knocking the
blow down. This helps to throw the countryman out of balance, and gives a good opportunity for a return blow.
When one man intends to take another prisoner, he generally seizes him by the collar, and an escape may often be effected in the following way.—Remain quiet for a few minutes till the enemy somewhat relaxes the severity of his grasp. Then, supposing he holds you with his right hand, suddenly seize it with your right, and twist it round so as to turn the
outer or little finger side of his wrist upward, and, at the same time, let your left arm fall heavily on the middle of his right. If you do but succeed in twisting the hand round, the rascal is at your mercy.—Fig. 53.

If, on the contrary, you wish to take a man prisoner, in such a way as to preclude the possibility of his doing you any injury, seize one of his hands with both yours; raise it up high enough to allow you to pop under his arm, holding his hand firmly all the while; and you will thus be behind him, having one of his arms twisted behind his back in a very uncomfortable way.—Fig. 54.

In justice to the reader, however, we must observe that some of these tricks (and particularly this one) are so well known among ruffians, as to be very difficult of performance upon them by gentlemen.

The method of turning a man out of a room, by lifting him almost off the ground by the collar and back of his trousers, is so well known as not to need description here.—We shall only observe, that unless the intruder be very far inferior in strength and weight, the thing cannot be done.
There is another method of turning a person out, as represented in Fig. 55. With your left hand seize his left wrist;

\[55\]

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twist it so as to turn upward its palmar side; pass your right hand under his arm, and grasp his collar high up and firmly; and hold your own arm stiff, with the elbow turned rather upward, the better to bear the weight of the delinquent's arm, which must be so pressed down by your other hand, as to make him stand on his toes. This method is liable to the same objection as the last.

If a man threaten to assault you, and you think it necessary at once to put him down, step quickly close up to him, and a little to one side (fig. 56); throw your leg round behind both his, and strike or push him forcibly on the breast. Care must be taken in the execution of this, that the leg and arm move together, for it is only by this cross action that it can succeed.
THE ART OF FALLING DOWN.

It may appear very simple to say, that the instant a man feels himself falling in any particular direction, he should throw out his hands in that direction, in order to save his
head. But still, judging from the very few instances in which this is done, it does appear necessary to enforce it upon the attention; for which purpose I have given Figs. 57, 58, 59.
THE SHILEL AH.

I have placed this first among the exercises of the stick, not on account of its excellences, but because it is easily acquired, and less restricted by arbitrary rules than those which follow.

The stick used is about four feet long. It is grasped at about a third of its length, which third is appropriated to the defence of the fore-arm, elbow, and right side of the head. It is not a very scientific amusement.

Figure 60 represents coming on guard.

The first object is generally to knock the hat off, in order to get at the head; and it is represented in Fig. 61.

In striking a blow at the right side of the head, the handle of the stick passes outside of the elbow; and by thus flying swiftly in an opposite direction to the point, adds greatly to the force of the blow.—Fig. 62.
This blow is stopped by throwing up the little finger third of the stick, appropriated, as already said, to the defence of the right side of the head, the fore-arm, and the elbow.—Same figure.
In the blow at the left side of the head, the handle of the stick passes inside the elbow.—Fig. 63.

A blow at the right side of the body is guarded by throwing the point of the stick in a semicircular direction downward, and outward to the right.—Fig. 64.
A blow at the left side is stopped by similarly throwing the point downward, and to the left.—Fig. 65.

The legs are seldom points of attack; but when they are, they should be protected by the same guards as the sides.

This is, perhaps, the rudest method of using the stick; but the protection it gives to the fore-arm and elbow are great advantages.
SINGLE-STICK.

Basket-sticks, similar to those used in the broad-sword exercise, but rather heavier, are used for this exercise. Both parties strip to the shirt. In some parts of the country, paddings are used to save the arms, especially the elbows; but this is never done in London.

Most players prefer to stand with the right foot forward; but some prefer the left.—Fig. 66.

The body is held upright; the head, backward; the leg, straight; the right arm, advanced and nearly straight; the hand, opposite the forehead, but rather higher; the stick, slanting towards the left shoulder. The left hand grasps a handkerchief, which is tied loosely round the left thigh; and the left elbow is elevated and thrown forward, so as to protect the head.
THE BLOW AT THE HEAD.

The principal point of attack is the head; first blood from it, or from the face or neck, above the level of the lower jaw, being decisive.

In the position already described, the head is thoroughly protected. It is, therefore, necessary to get the adversary out of that position before attacking his head. This may be attempted by attacking him under the arm, at the point of the elbow, or on the ribs; or you may wait till he attacks you, and then try to strike at his head before he can get back to guard.

All the blows are to be made from the wrist; the great art being to strike them as quickly as possible, and return to the primary position, in which the head is thoroughly protected, before the adversary can get at it.

The usual blow at the head is struck by suddenly twisting the wrist round from a state of pronation to supination; the point of the stick describing a semicircle round the hand.—(Fig. 67.) To stop this, raise the hand a little.—(Same Fig.) The return is the same as the attack.
Striking over is done when the adversary, through inattention or fatigue, lets his hand sink below the level of his head. In this blow, the stick passes close over the adversary’s hand; the wrist is not twisted round to supination; and the blow is altogether more horizontal and passes somewhat diagonally from left to right. The arm moves more.—(Fig. 68.) To guard this, raise the hand.

The usual return after this attack, is a blow at the left side of the face (fig. 69), which is likely to succeed on account of difficulty of the other party returning to guard after striking over.

Striking at the ribs is done chiefly to fatigue the adversary, and make him bring down his hand so as expose his head. It is the right ribs only that we attack.—(Fig. 70.) Some players guard this by throwing the stick down, while others do not guard at all, but strike at the head.—Fig. 71.

The right fore-arm and elbow are also frequent points of
attack. A blow on the inside of the elbow just between the two bones which project there, deadens the ulnar nerve passing
down to the third and fourth fingers, and prevents the stick being felt with them. — Fig. 72.
THE BLOW AT THE WRIST.

The wrist is sometimes attacked, and must be guarded by moving the hand a little to the right.—Fig. 73.
FENCING.

METHOD OF MAJOR GORDON.

ORIGIN AND EFFECTS OF THE ART.

To give authority to the common system, it has been asserted, that it was the result of experiments from nature; that different peasants having been ordered to make their efforts in succession, concurred in making their first thrust in prime, directing the point high, more to the left of the antagonist, with their hands in pronation; that is, with the knuckles and palm downwards, and the convexity of the hand, of course upwards.—See Prime, Fig. 74.

From this weak position most of the cuts and guards used by cavalry are derived.

The peasants agreed in delivering their second thrust under the arm of the adversary, the hand in pronation.—Seconde, Fig. 74.

Their third impulse was over the adversary’s arm, retaining the same position of the hands.—Tierce, Fig. 74.

This is an excellent position for cutting vertically downwards.

Being ordered to make a fourth impulse, they rolled their hands into supination, wherein the nails, knuckles, and palm of the hand, are turned upwards. They projected the thrust into the cavity of the arm of the adversary.—Quarte, the safest and strongest position, Fig. 75.

They directed the fifth thrust low, under the adversary’s
CUTS AND THRUSTS REDUCED TO QUARTE AND TIERCE. 75

arm, with their hand in pronation, and opposed to the right of the adversary.—Quinte, Fig. 74.—Hence, the hanging guard, and the inside and outside half hangers, &c.

The octave is the sixth thrust; the hand is in supination, and opposed to your own right. In quarte, the opposition is to your left.

Such are the simple thrusts, from which all cuts and thrusts, however complex, are derived.

The six simple guards are synonymous with the thrusts, as the guard of quarte, the guard of tierce, &c. &c.

As thrusts are either simple or complex, so are the guards. All cuts are complex motions, or combinations of several simple motions. Notwithstanding this French arrangement of the thrusts, yet it appears from experiments, and the construction of the arm, that the quarte should be placed at the head of all the thrusts and parades, from the strength of the hand in opposing, and retaining the weapon in that position. Tierce ranks next to quarte; as in tierce the hand is over the adversary, and has all the advantages of gravity in striking downwards. The seconde, quinte, and the prime itself, descend from tierce. But these three thrusts, and all guards and thrusts derived from them, such as the hanging-guard, the outside and inside half-hangers, the off side and near side protects should be rejected, being dangerous to the persons using them. In like manner, should be rejected all cuts, save only two, and all complex thrusts whatever; but certain complex parades cannot be too studiously cultivated.

ADVANTAGES OF THE SIMPLE THRUSTS, ETC., AND REDUCTION OF ALL CUTS AND THRUSTS TO TWO DENOMINATIONS, VIZ. QUARTE AND TIERCE.

A simple thrust is one direct motion, impelled with such celerity as to be finished in the least point of time. A complex thrust is a combination of two or more simple motions. All cuts are invariably complex.
FENCING.

Simple thrusts are to be used in preference to the complex, as appears from comparison.

Feints are either single or double, but rarely triple. The single feint is the least complex of all compound thrusts: it menaces an attack on one point, to cover the real impulse intended upon another. The French mode (which is erroneous) is as follows:—(Fig. 76.) The point describes the arc, or line A B, in the direction of the arrows: 2nd, it retrogrades in the same line, say B C, that is describing the base, or rather the whole triangle, twice; 3rd, the point is projected from the point A; that is, the single feint is composed of three motions, equal to the three sides of a triangle; but by Euclid (20th Prop. lib. 1), any two sides of a triangle are greater than the third, and the three are much greater; and the times being as the space described, the velocities being equal, the time of the single feint is to that of the simple thrust $3:1$; therefore, the celerity and advantage of the simple thrust are in that proportion, Q.E.D. Any further illustration of the advantage of the simple thrust over cuts and thrusts still more complex than the feint, seems to be superfluous. The right mode of executing the feint is this: after disengaging from A to B, from the point B push straight home, without returning to A, raising and opposing your hand, so as to force his blade out of the line; recover quickly, using the round parade of quarte; yet even so, the advantage of the simple thrust would be two to one.

The four simple thrusts, prime, seconde, tierce, and quinte (Fig. 74), agree in being delivered by the hand in pronation: they are said to differ, because they are directed to different
points of the body. The tierce, or cut over and outside of the arm, from its superior direction, conspires with gravity in forcing an opening by the dexterous application of the fort; but in the prime, seconde, and quinte, there are no such advantages.

The position of the hand is the weakest species of pronation: the fingers opening downwards, are ready to be disarmed by the slightest vertical impulse. The weakness is still greater in the guards derived from these positions: therefore, these might be safely reduced to one class, called tierce.

The three thrusts, quarte, quarte over the arm, and the octave (fig. 75), are excellent, and agree in the circumstance of being impelled by the hand in the strong position of supination. The arm, wrist and fingers, being turned upwards, the fingers open in that direction, and the impulse which is made upwards against the force of gravity, will generally fail in effecting the disarm: these three differing only in their direction to different points of the body, and in direction of the opposition of the hand, might, therefore, be reduced to one class, denominated quarte.

It is clear, that an indefinite number of cuts and thrusts may be directed to the various parts of the body; but if all such were to have distinct names, no dictionary could contain them.

THE GUARDS OF QUARTE, TIERCE, ETC.

The science of defence is concentrated in the three following particulars:—

1st.—In the graceful command of the body and limbs, and in the acquisition of the particular means which are subser vient to this end.

2dly,—In the possession of the proper line of direction, &c., and,

3rdly,—In the proper opposition of the hand, and in the application of the fort to the feeble.
For the purpose of obtaining the first of those essential points, the command of body, you are to be exercised in the three following positions. The first is well known, being the position of a soldier standing on parade, erect, with his heels close, upon a small base. This is a weak attitude, and unfit for defence, &c.; therefore, he is to spring from this into the second position, which is martial, and well adapted to defence and attack.—(Fig. 77.) The knees are bent, and the more the better, as the force of the elastic spring will be in proportion to the contraction of the muscles; the body is balanced on both legs, so that it may rest on both or upon one, and more particularly upon the hinder leg. By this flexibility and command of body, you may be within and out of measure (as it were) at the same moment. Instead of standing square to the front, as in the first position, and presenting the greater diameter of your person, you present your side only, which will be covered by your weapon, and your arm directed in a line before you. The sword is to be grasped by all the fingers, and the thumb extended along the gripe. As the knees are bent, so must the hand be contracted at the elbow.—Fig. 78.

This position is termed on guard. The sword must not be held parallel to the horizon, as that position would subject your feeble to his fort; and much less should your point be depressed below the horizon, for the same reason; therefore, it should be raised thirty degrees above the horizon, and directed nearly in the line of his eye. In the second position, you guard or parry quarte and tierce, and all cuts and thrusts, and advance and retire a few paces, facing your adversary.

Parry quarte by your fort in quarte, and tierce by your fort in tierce. You cannot be too much practised in advancing, retiring and parrying, simple thrusts and cuts in this attitude. Having fully obtained the command of your person by this practice, and not before, you are to spring from it into your third position, which is that of the allonge.

In the second position you sink on your knees, and have all
GUARDS OF QUARTE, TIERCE, ETC.

On Guard in Quarte.
your powers restrained and ready to be exerted; the exertion of these powers will place you in the third position, with your feet about thirty-six inches asunder, at right angles. This attitude is termed the allonge.—Fig. 79.
The allonge is to be made with all possible rapidity: this will be better accomplished by impressing the ideas of it upon the mind one after another. Thus, first form your extension (fig. 80); elevate your right hand in quarte, as high as the direction of your left eye-brow; lower your point in a line with the cavity under the arm of the adversary; extend your left hand and left knee; then project the thrust, rolling your hand still more in quarte, or supination; throw forward your right foot at the same instant, fifteen or sixteen inches, so that your feet may be at least thirty-six inches asunder.—(Fig. 81.)
The foot should resound in striking the ground. Repeat this practice until you can execute it in one rapid motion. Examine your attitude in this third position, and practise unremittingly in the air, until you acquire a graceful precision in the execution. Fig. 82, gives an idea of guarding the thrust of quarte.

Your own feelings and judgment will best determine the length of your allonge: it should be such as would enable you to recover to your second position, with the utmost ease and celerity in real action.

When you are engaged on guard in the second position, the blades are to touch in a point, about ten inches distant from their extremities. The quarte is to be thus delivered:—

Form the extension by a rotatory motion of the arm and wrist raised and extended, &c. (fig. 80); project the sword in and along the identical point of contact, as in a nick; oppose your fort thus upwards against his feeble, as it were in the nick. Direct your thrust, or cut, in the line, in such a manner as to infixed your point into the cavity under his arm.—Fig. 83.

All this is to be executed in one motion, and with such celerity as to hit your adversary an instant before your foot strikes the ground. Recover quickly, using your round parade of quarte on this and all occasions.

There are only two good cuts, and these have not been noticed by the French, nor by their disciples: the first is the cut made vertically downwards in quarte; the second is hurled vertically downwards in tierce.

Make the vertical cut in quarte thus:—Raise your point vertically, and oppose your identical fort (that is, that point of your sword which is in contact with the shell) to the very extremity of his sword; contract your arm; and having thus secured his foible, strike in this vertical cut on the quarte, or inside of your adversary; terminate this cut in a thrust, and recover, using your round parade of quarte with all celerity.—Fig. 83.

In cutting, the hand is to be in the most natural position,
Thrust and Cut in Quarte.
between supination and pronation; but it is to be turned into complete supination when you end your cut in a thrust. The best mode of parrying this cut is by the pointe volante; that is, by contracting the arm, and opposing the fort of the weapon, which must be raised perpendicularly to extricate the foible. By this parade, he opposes his fort to your feeble.—Figs. 84 and 85.*

Pointe Volante in Tierce.

The terms fort and foible are relative, and used to mark the different forces of the different parts of the hand-weapon. That part of the weapon held by the hand is the fort; the powers of the other parts of the instrument vary in the following proportion; they are in the reciprocal proportion of their distance from the fort; that is, the power of any point decreases as its distance from the fort increases, and vice versa. The

* The pointe volante is here introduced, chiefly in relation to its applicability to defence with the bayonet.
extreme point of the weapon is more weak than any point between the extremity and the fort, &c.; the fort itself of the instrument is the foible, in regard to the power of the elbow, &c. In the application of the fort, and the command of the body, &c., is concentrated the art of defence.

The guard, cut and thrust of tierce, are formed by turning the fore-arm, wrist and hand, into pronation. As in the guard of quarte hand is to be less in supination than when it finishes the thrust, so in the guard of tierce it is to be less in pronation than when it delivers the thrust.

Besides this motion of pronation, the hand is to describe an arc of about eight inches, from the guard of quarte to that of tierce, from the left to the right.

The delivery of the thrust and cut in tierce, is similar in principle to that of quarte, in justly applying your fort. The formation of the extension and the allonge are the same in all thrusts; but your opposition in tierce, and in quarte over the arm, is to your right.—Fig. 86.

Feel your adversary's blade constantly, but do not press it,
as you will be exposed to his time thrust by your relinquishing the point of contact; therefore, in disengaging from quarte to tierce, move your point closely, within a hair's breadth of his blade; so quickly, that your change shall be imperceptible, your hand being in supination, as it was before, for if you roll your hand into pronation as you change your point, your motion will be wide. Roll your hand into pronation as you project the thrust along his blade, in the point indented in it, as it were in a nick, to direct your course. Oppose your hand high, and over his blade, to your right. Direct your point into the cavity under his arm. His effort to parry this thrust (if you have seized his foible), by his parade in tierce, will materially serve you, as it will be a fulcrum assisting your thrust, unless your sword hips or bends. Fig. 87, gives an idea of planting the tierce.

Engaged in quarte, if you find a direct thrust or cut impracticable for you to execute, but not otherwise, raise your point vertically; apply your fort to his point in tierce, and cut down vertically and forcibly, ending your cut in a thrust. The best mode of guarding this thrust, &c. is by the pointe
volante in tierce: thus extricate your foible by raising your point vertically, with your hand in tierce. By this mode, his foible will come to your fort.

The seconde differs from tierce only in its direction, which is under the arm; it is generally returned after you have parried the quarte over, or the tierce.

The thrust of prime is, or may be, returned after the parade in prime.

Although no guard can be weaker than that of prime, excepting the modern guards derived from it, such as the protects, &c. (fig. 88), yet it is useful in one case, and in that

**Prime.**

only; namely, in guarding off a forcible quarte over the arm; for if by his fort he has seized your foible, in pushing his quarte over, you cannot parry this thrust by your parade of tierce; on the contrary, your resistance in tierce will serve him as a fulcrum: for his sword, which was a lever of the third, that is, of the worst kind, before he had pushed it into
its present situation inside your arm, now becomes a lever of
the first, that is, of the best kind; therefore, instead of
resisting in vain, submit your point, and contract your hand
in prime; thus his foible will come to your fort.

The better mode of parrying is by the pointe volante in
tierce.

The quinte (fig. 89) seems to be unworthy of notice. The
quarte over the arm is executed by disengaging your pointe
closely. Spring your fort to his pointe, and hurl the thrust
into the cavity under his arm, turning your hand into com-
plete supination. Your opposition is to your right as in
tierce.

The octave is a good return, directed under his arm, after
you have parried quarte over, or tierce. After you parry
quarte over, or tierce, return tierce; if you see no opening for
tierce, return the octave, that is, quarte under his arm instead
of the seconde; you may, however, slide in tierce, and
instantly dart in seconde, which is tierce directed under his
arm; recover quickly, upon all occasions using your round
parade of quarte.

COMPOUND THRUSTS, CUTS, PARADE, &C.

An idea of the simple thrusts, and the project of compres-
sing them, having been previously submitted; in this section
will be offered a sketch of the complex thrusts, &c.

The weakness of the prime, seconde, and quinte, has been
already remarked: if these are radically bad in their simple
state, all modifications and combinations of them, in feints,
glissades, circles, and round parades, are still worse, and
therefore should be rejected.

The seconde should not be parried by the half-circle, but by
a little impulse of your fort in quarte, which will probably
disarm him. If you throw in the octave at the instant he
pushes seconde, you will both parry and hit him at the same
moment, as his foible will come against your fort; but your
round parade of quarte will break all such returns. Parry his
Quinte, or Hanging Guard.
quarte over with your round parade of quarte, and return quarte, or quarte over, or a vertical cut, which, if he parries, dart in quarte under his arm as you are in the act of recovering.

The glissade is a sliding movement along his blade, intended to draw him from the line, and to expose him to a thrust or cut. The glissade is dangerous, as he may hit you on the first movement by his simple thrust, having two to one in his favour. The glissades in simple quarte and tierce are dangerous; but the glissades of seconde, prime and quinte, are still more useless.

The flanconnade is a thrust directed to the lateral part of the belly: make use of it as a return from your round parade of quarte, by pressing down his point with your fort; the resistance of his point will assist the direction of your flanconnade. If he submit his point to your force, and comes to the second position in quarte, your foible will come to his fort; that is, he will parry, and perhaps hit you, in quarte. The mode of executing these little thrusts, &c. will be better illustrated by the example and living voice of a master, than by this detail.

Notwithstanding the danger generally resulting from the use of all cuts, and compound thrusts, and more particularly from any combinations of the guards of prime, seconde, &c., yet the complex guards, termed the round parades of quarte, of tierce, and of the half circle, cannot be sufficiently practised. These guards counteract and confound the projects of the adversary. The round parade of quarte circled twice round with celerity, and combined with the half circle annexed; or the rapid rotation, twice, or thrice, of the half circle, with the round parade immediately annexed, or any combination of the round parade of quarte with the round parade of tierce, terminated by simple quarte and tierce, form a shield sufficient to guard off all cuts and thrusts whatever.

Fig. 90.—The round parade in quarte is thus formed. With the point of your sword describe the circle in the direction of
the arrow (which circle is the base of the conical surface described by your weapon); feel his blade, by adhering to the point of contact as you circle; protrude his blade with dexterity, so as to bring it round to your former position of quarte; finish your parade with a degree of energy. If he circles twice, or oftener, repeat this parade, immediately annexing the half circle, whereby you will cross his sword, and perhaps disarm him; or you may annex to this parade your round parade of tierce, which will either disarm or drive him from the line. Dexterity, in the combination of these parades, will enable you, although blindfolded, to parry all superior cuts and thrusts.

Fig. 91.—The round parade of tierce is thus formed. With

the point describe a circle in the direction of the arrow, from your right towards your left; adhere closely, as if the swords were tied in the point of contact; finish this circle with a degree of force, in or near to the point of its commencement. If he circles, repeat this parade, and unite to it the round
parade of quarte, or simple quarte and tierce. The tierce, the quarte over, the quarte under the arm, and the vertical cut, hurled down along his blade, are all excellent returns immediately after this parade.

The half circle (fig. 92) is formed thus. By a rapid twirl

2nd. Position; Parade of the Demicircle.

1st. Position of Quarte.

of your hand, with your point describe the segment or arc of the circle in the direction of the arrow. The point is depressed, and the hand raised as high as your left eyebrow. Take care that in all parades whatever, you bend, and do not extend, your right arm.

The repetition of this parade forms circles; it collects all thrusts and low cuts; and when combined with the octave, it is a complete shield for defence, if he feigns, parry with the half circle, unless you choose to time him, or to break all his projects with your round parade of quarte. If he deceive your half circle, only extend your hand in octave, and he must fall on your point, &c.

**DISARMING.**

The dexterous combination of the round parades will enable you frequently to disarm your adversary. The weakness of the hand in pronation, particularly in the thrusts, cuts and guards of prime, seconde and quinte, is evident. This weakness is still more manifest, in the guards termed the hanging
FENCING.

93

Near side protect.

94

Giving Point.

guard, the protects, and the inside and outside half-hangers, &c. &c.—(Fig. 93 and 94.) No aid from the sword-knot can prevent the fingers from opening and yielding to any impulse in the vertical direction, when the sword is held in these positions. But even a tolerable swordsman may be disarmed in the following circumstances:

1. If he changes from tierce to push quarte, cross his foible from your left towards your right, in the direction of the opening of his fingers, direct your point in the line towards his right eye, allonge, and you will both hit and disarm him.

2. If he cuts over your point, or pushes quarte-over, use your round parade of quarte; instantly rolling your hand into pronation, direct your point in the line as before.

3. Parry any assault made over your arm with the pointe volante in tierce, hurl down the vertical cut, end it in a thrust, opposing your hand well in quarte, and he will be cut, hit and disarmed.

4. If he pushes prime, seconde, or quinte, &c., his hand is
ready prepared to be disarmed by the slightest impulse of your weapon in quarte, touching his foible. Be careful to disarm in the line, that you may not be exposed, in the event of your not succeeding in your plan.

5. If he pushes or cuts under your arm, rotate your hand, describing the half-circle three or four times in continuation; adhere closely to his blade, and he may be thus disarmed. Your point, in this case, describes circles, although this guard is termed the half-circle.

6. The following mode of disarming is safe and certain, however unfair it might be deemed in the schools: parry his quarte over with your round parade of quarte; and before his foot strikes the ground depress his foible, and adhere to it with your foot; seize the fort of his sword with your left hand, and he will be instantly disarmed, &c. &c. Attempt none of these modes of disarming before you feel yourself completely dexterous in the preceding parts.

OF THE TIME-THRUST.

Timing is the summit and very last stage of the art of defence, and not to be attempted, except by the ablest swordsman. It consists in the anticipation of your adversary, by nicking that point of time which is the most favourable and safe for you to make a thrust. The thrust delivered at this critical moment is called the time-thrust, and is of four kinds.

1. The first is, the time-thrust, which you deliver on his first movement to assault you, when you are both engaged within the proper measure. As, suppose he raises his point, or feigns; in either case, dart in a simple thrust, opposing your fort, either in quarte or tierce, as the case may require, and you will probably anticipate him, it being above two to one in your favour if you nick the time.

2. The time of the arrest is a decisive thrust, when properly executed. Be careful to take your station on guard, at least twenty-four inches beyond the extent of his allonge; at this
distance he cannot reach you; he must, therefore, advance one step. He means, suppose, to engage your blade in tierce, do not meet or touch his blade with yours, but nick the time of his first movement, and anticipate him by your well-delivered quarte. Recover quickly, and spring back to your former ground, or rather twenty-four inches farther back. Use your round parade of either quarte or tierce, as you are recovering; repeat the same if you can seize an opportunity, as it will be safer for you to act in this manner, than to risk a contest with him in close action. You give the time-thrust gratis, unless he is pre-eminent in the art.

3. Should he, standing out of measure as before, advance to join your blade in quarte, do not suffer your blade to be touched, seize the time of his advance, and send home a quarte over the arm. Spring back to your ground as before; you may throw in a quarte under his arm as you recover.

4. Counter-timing. If your antagonist should decline to advance, in the expectation of timing you as you advance, you may counter-time him in this manner:—Advance in tierce, to excite him to deliver his time-thrust in quarte, as you are advancing, whirl your hand forcibly into the half-circle, with your point directed in the line, and you will parry and counter-time him at the instant he delivers his thrust.

Again, suppose he will not advance, but rather wait, for the purpose of timing you on your first movement. He stands guarded in tierce to allure you to engage his blade in quarte, that he may time you with his quarte-over, as you advance from the pointe volante in tierce, and his foible will be precisely applied to your fort; from this position hurl down a vertical cut; end your cut in a thrust along his blade, over his arm. If you succeed in this stroke, as you must if you do your duty, you may continue to pour in thrust after thrust incessantly until he submits.

If, however, your antagonist has recovered quickly, and parried your assault by the pointe volante, which seems to be the only parade adequate to the purpose, the assault may be
continued. In this case, the best general rule is to use your round parades, and the pointe volante. Hesitate not to excite him to cut at your lower extremities. For example; if he cuts low at your thigh, withdraw it a little; seize this critical moment, and cut down vertically through his face; terminate this cut in a thrust, in conformity to the Roman practice, as in fig. 95.
BROAD SWORD,

AS IN THE COMMON MILITARY PRACTICE.

EXPLANATION AND USE OF THE TARGET, FIG. 96.

The target should be placed so as to have the centre rather below the height of a man's shoulder: from below this centre a line is drawn on the ground directly to the front; and, at the distance of about ten feet, the learner is placed in the position of attention, with his left heel on the line, so that when he turns to the first position of the exercise, his right foot may cover it. The circular figure shews the seven cuts and guards. The cuts are directed through the centre, distinguished by lines, and named according to that figure from which each cut commences. The guards are performed by holding the sword opposite, and in the inclination of the dotted lines, which have sword-hilts attached to them, and supposing the circular figure to be about the breadth and height of a man's body, the cuts and guards will be regulated according to the lines described upon the circle; nor is the learner practised in any other mode until he has gained the proper direction of the cuts, as well as the inclination of the blade, and portion of the wrist, in forming the guards.

The points, or thrust, should be directed, as marked in the target, with the wrist towards No. 1, and the edge of the sword raised to the right in the first point; or towards No. 2, with the edge raised to the left in the second point; and in the third point, with the wrist rising to the centre, the edge upwards to the right, and the point directed as marked on the bottom of the circle.
OF THE PREPARATORY POSITION AND MOVEMENTS
PREVIOUS TO USING THE SWORD.*

Attention.—The body is to be erect, the heels close together, and the hands hanging down on each side.

First Extension Motions.—This serves as a caution, and the motions tend to expand the chest, raise the head, throw back the shoulders, and strengthen the muscles of the back.

One.—Bring the hands and arms to the front, the fingers lightly touching at the points, and the nails downwards; then raise them in a circular direction well above the head, the ends of the fingers still touching, the thumbs pointing to the rear, elbows pressed back, and shoulders kept down.

Two.—Separate and extend the arms and fingers, forcing them obliquely back, till they come extended on a line with the shoulders; and as they fall gradually from thence to the original position of Attention, endeavour, as much as possible, to elevate the neck and chest.

These two motions are frequently practised, with the head turned as much as possible to the right or left, and the body kept square to the front; they are repeated by fluglemen placed to the respective flanks. This tends very materially to supple the neck, &c.

Three.—Turn the palms of the hands to the front, and press back the thumbs with the arms extended, and raise them to the rear, till they meet above the head; the fingers pointing upwards, with the ends of the thumbs touching.

Four.—Keep the arms and knees straight, and bend over till the hands touch the feet, the head being brought down in the same direction.

Five.—With the arms flexible and easy from the shoulders, raise the body gradually, so as to resume the position of attention.

* Drawings of these positions and motions may be seen in Walker's Manly Exercises, Fourth Edition, published by Hurst, No. 5, St. Paul's Church Yard. The Fifth Edition published by Orr, is not recognised by the author.
The whole of these motions are done very gradually, so as to feel the exertion of the muscles throughout.

First Position in Three Motions.—Caution.

One.—Move the hands smartly to the rear, the left grasping the right arm just above the elbow, and the right supporting the left arm under the elbow.

Two.—Make a half face to the left, turning on the heels, so that the back of the left touches the inside of the right heel; the head retaining its position to the front.

Three.—Bring the right heel before the left, the feet at right angles, and the right foot pointing to the front; the shoulders square to the left, and the weight of the body resting on the left leg.

Second Position in Two Motions.—Caution.

One.—Bend the knees gradually, keeping them as much apart as possible, without raising the heels or changing the erect position of the body.

Two.—Step out smartly with the right foot about eighteen inches in line with the left heel; the weight of the body remaining on the left leg.

Balance Motions.—Caution.

One.—Move the right foot about eight inches to the rear of the left heel, the toe lightly touching the ground, with the heel perpendicular to it, forcing the knees well apart.

Two.—Raise the body gradually by the extension of the left leg.

Three.—Bend the left knee, resuming the position made previous to the second motion.

Four.—Advance the right leg, and with a smart beat of the foot resume the Second Position, from which the balance motions commenced.

First Position.—Extending both knees, draw the right heel up to the left.
Third Position in Two Motions.—Caution.

One.—Incline the right side to the front, with the hip kept in, so that the shoulders and knee are perpendicular to the point of the foot.

Two.—Step out smartly to the front, about thirty-six inches, with the knee perpendicular to the instep; the left knee and foot kept straight and firm, the heels in a line, the body upright, and the shoulders square to the left.

Second Extension Motions.—Caution.

One.—Bring the arms to the front of the body with the hands closed, and the knuckles uppermost, touching each other below the lower button of the jacket; raise them gradually (keeping the elbow on the same line with them) to the pit of the stomach, the knuckles of the fingers by degrees turning upwards; then by forcing back the shoulders, the hands will be drawn apart, and the motion is completed, by sinking the elbows, and smartly extending the arms and fingers in a diagonal line, with the right wrist as high as the head, the shoulders kept down, and the thumbs inclined to the right.

For beginners, this motion may be divided, by giving the word Prepare, for the first part; and remaining perfectly steady, when the hands are brought to the breast ready to separate; then give the word One, for the motion to be completed.

Two.—Close the right hand, and draw it into the shoulder, at the same time inclining the body forward, until the right elbow rests upon the point of the knee; the left arm rising gradually, and remaining extended, as the body advances, so as to bring the wrist as high as the head, which must be well kept up.

Three.—Raise the upper part of the body, drawing in the elbow, and, when nearly upright, extend the right arm smartly, and open the hand; thereby resuming the position formed by the first motion.
Four.—Raise the body by extending the right leg.

Five.—Bend the right knee and advance the body, so as to resume the position in the first motion.

First Position.—Spring up with the arms to the rear, and the right heel close to the left, which forms the First Position, as before described.

Front.—Come smartly to the position of Attention, bringing the hands and feet, in one motion, to their proper places.

In the foregoing instructions, the Positions and Movements preparatory to using the Sword have been explained, giving a separate word of command for each motion respectively. The same positions may now be gone through, naming only in the word of command the Position or Movement required, and distinguishing it by the numbers, One, Two, &c. &c. It is intended by this to practice the learner in changing from the different positions readily, and without losing his balance, which will almost invariably rest upon the left leg.

Positions by Numbers.—Caution.

One.—Raising the arms to the rear, and the right heel to the front, come at once to the First Position.

Two.—Come to the Second Position.

Three.—To the Third Position.

Two.—To the Second Position.

One.—To the First Position.

Three.—To the Third Position.

First Balance Motion.—Spring up to the position, as shown in the First Balance Motion.

Three.—Step out to the Third Position.

First Balance Motion.—Spring up as before.

Two.—Step out to the Second Position.

Single Attack.—Raise the right foot, and beat it smartly on the ground.
Double Attack.—Raise the right foot, and beat it, as before, twice on the ground; first with the heel, and then with the flat of the foot.

Advance.—Move forward the right foot about six inches, and place it smartly on the ground; then bring the left foot lightly about the same distance.

Single Attack.—As before.

Retire.—Move the left foot lightly to the rear about six inches, the whole weight and balance of the body still continuing to rest upon it; then move the right foot back the same distance, and place it smartly on the ground.

Double Attack.—As before.

Front.—Draw back the right foot, and resume the position of Attention.

The object of the preceding portion of the Drill, as Positions and Movements preparatory to using the Sword, is to give a free and active use of the limbs; a thorough command of which, with the knowledge of the best mode of position, in applying the force of the muscular powers, will not only facilitate and give great advantage in the use of the sword, but tend to ensure a proper efficacy to the cuts and guards: enabling the beginner to gain more easily that pliability, as well as strength in his position, which may be required either for assault—defence—or in quickly returning the attack upon his adversary. The instructor proves the firmness of the positions by bearing equally and firmly on the shoulders of the learner, and during the changes in forming the Second Position and Balance Motions; when in the First of the Second Extension Motions, by taking hold of his right wrist with both hands, and bearing upon it in the direction of the left leg, upon the line of which the right arm should be, if properly placed; and making him also, in each position, move the right toe up and down, without its motion affecting the body. In all positions where both knees are bent, the more so they are the better; as a greater spring and elasticity is gained in
forming quickly any other position. The body must be generally (and indeed almost always) balanced, and rest upon the left leg; by which means greater flexibility is allowed to the right leg in moving forward to gain distance upon an adversary, or vice versa, in retiring from his reach. No precise length can be assigned in moving the right leg to the front in the Third Position, as it depends upon the length and stride of the person; but it should not be beyond what may allow of his return to the First or Second Position with quickness, and perfect facility to himself. When this section of the exercise is practised as a Drill for the limbs only, it should be performed with the left shoulder and foot to the front, as well as with the right.

OF THE CUTS, POINTS, GUARDS, AND PARRIES.

The learner being perfectly instructed in the preparatory movement, now takes the sword; making him acquainted with the strong and weak parts of it; the forte (strong) being the half of the blade near the guard; the foible (weak), the half towards the point. A knowledge of these distinctions is very material, either in giving or guarding a cut; as much depends upon their proper application. From the guard upwards, in opposing the blade of an adversary, the strength decreases in proportion as it is received towards the point; and vice versa, it increases from the point downwards. The forte ought always to gain the foible of the opponent's weapon, and the cuts should be given within eight inches of the point, that the sword may clear itself. In delivering a cut, it is advantageous if the forte meet the adversary's foible, as it will of course force his guard. The sword should be held flexible, and easy in the hand, but yet sufficiently firm to resist the cut of an adversary, and to give a cut or thrust with proper force and precision. The middle knuckles are to be in the direction of the edge in all cuts and guards. If the sword is light, the thumb may be placed along the back of the handle; if heavy,
the grip of the handle should be held by the thumb and fingers around it. According to the directions stated in the explanation of the Target, the learner is now placed before it; or he may be previously instructed in the drawing, returning, carrying, sloping swords, saluting, &c.

Draw Swords.—Take hold of the scabbard of the sword with the left hand, just below the hilt, which should be raised as high as the hip; then bend and raise the right arm to the front, as high as the shoulder, and move it across the body until the hand seizes the hilt, turning it at the same time to the rear. By a second motion, draw the sword from the scabbard, with an extended arm, the edge being to the rear; and lower the hand until the hilt is in a line with the chin, the blade perpendicular, and edge to the left, which forms the position of Recover Swords.—By a third motion, lower the wrist below, and in line with the right hip, the elbow being drawn back, and the arm extended as much as it can be with ease; the hand slightly grasping the sword, but ready, by the contraction of the fingers, to resume a firm hold. The upper part of the sword will then be in the hollow of the right shoulder, with the edge to the front, which brings it to the position of Carry Swords. The left hand, in dropping the scabbard as soon as the sword is drawn, remains as in the position of Attention.

Port Swords.—Bring the sword diagonally across the body with the edge downwards; and, by bending the left elbow, raise the hand as high as the shoulder, taking hold of the blade between the thumb and fore finger, the knuckles being to the front, and the thumb extended towards the point of the sword.

Salute.—Lower the left arm, and raise the right to the position of Recover Swords, with the thumb extended to the side of the handle; then, without pause, gradually sink the wrist to the right, clear of the body, and rather in advance of the thigh, the arm extended, the elbow drawn in, and the
sword lowered in the direction of the right foot, until the point is a few inches from the ground, with the edge to the left. The left arm is, at the same time, to be raised to the left as high as the shoulder, and brought gradually round with a circular motion, until the hand touches the peak of the cap, the knuckles being upwards, and the elbow raised.

The salute in line is performed at the second and third motion of Present Arms; but on passing a superior officer in review order, the salute commences when ten paces distant from him, allowing four paces for both motions, which are now blended into one, with a circular and graceful movement of the arm in coming up to the recover; for the effect of the salute depends chiefly upon the manner and address with which it is given; the head and eyes being also turned towards the person for whom the compliment is intended; having passed him about six paces, the sword is again brought to its original position. The salute invariably commences as the left foot comes to the ground, and the same rule is followed in returning it to the Recover.

Port Swords.—Resume the position of Recover Swords; and by a second motion come to the Port.

Carry Swords.—As directed under the third motion of Draw Swords.

Slope Swords.—The hand is carried to the front in line with the elbow, which now becomes close to the hip, with the sword resting upon the shoulder, and the edge being to the front.

Stand at Ease.—Bring the hands together, the left supporting the right; the back of the sword resting on the inside of the left arm, the right instep drawn close to the left heel, and the left knee slightly bent.

The preceding directions for standing at Ease are meant to apply only when the officers are in front of the line, or at Open Order; as in the ranks, or at Close Order, the point
should be lowered between the feet, at the edge to the right, the hands together, with the left uppermost.

**Carry Swords.**—As before.

**Return Swords.**—Bring the hilt to the hollow of the left shoulder, the blade being perpendicular, and the back of the hand to the front; then by a sharp turn of the wrist drop the point into the scabbard, turning the edge to the rear, until the hand and elbow are in a line with each other across the body; by a second motion replace the sword in the scabbard, keeping the hand upon the hilt, until withdrawn by a motion from the flugelman.

Great care should be taken to preserve the edge of the blade, by allowing the back alone to bear upon the scabbard.

During a march, or in close order for manoeuvres, the sword is carried with an extended arm, letting the outward part of the guard rest upon the inside of the fingers, with the thumb above it; the blade being perpendicular, and the back, near the point, in the hollow of the shoulder.

Prepare to perform Sword Exercise.—Being at the position of Attention with sloped swords, turn the body and feet to the First Position, with the left hand resting upon the hip, and thumb to the rear.

**Right, Prove Distance.**—Extend the arm to the right, and lower the sword in a horizontal direction from the shoulder, with the edge to the rear, and the left shoulder brought square to the front.

**Slope Swords.**—As before.

**Front, Prove Distance.**—Step out to the Third Position, and extend the arm, lowering the point of the sword towards the centre of the target, with the edge to the right.

**Slope Swords.**—As before.

In both movements of proving distance, the fore-finger and thumb are stretched along the handle, the thumb being on the
back, with the end or pommel of the hilt in the palm of the hand.

Guard.—Advance the point of the sword, extending the arm towards the centre of the target; the edge downwards, and thumb along the back of the handle: then, without pause, step out smartly to the Second Position, bending and raising the elbow, the hand being directly over the right foot, and turn the edge of the sword upwards to the right with the point lowered, and inclining to the left, so as to form an angle, through which the opponent should always be seen; the left shoulder brought a little forward, and the hilt of the sword inclining towards No. 1, and the point directed rather below, and to the left of No. 4.

Inside Guard.—Lower the wrist with the knuckles down and over the foot; the point to the front, the edge to the left, and the hand as low as the elbow, which is to be nearly on a level with, and in front of, the upper part of the hip; at the same time make the single attack. The wrist is here inclined towards No. 4; the point towards No. 1.

Outside Guard.—Turn the wrist with the nails downwards, and bring the edge to the right, repeating the single attack; the hand inclining to No. 3; the point towards No. 2.

Assault.—Draw up to the First Position, and raise the right arm to the front, with the wrist opposite No. 1, and the elbow rather bent towards the centre of the circular figure; the back of the sword, near the point, resting on the shoulder, with the edge inclined to the right.

One.—Extending the arm, direct the cut to the front in a diagonal line from right to left, as shewn from No. 1 to No. 4; and as the point clears the circle, turn the knuckles upwards, and continue the sweep of the sword, so as to bring the point to the rear of the left shoulder, upon which it rests, with the edge inclined to the left, and the wrist opposite No. 2.
CUTS, POINTS, GUARDS, AND PARRIES.

Two.—Direct the cut diagonally from No. 2 to No. 3, and turn the wrist, so that the sword continues its motion till it rises perpendicular to it, with the edge to the rear, and the arm extended to the right, on a level with the shoulder.

Three.—Cut diagonally upwards from No. 3 to No. 2, and continue the motion of the wrist so as to bring it to the hollow of the left shoulder, with the point of the sword perpendicular to it, and the edge to the rear.

Four.—Cut diagonally upwards from No. 4 to No. 1, and carry the sword to the right, turning the knuckles downwards, with the wrist as high as the shoulder, and the edge to the rear.

Five.—Cut horizontally from No. 5 to No. 6, and turn the knuckles up, with the edge of the sword to the left, and point to the rear, over the left shoulder.

Six.—Cut horizontally from No. 6 to No. 5, and bring the hand in the direction of No. 7; the sword being on the same line over the head, with the point lowered to the rear, and the edge uppermost.

Seven.—Cut vertically downwards from No. 7, to the centre of the circle, and remain with the arm extended, placing the thumb along the back of the handle, with the left shoulder well pressed back.

First Point.—Turn the wrist with the edge of the sword upwards to the right, drawing back the hand just above, and in front of the right eye; the elbow well bent, and raised; and the left shoulder brought a little forward. By a second motion extend the arm, and deliver the point smartly to the front, in the direction of the centre of the target, with the wrist inclining to No. 1, and press back the left shoulder, so as to advance the right, which should be equally attended to in the second and third Points also.

In this, and throughout the instructions, where a second
motion is required, the word of command Two is given, unless
the practice is carrying on with a flugelman.

Second Point.—Turn the edge upwards to the left, and
draw in the elbow close to the body, with the wrist in a line
above it, as high as, and in front of, the breast. By a second
motion deliver the point as before directed, the wrist inclining
to No. 2, and the edge raised with the knuckles downwards.

Third Point.—Draw in the arm till the wrist touches the
upper part of the hip; the edge raised to the right, the
left shoulder advanced, and the hips well thrown back. By
a second motion deliver the point in the direction, as marked
on the Target, and raising the wrist towards the centre.

Guards.—This serves as a caution for the seven guards
which follow, distinguished in the word of command, First,
Second, &c.

First.—Turn the edge to the left, the thumb resuming its
grasp of the handle, and draw in the elbow close to the body;
the wrist being kept to the front, and the sword placed oppo-
site the diagonal line, as shewn in the Target by the hilt
marked First Guard.

In this, and in all the following guards, the point should be
advanced rather to the front.

Second.—Turn the wrist with the knuckles uppermost, and
the edge to the right; the sword placed opposite the diagonal
line with the hilt marked Second Guard.

Third.—Turn the wrist and edge to the left, nearly as high
as the shoulder, with the point lowered to the right; the
sword being held towards the diagonal line from the hilt
marked Third Guard.

Fourth.—Turn the wrist and edge to the right, with the
point to the left; the sword held towards the diagonal line
from the hilt marked Fourth Guard.

Fifth.—Turn the edge to the left, with the wrist as high
as the shoulder, to the front and left of the body; the sword being placed opposite the perpendicular line from the hilt marked Fifth Guard.

Sixth.—Turn the wrist and edge to the right, so as to bring the sword opposite the perpendicular line from the hilt marked Sixth Guard.

Seventh.—Raise the hand above, and in advance of, the right ear; the elbow being raised, and well kept back, with the left shoulder slightly brought forward, and the sword in the direction of the line from the hilt marked Seventh Guard.

Left Parry.—Lower the wrist nearly close to the right shoulder, with the thumb at the back of the handle, and the edge to the right; the hips well pressed back, and the sword opposite the centre perpendicular line. By a second motion, turn the wrist, so that the point falls to the rear, and forms a circle from left to right of your body, and again returns to its former position.

Right Parry.—Drop the point to the rear, and by the turn of the wrist continue the motion, so as to form a circle from right to left of your body; the sword returning to its position as before.

The cuts and guards may now be combined, and here it is more particularly intended to practise the learner in shewing the guard for each cut, so as to impress it on his recollection. The cuts should be given from the wrist to the full extent of the arm to the front, and in the Third Position; with the cut directed no further than the centre of the circle, opposite which the point should remain.

Left Check.—Step out to the Third Position, and deliver the cut One towards the centre of the Target, opposite to which the point is to remain steady, with the arm extended, and the wrist kept well up in this as in all the following cuts.
First Guard.—Spring up to the First Position, and form the First Guard.

Right Check.—Deliver cut Two, and remain as before.

Second Guard.—Spring up to the Second Guard, &c.

Wrist.—Deliver the cut Three, &c.

Third Guard.—Spring up to Third Guard, &c.

Leg.—Deliver cut Four, the point not carried above the height of the knee, &c.

Fourth Guard.—Spring up to Fourth Guard, low down, and arm extended, &c.

Left Side.—Deliver the cut Five, &c.

Fifth Guard.—Spring up to Fifth Guard, &c.

Right Side.—Deliver cut Six, &c.

Sixth Guard.—Spring up to Sixth Guard, &c.

Head.—Deliver cut Seven, &c.

Seventh Guard.—Spring up to Seventh Guard, &c.

First Point.—As before directed, but the second motion given in the Third Position.

Left Parry.—Spring up to First Position, and parry.

Second Point.—As before, in Third Position.

Right Parry.—As before, in First Position.

Third Point.—As before, in Third Position.

Right and Left Parry.—Form both Parries on drawing up to the First Position.

Guard.—As before directed, in the Second Position.

Slope Swords.—As usual, drawing up to the First Position.

When performing by flugelman, the practice of the Assault is also made as follows:—The elbow is slightly bent, and the wrist turned sufficiently to deliver the cut One; the hand being brought to the front, and about the height of the face,
so as to be in the direction of the centre of the Target, with
the hips pressed well back. The seven cuts are then delivered
without any material pause between them; as, by the proper
and timely turn of the wrist, each cut will lead into the other,
and, consequently, blend their force together: the cuts should
be given strong with the edge, leading forwards, the wrist retain-
ing its direction to the front, as much as possible, without
moving to the right or left; and in returning to prepare for
another cut, the edge should be drawn back nearly in the
same line; the arm being a little bent, so as to allow a free
play of the elbow and shoulder, in giving effective force to the
cut, and then extended to the utmost in the delivery of it.
Whenever the learner fails to carry the edge well, in making
the assault, he should be practised in combining the cuts One
and Four, repeating them several times; also, Two and Three,
and Five and Six; taking care that the edge leads on the
respective lines in the Target, the wrist being darted towards
the centre in each cut.

OF THE ATTACK AND DEFENCE.

The Drill being now complete in the formation of the cuts,
and their respective guards, may put them in practice accord-
ing to a mode of exercise.

OF THE PRACTICE DRILL WITH STICKS.

As no exercise with the Sword can be brought to perfection
without some species of loose or independent practice, Sticks
should be substituted for Swords in the present instance, as, in
Fencing, Foils are used for the acquirement of that art.
The Point also is to be occasionally substituted for the Cut,
and defended by the same Guard as for the latter; and as a
thrust should always be given, if a good opportunity and
opening is offered, such an advantage should be taken of the
practice with sticks, and the thrust delivered by an immediate
extension of the arm, when the point is in the proper line of direction.

In the following directions, the word Sword is retained, although the practice is with sticks, which should be about thirty-eight inches long, and not so weak as to bend; and the leather practising-hilts merely large enough to cover the hand, without confining it: strong wire masks ought always to be used, as it enables those who practise to cut or thrust with more confidence.

It is good practice, in the drill with sticks, for each movement of Attack, or Defence, first to be performed in two motions, by repeating each number, the stick slightly touching the part to which it is directed, and the defence only formed when the number is given a second time.

A Feint is a half cut, or thrust, menacing an attack on one part whilst the intention is to direct it at another; and the cut, or thrust, may be given immediately after the feint, without shifting the leg, when practising by Division.

Particular attention should be paid, that in the Attack the wrist preserves, as much as possible, the line of direction; and, in each position of Defence, that it only deviates sufficiently to form the guard, taking care to have the wrist, elbow, and shoulders, supple and easy, so as to be ready to deliver a cut, thrust, or any movement of Attack, or Defence.

As it is supposed that the Stick is the substitute for the Sword, the cut is considered fair, and effective, only when given with that part which would, of course, correspond with the edge; nor should anything be attempted with the Stick, which could not be performed with the Sword.

It would be useless to endeavour to state which are the best movements, as that must depend entirely on the judgment of the parties engaged, and their respective abilities; but as the loose play should not be allowed until a sufficient competency is attained by the parties, and they have been thoroughly instructed in the movements of Attack and Defence, they can never find themselves at a loss if the art is followed
GENERAL OBSERVATIONS.

up by sufficient practice, and attention to the instructions they have received.

GENERAL OBSERVATIONS AND DIRECTIONS.

The exercise of the Sword consists of seven Cuts, or directions of the Edge; the same number of Guards, or defensive Positions; the Point (or Thrust) given with the nails up or down; and two circular motions of the Blade, termed Parries: —therefore, whatever may be the Attack, or Defence, it can be formed only by having recourse to some of the above movements, or a combination of them.

In Engaging, by which is meant the action of joining the sword of an opponent, either previous to his, or your own attack, there should be only a slight pressure on his blade, so that the hand, or wrist, may be the more susceptible of any motions he may make; and though the Position termed Guard affords protection at the moment, it is merely considered as preparatory to any offensive or defensive movement, varying the latter according to the Points liable to be attacked.

In all attacks, whether Cuts or Thrusts, the motion ought to increase in speed, the impetus being given at the last; the same rule should be observed in stepping out to the Second and Third Position: but, in recovering, the reverse is to be followed, as the part is the quickest; and nothing can be of more importance, than that the eye should follow those of an opponent, and slightly glance at the part at which you intend to cut or thrust; taking care never to look at your own sword, which will invariably follow the eye wherever you direct it.

It is merely Drill Practice in making the Assault by Number, and although each cut has its guard according to the number, which answers for both, yet it does not follow that the File on the Defensive is always to have recourse to it, as he may frequently be enabled to secure himself more effectively, and quicker by forming another Guard. If, for example, he makes the cut Six at the body, and his opponent, after defending by the Sixth Guard, returns the cut One at the breast, then the
Fifth Guard becomes the quickest movement of defence; but if the opponent has defended by the Second Guard previous to his return of the cut One, then the First Guard is the soonest formed; consequently, the First and Fifth Guards each defend the cuts One or Five. The Second and Sixth Guards each defend the cuts Two or Six, according as they may be given high or low; and if the Third or Fourth Guards are required for the defence of the leg, the arm must be extended, so that the forte of the blade may receive the foible of the opponent’s weapon; bearing well in mind, however, that in all cuts at the leg, when at the proper distance, the shifting of your own leg and delivering a cut at the same moment, becomes the most effective and advantageous defence; and which is still more so to a tall man (even in every part of the body) when engaged with another of lesser stature, or length of arm, as he will be out of his opponents’ reach, whilst the latter may be within his. The power of defence does not consist so much in your own strength of position, as in effecting a decided quick movement in that direction, in which your opponent has the least power of resistance, especially in defending against the Point, when the First, Third, and Fifth Guards are the most effective against the First and Third point; and the Second, Fourth, and Sixth Guards, against the Second point; provided the wrist is previously so placed, that the requisite Guards may be quickly executed. The two Parries must also be regulated by the position of the opponent’s wrist, so that the bearing of your sword may tend to open his hand, and, if well judged and timely given, will disarm him; or so cripple his wrist, as to preclude even the capability of forming a defensive guard, or continuing the attack.

If opposed to the small sword, have recourse to the cuts Three and Four, directing them at the arm, by which means there is every probability of the cuts taking effect, as it must always, in thrusting, come within range of the Edge, before the point can be sufficiently advanced to reach the body. If
the above cuts are quickly given and continued, they will also be found advantageous in advancing against the small sword, as they form an Attack and Defence at the same instant; but should the opponent be the most skilful and quickest, then it is best to retire while forming them, cautiously preserving the proper distance, so that each cut may just reach the fore part of his arm.

The Second Point, if delivered as a first movement, should be given with great caution, the wrist being then so liable to the disarm. It should be resorted to chiefly in the return, or after a Feint from the outside or inside Guards; if from the former, Feint Third Point under, and deliver Second Point over the arm; if from the latter, Feint cut Two, and continue the sweep of the sword, until the point is sufficiently lowered to deliver without pause the Second Point at the body under the arm.

Although a regular mode is laid down for drawing the sword, yet occasional practice should be given to come to the Guard immediately, and at any required point, without going through the Parade Motions, &c., which will prepare the Swordsman for any sudden attack of an Enemy.
SIMPLER METHOD FOR THE BROAD SWORD.

The general position of the body, according to this method, is the same as for fencing. But the arm is more bent, and the point of the sword more elevated; so that it is somewhat higher than the head.

Two guards and one time-thrust are all the defensive means employed.

On coming on guard with the quarte position, it is so decidedly taken as to prevent the possibility of a straight thrust or cut on the left side. The left side being thus out of danger, the attention can be more exclusively devoted to the right.

In cutting from quarte to tierce, and vice versa, the sword should be drawn no further back than is necessary to clear the adversary's.

In cutting at the adversary's sword-arm, or wrist, the extension is sufficient without the longe.

In all other cases, the longe is necessary.

All cuts aimed at the right side of the body or head, are guarded by simultaneously turning the hand into tierce, contracting the elbow, and raising the point.

All cuts aimed at the left side of the body or head, are guarded by turning the hand into quarte, contracting the elbow, and raising the point.

In passing from the guard of quarte to that of tierce, the fort and foible of the sword move each exactly the same distance from the left to the right, and vice versa: so that the two positions are parallel. In both of them, the sword inclines a little to the left.
The return from the guard of tierce is at the outside of the arm, the head, or the leg.

The return from the guard of quarte is at the head, inside of the breast, or leg.

The cut under the wrist from the inside guard, quarte, is guarded by following the adversary's blade with a half-circle, like the first half of the counter in quarte.

The legs are protected by drawing the right back behind the left, and thrusting straight at the adversary's head or breast the moment he attacks them.

The great advantage which this method has over the preceding, is, that it is so much more easily acquired. The difficulty of following, with the seven guards of the military school, all the feints which the adversary may make, is very great.

It has been objected, that the mode of defending the legs according to this plan, is dangerous in practising with the sticks. This objection is easily avoided by the players agreeing before they begin not to attack the legs.
THE QUINTAIN.

As an excellent sword-exercise, this is worthy of being practised. It is here given from Strutt, with some improvement of method.

The quintain, originally, was nothing more than the trunk of a tree or a post, set up for the practice of tyros, and was called the pel, from the Latin palus. It was six feet in height above the ground, and so firmly fixed therein as not to be moved by the strokes that were laid upon it.—Fig. 97.

Tilting, or combating at the quintain, is a military exercise of high antiquity. The exercise of the pel is spoken of by Vegetius, who tells us that this species of mock combat was in common use among the Romans, who caused the young
military men to practise at it twice in the day, at morning and noon; and he adds, that they used clubs and javelins, heavier than common, and fought at the pel as if they were opposing an adversary, &c. In the code of laws established by the Emperor Justinian, the pel is mentioned as a well known sport; and permitted to be continued, upon condition that it should be performed with pointless spears, contrary to the ancient usage, which it seems required them to have heads or points.

In its original state, it was not confined to the exercise of young warriors on horseback; it was an object of practice for them on foot, in order to acquire strength and skill in assaulting an enemy with their swords, spears, and battle-axes.

The practitioner was then to assail the pel, armed with sword and shield, in the same manner as he would an adversary, aiming his blows as if at the head, the face, the arms, the legs, the thighs, and the sides; and taking care at all times to keep himself so completely covered with his shield, as not to give any advantage, supposing he had a real enemy to cope with.

Afterwards, a staff or spear was fixed in the earth; and a shield being hung upon it, was the mark to strike at. The dexterity of the performer consisted in smiting the shield in such a manner as to break the ligatures, and bear it to the ground.

As the rules of chivalry would not admit of any person, under the rank of an esquire, to enter the lists as a combatant at the justs and tournaments, the burgesses and yeomen had recourse to the exercise of the quintain, which was not prohibited to any class of the people. But, as the performers were generally young men whose finances would not at all times admit of much expense, the quintain was frequently nothing better than a stake fixed into the ground, with a flat piece of board made fast to the upper part of it, as a substitute for the shield that had been used in times remote; and
such as could not procure horses, contented themselves with running at this mark on foot.—Fig. 98.

In process of time, this diversion was improved; and instead of the staff and the shield, the resemblance of a human figure, carved in wood, was introduced. To render the appearance of this figure more formidable, it was generally made in the likeness of a Turk or a Saracen, armed at all points, bearing a shield upon his left arm, and brandishing a club or a sabre with his right. Hence this exercise was called by the Italians, "running at the armed man, or at the Saracen."—Fig. 99.
The quintain, thus fashioned, was placed upon a pivot, and so contrived as to move round with facility. In running at this figure, it was necessary for the horseman to direct his lance with great adroitness, and make his stroke upon the forehead between the eyes, or upon the nose; for if he struck wide of those parts, especially upon the shield, the quintain turned about with much velocity; and, in case he was not exceedingly careful, would give him a severe blow upon the back with the wooden sabre held in the right hand, which was considered as highly disgraceful to the performer, while it excited the laughter and ridicule of the spectators.

When many were engaged in running at the Saracen, the conqueror was declared from the number of strokes he had made, and the value of them; for instance, if he struck the image upon the top of the nose between the eyes, it was reckoned for three; if below the eyes, upon the nose, for two; if under the nose, to the point of the chin, for one; all other strokes were not counted; but whoever struck upon the shield, and turned the quintain round, was not permitted to run again upon the same day, but forfeited his courses as a punishment for his unskilfulness.

Others made use of a moveable quintain, which was very simply constructed; consisting only of a cross-bar, turning upon a pivot, with a broad part to strike against on one side, and a bag of earth, or sand, depending from the other. There was a double advantage in these kinds of quintains: they were cheap, and easily procured. "He," says Stow, "that hit not the board end of the quintain was laughed to scorn; and he that hit it full, if he rode not the faster, had a sound blow upon his neck with a bag full of sand, hanged on the other end."—Fig. 100.

The form of the modern quintain is more fully described by Dr. Platt, in his History of Oxfordshire:—"They first set a post perpendicularly into the ground, and then place a slender piece of timber on the top of it on a spindle, with a board nailed to it on one end, and a bag of sand hanging at
the other; against this board they anciently rode with spears. I saw it at Deddington, in this county, only with strong staves,

which violently bringing about the bag of sand, if they make not good speed away, it strikes them in the neck or shoulders, and sometimes knocks them off their horses; the great design of this sport being to try the agility both of horse and man, and to break the board. It is now," he adds, "only in request at marriages, and set up in the way for young men to ride at as they carry home the bride; he that breaks the board being counted the best man."

All writers recommend the use of arms of double weight upon these occasions, in order to confer strength, and give the warrior greater facility in wielding weapons of the ordinary size.

The military men, in the middle ages, would sometimes also practise with their lances at a man completely armed; whose business it was to act upon the defensive, and parry their blows with his shield. Ducange, accordingly introduces one knight saying to another, "I do not by any means esteem you sufficiently valiant (si bon chevalier) for me to take a lance and just with you; therefore, I desire you to retire some
distance from me, and then run at me with all your force, and I will be your quaintain."—Fig. 101.

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THE WATER QUINTAIN.

Fitzstephen speaks of an exercise of this kind, which was usually practised by the young Londoners upon the water during the Easter Holidays. A pole, or mast, he says, is fixed in the midst of the Thames, with a shield strongly attached to it; and a boat being previously placed at some distance, is driven swiftly towards it by the force of oars and the violence of the tide, having a young man standing in the prow, who holds a lance in his hand, with which he is to strike the shield. If he be dexterous enough to break the lance against it, and retain his place, his most sanguine wishes are satisfied; on the contrary, if the lance be not broken, he is sure to be thrown into the water, and the vessel goes away without him; but at the same time two other boats are stationed near to the shield, and furnished with many young persons, who are in readiness to rescue the champion from danger. It appears to have been a very popular pastime; for the bridge, the wharfs, and the houses near the river, were
crowded with people on this occasion, who come," says the author, "to see the sports, and make themselves merry."
—Fig. 102.

RUNNING AT THE RING.

Tilting, or, as it is most commonly called, running at the ring, was also a fashionable pastime in former days. The ring is evidently derived from the quintain; and indeed the sport itself is frequently called running or tilting at the quintain.

The excellence of the pastime was to ride at full speed, and thrust the point of the lance through the ring, which was supported in a case or sheath, by means of two springs, but might be readily drawn out by the force of the stroke, and remain upon the top of the lance.

Fig. 103 shows the form of the ring, with the sheath, and the manner in which it was attached to the upright supporter, from Pluvinel. The letter A indicates the ring detached from the sheath; and B represents the sheath, with the ring inserted and attached to the upright post, in which there are several holes to raise or lower the ring to suit the convenience of the performer. The ring, says the same author, ought to be placed with much precision, somewhat higher than the left
eyebrow of the practitioner, when sitting upon his horse; because it is necessary for him to stoop a little in running towards it.

Fig. 103 also represents the method of performing the exercise.

Pluvinel says, the length of the course was measured, and marked out according to the properties of the horses that were to run: for one of the swiftest kind, one hundred paces from the starting place to the ring, and thirty paces beyond it, to stop him, were deemed necessary; but for such horses as had been trained to the exercise, and were more regular in their movements, eighty paces to the ring, and twenty beyond it, were thought to be sufficient.

In tilting at the ring, three courses were allowed to each candidate; and he who thrust the point of his lance through it the oftenest, or, in case no such thing was done, struck it the most frequently, was the victor; but if it so happened,
that none of them did either the one or the other, or that they were equally successful, the courses were to be repeated until the superiority of one put an end to the contest.

**TILTING AT A WATER BUTT.**

There is in a manuscript in the Bodleian Library, dated 1343, a representation of three boys tilting jointly at a tub full of water, which is to be struck in such a manner as not to throw it over them. It is presumed that they are learners only, and that, therefore, they are depicted without their clothes, as having undressed themselves, in order to save their garments from being wetted in case the attempt should prove unsuccessful.—Fig. 104.

This farcical pastime, according to Menestrier, was practised occasionally in Italy; where, he says, a large bucket, filled with water, is set up, against which they tilt their lances; and if the stroke be not made with great dexterity, the bucket is overset, and the lanceman thoroughly drenched with the contents.
EXERCISE WITH BALLS OR STONES.

Balls are easily found; and, if not, round stones of different weights may be used, so as to apportion them to the strength of the learner. The object in view is simply to hurl the weight used to the greatest distance, or to the greatest height possible, according to the nature of the muscular development or the kind of skill which is desirable.

In order to attain this result, the pupil must turn all the strength he possesses to advantage, and direct the object discharged in the line best suited to that purpose. If it is required to hurl it to the greatest possible distance, three movements are described by the arm backwards one after the other, and after the third the right arm and left leg are advanced, and the object is delivered when the arm is in a horizontal position; for if it were delivered previously, the ball would strike the ground too soon; and if delivered with the arm too elevated, it would describe a parallel so high as to diminish its force. In all cases the legs should be somewhat apart.

In throwing a body to the greatest possible height, the rules are different. For this purpose, the body must receive an impulse upwards from the ground.

This exercise should be practised with both hands; and, if necessary, with the left more frequently than the right.
THE GUN, AND ITS EXERCISE.

The gun may be considered in relation to the barrel, the stock, the lock, the art of shooting, &c.

The best Birmingham barrels, made for the principal town gunsmiths, are preferable to all others.

A barrel which is substantial and rather heavy, is to be preferred; and its principal strength should be about a foot from the breech, against which the greatest shock is directed.

Barrels which have specks or flaws are carefully to be rejected. On proving a barrel by water, it will filter through these flaws, and on passing the hand over it, their dampness will show where they are.

The force commonly employed in proving guns, renders many unsound, and they consequently burst after passing the proof-house.

Barrels should be taken out of their stocks, and looked into against the light, in order to ascertain whether they are uniformly bored; for without that, they are useless.

The breech should be very strong; and the parabolic form, the opening from the chamber to the barrel, wide enough to give free vent to the ignited power; and Golding's improvement, producing central ignition, are approved by most persons.

The stock is generally of well seasoned walnut, as knotty as possible.

Short-necked persons require straight stocks; and even long-necked people should not have them bent so much as they usually are.
Persons whose arms are not lengthy, require stocks short enough to allow them the command of the trigger. In all cases, however, the stock should be long enough to permit the cheek to rest on the swell or full part of the wood, and not to throw it forward on the small part, and thereby place the eyes under the line of sight.

It is a common fault that so much of the swell is pared away, to make guns light, that the shooter must stretch his neck, and forcibly press his cheek, in order to place it steadily.

It is another fault, that the butt, being made narrow, rests merely on the top of the shoulder, instead of more generally applying to it and giving a view over the barrel, affording a firmer grasp, and preventing the recoil becoming unpleasant. The butt-plate should be laid on flat instead of being curved.

After much shooting, a few drops of linseed oil may be rubbed over the wood of the gun.

As to the lock, Golding's convex one carries the cock to the centre of the breech, and instantaneously ignites the whole charge; and his safety-guard is also a valuable improvement.

The advantages of Jones's patent guns are,—the obtaining of a direct central fire; the certainty of not missing fire; the superior quickness of the fire; the superior strength of the fire; the diminished recoil of the gun; the protection of the eyes from the flying off of the copper caps; the removal of the annoyance of the flash in firing; the protection of the priming caps from wet; the impossibility of blowing out the nipples; the locks being imperviable to wet; the great simplification in the construction of the locks; the superior mechanical action of the locks; the superior strength of the stock; the general superiority and greater durability of the gun.

If a shooter uses different guns, their locks should require the same pull, as deviations in this respect often cause the ablest to miss.

To acquire the art of shooting, the learner must be taught
to put a gun which he can manage to his shoulder, with the
breech and sight on a level, and must first practise until he
can bring them up to a wafer, with perfect precision.

He must next, with a wooden driver, instead of a flint,
practise at this; remembering that the first sight is always
the best, and, therefore, that the instant the gun is brought
up to the centre of the wafer, the trigger must be pulled.

When he can pull the trigger without starting, he may
practise with powder, until he becomes steady.

Finally, he may load his gun with shot.

Some cautions are worthy of attention.

The muzzle of the gun should not be allowed to hang down-
wards, as the shot may then fall from the powder; and if a
considerable space is thus left empty, and the gun fired with
its muzzle low, the barrel may burst.

By thus carrying a gun, moreover, men and animals are in
perpetual danger.

It is very dangerous to pour the charge from the flask into
the barrel, as the whole contents of the former may be thus
instantly exploded, if any tow, left in the gun, continue on
fire. Explosions of this kind generally happen at the second
or some subsequent time of pouring in powder.

The barrel should be washed out, first with cold and then
with hot water, using, in drying, only linen rag.—A scraper
should not be used for the inside of the barrel, as it may
thereby be made rough.—The tyro should not take his lock to
pieces. It does not need oil more than three or four times a
year, by means of a piece of linen merely moistened ther-
with, and rubbed over the iron work.—Accidents happen
daily from keeping guns in which the barrel is injured, or the
lock enfeebled.
INSTRUCTION OF THE LEARNER WITHOUT ARMS.

Single Rank, at Open Order.

Open order is taken by each learner stretching out his right arm, and keeping that distance from his right hand man.

Position of the Soldier.

The equal squareness of the shoulders and body to the front is the first and great principle of the position of a soldier. The heels must be in a line, and closed; the knees straight; the toes turned out, so that the feet may form an angle of 60 degrees; the arms hanging close to the body; the elbows turned in, and close to the side; the hands open to the front, with the view of preserving the elbow in the indispensable position, as above described, and thereby of preventing false distances when marching in line; the little fingers lightly touching the seams of the trowsers, with the thumb close to the forefinger; the belly rather drawn in, and the breast advanced, but without constraint; the body upright, but inclining forward, so that the weight of it may principally bear on the fore part of the feet; the head to be erect, and the eyes straight to the front.

In order to supple the learner, open his chest, and give freedom to the muscles: he is practised in the three first movements of the extension motions as laid down for the Sword Exercise.

Too many methods cannot be used to improve the carriage of the learner, and banish the air of the rustic. But the greatest care must be taken not to throw the body backward instead of forward, as being contrary to every true principle of movement.
N.B. The headings, which are joined to each paragraph, are the words of command to be given by the instructor.

Standing at Ease.

Stand at Ease.—On the words Stand at Ease, the right foot is to be drawn back about six inches, and the greatest part of the weight of the body brought upon it; the left knee is a little bent; the hands brought together before the body; the palms being struck smartly together, and that of the right hand then slipped over the back of the left; but the shoulders to be kept back and square; the head to the front, and the whole attitude without constraint.

Attention.—On the word Attention, the hands are to fall smartly upon the outside of the thighs; the right heel to be brought up in a line with the left; and the proper unconstrained position of a soldier immediately resumed.

When the learner falls in for instruction, he is first taught to place himself, on the word Attention, in the position above described, to remain perfectly steady, and to give his whole attention to his commander. Before the word Attention is given, and, occasionally, during the time of drill, the learner is occasionally allowed to rest by Standing at Ease, as above explained.

Eyes to the Right.

Eyes Right. Eyes Left. Eyes Front.—On the words Eyes Right, glance the eyes to the right with a slight turn of the head. At the words Eyes Left, cast the eyes in like manner to the left. On the words Eyes Front, the look and head are to be directly to the front, the habitual position of the soldier.

These motions are useful on the wheeling of divisions,—or in closing to a flank,—or when dressing is ordered after a halt; and particular attention is paid, in the several turnings of the eyes, to prevent the soldier from moving his body,
which is preserved perfectly square to the front; but in all marches to the front, the learner, at Open Order, is taught to select objects in his front, and to march straight upon them: at Close Order, the touch, with the preservation of a uniform and proper cadence, forms his only guide in marching.

The Facings.

In going through the facings, the left heel never quits the ground; the body must rather incline forward, and the knees be kept straight.

The Right Face.—1st. Place the hollow of the right foot smartly against the left heel, keeping the shoulders square to the front.
2nd. Raise the toes, and turn to the right on both heels.

To the Left Face.—1st. Place the right heel against the hollow of the left foot, keeping the shoulders square to the front.
2nd. Raise the toes, and turn to the left on both heels.

To the Right about Face.—1st. Place the ball of the right toe against the left heel, keeping the shoulders square to the front.
2nd. Raise the toes, and turn to the right about on both heels.
3rd. Bring the right foot smartly back in a line with the left.

To the Left about Face.—1st. Place the right heel against the ball of the left toe, keeping the shoulders square to the front.
2nd. Raise the toes, and turn to the left about on both heels.
3rd. Bring up the right smartly in a line with the left.
Right, or Left, Half Face.—On the word of command Right or Left Half Face, each man will make an exact half face, as directed, by drawing back or advancing the right foot one inch, by which the whole will stand individually in echelon.

Front.—When it is intended to resume the original front, the word of command Front will be given, and the whole will face, as accurately as possible, to their former front.

Right or Left about Three-Quarters Face.—Front.—When it is necessary to perform the diagonal march to the rear, the learner will receive the word Right (or Left about) three-quarters face, upon which he brings the right foot (not the ball of the toe) to the left heel, or the right heel to the ball of the left foot, and makes a three-quarters face in the given direction. Upon the word Front, if he has faced to the right, he fronts to the left; and if he has faced to the left, he fronts to the right.

The feet, in the first of the above motions, are slipped back or brought forward without a jerk; the movement being from the hip, so that the body is kept perfectly steady until faced.

The greatest precision must be observed in these facings.

Position in Marching.

In marching, the soldier maintains the position of the body as before directed. He must be well balanced on his limbs. His arms and hands must be kept perfectly steady by his sides, and on no account be suffered to move or vibrate; care must be taken that the hand does not cling to the thigh, or partake in the least degree of the movement of the limb. The body must be kept erect and square to the front. The movement of the leg and thigh must spring from the hanch, and be free and natural. The foot must be raised sufficiently high to clear the ground without grazing it, carried straight to
INSTRUCTION TO THE LEARNER WITHOUT ARMS. 139

the front; and, without being drawn back, placed softly on the ground, so as not to jerk or shake the body in the slightest degree. The head to be kept well up, and straight to the front, and the eyes not to be turned to the right or left.

Balance Step.

The learner being placed in the position of the soldier, as above described, is instructed in the balance step, the object of which is to teach him the free movement of his limbs, preserving, at the same time, perfect squareness of shoulders, with the utmost steadiness of body; and no labour is spared to attain this first and most essential object, which forms indeed the very foundation of good marching. The instructor is careful that the learner does not contract a habit of drooping or throwing back a shoulder at these motions, which are intended practically to shew the true principles of marching, and that steadiness of body is compatible with perfect freedom in the limbs.

1st. Without gaining Ground.

Caution.—Balance step without gaining ground, commencing with the left foot.

The left foot is brought quietly forward, with the toe at the proper angle to the left, the foot about three inches from the ground, the left heel in line with the toe of the right foot.

Rear.—When steady the left foot is brought gently back (without a jerk), the left knee a little bent, the left toe brought close to the right heel. The left foot, in this position, will not be so flat as to the front, as the toe will be a little depressed.

Front.—Halt.—When steady, the word Front will be given as above, and repeated to the Rear three or four times; to prevent the learners being fatigued, the word Halt will be
given, when the left foot, either advanced, or to the rear, will be brought to the right.

The instructor afterwards makes the learner balance upon the left foot, advancing and retiring the right in the same manner.

2dly. Gaining Ground by the word Forward.

Front.—On the word Front, the left foot is brought gently to the front without a jerk; the knee to be gradually straightened as the foot is brought forward, the toe turned out a little to the left, and remaining about three inches from the ground. In this posture he remains for a few seconds only in the first instance, till practice has steadied him in the position.

Forward.—On this word of command, the left foot is brought to the ground, at thirty inches from heel to heel, while the right foot is raised at the same moment, and continues extended to the rear. The body remains upright, but inclining forward; the head erect, and neither turned to the right nor left.

Front.—On the word Front, the right foot is brought forward, and so on.

Slow Step.

March.—On the word March, the left foot is carried thirty inches to the front, and without being drawn back is placed softly on the ground so as not to jerk or shake the body; the learner is to be taught to take seventy-five of these steps in a minute.

The learner is carefully trained, and thoroughly instructed in this step, as an essential foundation for arriving at accuracy in the paces of more celerity. This is the slowest step at which troops are to move.
The Halt.

Halt.—On the word Halt, let the rear foot be brought upon a line with the advanced one, so as to finish the step which was being taken when the command was given.

N. B. The words Halt, Dress, are considered as one word of command.

Three or four learners are now formed in one rank at open distance, and instructed as follows:—

Stepping Out.

Step Out.—The squad marches, as already directed in slow time. On the word, Step Out, the learner must be taught to lengthen his step to thirty-three inches, by leaning forward a little, but without altering the cadence.

This step is necessary, when a temporary exertion in line, and to the front, is required, and is applied both to slow and quick time; and at the word (slow or quick step) the pace of thirty inches must be resumed.

Stepping Short.

Step Short.—Forward.—On the word Step Short, the foot advancing will finish its pace, and afterwards each learner will step as far as the ball of his toe, and no further, until the word Forward be given, when the usual pace of 30 inches is to be taken.

This step is useful when a momentary retardment of either a battalion in line, or of a division in column, is required.

Marking Time.

Mark Time.—Forward.—On the words Mark Time, the foot then advancing completes its pace, after which the cadence is continued, without gaining any ground, but alternately throwing out the foot and bringing it back square with the other. At the word Forward, the usual pace of thirty inches will be taken.
This step is necessary when a column, division, &c., on the march, has to wait for the coming up of others.

The Side or Closing Step.

The Side or Closing Step is performed from the halt in quick time, by the following commands:

Right Close—Quick March.
Left Close—Quick March.

Right Close, March.—Halt.—In closing to the right, on the word Quick March, eyes are turned to the right, and each man carries his right foot about ten inches directly to his right (or, if the files are closed, to his neighbour's left foot), and instantly brings up his left foot, till the heel touches his right heel, and proceeds to take the next step in the same manner; the whole with perfect precision of time, shoulders kept square, knees not bent, and in the true line on which the body is formed. At the word Halt, the whole halt, turn their eyes to the front, and are perfectly steady.

Note.—In closing on rough or broken ground, the knees must necessarily be bent.

Stepping Back.

Step Back, March.—Halt.—The Step Back is performed in the slow time and pace of thirty inches, from the halt. On the command Step Back, March, the learner must be taught to move straight to the rear, preserving his shoulders square to the front, and his body erect. On the word Halt, the foot in front must be brought back square with the other.

A few paces only of the Step Back can be necessary at a time.

Changing the Feet.

Change Feet.—To change the feet in marching, the advanced foot completes its pace, the ball of the other is
brought up quickly to the heel of the advanced one, which instantly makes another step forward, so that the cadence may not be lost.

This may be required of an individual who is stepping with a different foot from the rest of his division; in doing which he will, in fact, take two successive steps with the same foot.

Oblique Step.

To the Left Oblique, March.—When the learner has acquired the regular length and cadence of the slow pace, he is to be taught the Oblique Step. At the words, To the Left Oblique, March, without altering his personal squareness of position, he will, when he is to step with his left foot, point and carry it forward nineteen inches in the diagonal line to the left, which gives about thirteen inches to the side, and about thirteen inches to the front. On the word Two, he will bring his right foot thirty inches forward, so that the right heel be placed thirteen inches directly before the left one. In this position he will pause; and on the word Two, continue to march, as before directed, by advancing his left foot nineteen inches, pausing at each step till confirmed in his position; it being essentially necessary to take the greatest care that his shoulders be preserved square to the front. From the combination of these two movements, the general obliquity gained will amount to an angle of about twenty-five degrees. When the learner is habituated to the lengths and directions of the step, he must be made to continue the march, without pausing, and with firmness; when he has been made perfect in the oblique step in slow time, he must be instructed in quick time on the same principle.

As all marching (the side step excepted) invariably begins with the left foot, whether the obliquing commences from the halt, or on the march, the first diagonal step taken is by the leading foot of the side inclined to, when it comes to its turn, after the command is pronounced.

The squareness of the person, and the habitual cadenced
step, in consequence, are the great directions of the oblique, as well as of the direct march.

Each learner is separately and carefully instructed in the principles of the foregoing portions of the drill. They form the basis of all military movements.

The Quick Step.

The cadence of the slow pace having become perfectly habitual to the learners, they are now taught to march a quick time, which is one hundred and eight steps in a minute, each of thirty inches, making two hundred and seventy feet in a minute.

Quick March.—The command, Quick March, being given with a pause between them, the word Quick is be to considered as a caution, and the whole to remain perfectly steady. On the word March, the whole move off, conforming to the directions given.

After the learner is perfectly grounded in marching to the front in quick time, all the alterations of step, as above, for slow time, are practised in the quick time.

This is the pace which is applied generally to all movements by large as well as small bodies of troops; and, therefore, the learner is trained and thoroughly instructed in this essential part of his duty.

The Double March.

The directions for the March, in the preceding section, apply, in a great degree, to this step, which is one hundred and fifty steps in the minute, each of thirty-six inches, making four hundred and fifty feet in a minute.

Double March.—On the word Double March, the whole step off together with the left feet; keeping the heads erect, and the shoulders square to the front; the knees are a little bent; the body is more advanced than in the other marches;
the arms hang with ease down the outside of the thigh. The
instructor is careful to habituate the learner to the full pace of
thirty-six inches, otherwise he will get into the habit of a
short trot, which would defeat the obvious advantages of this
degree of march.

Halt.—As directed before.

The word March, given singly, at all times denotes that
slow time is to be taken; when the Quick, or Double March,
is meant, the words Quick, or Double, as a caution, precede
the word March.

The great advantage attending the constant use of the
plummet must be obvious; and the several lengths swinging
the different marches in a minute, are as follows:—

<table>
<thead>
<tr>
<th>March Type</th>
<th>Steps in the Minute</th>
<th>In. Hun.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slow time</td>
<td>75</td>
<td>24.96</td>
</tr>
<tr>
<td>Quick time</td>
<td>108</td>
<td>12.03</td>
</tr>
<tr>
<td>Double march</td>
<td>150</td>
<td>6.26</td>
</tr>
</tbody>
</table>

A musket-ball, suspended by a string, which is not subject
to stretch, and on which are marked the different required
lengths, will answer the above purpose, may be easily ac-
quired, and, in the army, is frequently compared with an accu-
rate standard in the adjutant's possession. The length of the
plummet is measured from the point of suspension to the
centre of the ball.

**SINGLE RANK AT CLOSE ORDER.**

Six or eight learners are now formed in rank at close files,
having a steady well-drilled man on their flank to lead, and are
then carefully instructed in the touch, which in close order
constitutes the principal guide and regulator in marching.
Each man, when properly in line, should feel his right or left
hand man (towards the point of direction) at the thick part
of the arm immediately below the elbow, which must continue turned in and close to the side. The fingers are kept straight, the thumb close to the fore-finger, the thumb and fore-finger in a small degree turned out (in order to keep the elbows close), the edge of the hand very slightly touching the thigh, and a little behind the seam of the trousers. The touch must be light, and crowding carefully avoided.

WITH ARMS.

Position of the Learner.

When the firelock is shouldered, the person of the learner remains in the position described under the head of Close Order, except that the wrist of the left hand is turned a little out, the better to embrace the butt. The firelock is placed in the hand with the two first joints of the fingers grasping the inside of the butt, the thumb alone to appear in front. The piece is carried at the full length of the arm, the butt a little forward, the fore part nearly even with that of the thigh; the hind part of it lightly touching the thigh, when stationary, without being in the least degree affected by it when in motion. The firelock rests upon the hollow of the shoulder, and is held firm and steady.

Different Motions of the Firelock.

The following motions of the firelock are taught and practised as here set down, until each learner is perfect in them; they being necessary for the ease of the soldier in the course of exercise.

As mentioned in the Manual Exercise.

Supporting arms.
Sloping arms.
Carrying arms.
Ordering arms.
Standing at ease.
Attention.
Shouldering from the order.
The learner is accustomed to carry his arms for a considerable time together; it is most essential he should do so, and not be allowed to support or slope them so often as is practised, under the idea that long carrying them is a position of too much constraint.

THE MANUAL EXERCISE.

1st. Secure Arms.—1st. Bring the right hand briskly up, and place it under the cock, the fore-finger touching the back part of it, the thumb placed between the stock and barrel, and pointing to the muzzle, keeping the firelock steady.

2nd. Quit the butt with the left hand, and seize the firelock with it at the swell, bringing the elbow close down upon the lock, carefully avoiding to raise or lower the shoulder; the right hand kept fast in this motion, and the piece still upright.

3rd. Quit the right hand, giving the piece a cant with the fore-fingers, and bring it down to your right side, bringing the firelock down to the secure, under the left arm, the elbow thrown a little to the rear, the guard just visible, the thumb on the sling, the fingers grasping the barrel, and the hand rather below the hip bone.

2nd. Shoulder Arms.—1st. Bring the firelock up to the perpendicular line, seizing it with the right hand under the cock, as the first motion of the secure.

2nd. Quit the left hand, and strike the butt with the palm, grasping it at the same instant.

3rd. Quit the right hand, and bring it smartly down to the right side.

3rd. Order Arms.—1st. Seize the firelock with the right hand at the lower loop, just at the swell, the elbow close to the body.

2nd. Bring it down to the right side, to the trail, allowing the little finger to slip between the stock and barrel, the butt as low down as the arm will admit without constraint.
3rd. Drop the heel of it on the ground, placing the muzzle against the hollow of the right shoulder, and the hand flat upon the side of the stock; the thumb only to appear on the sling.

4th. Fix Bayonets.—1st. At the word Fix, place the thumb of the right hand, as quick as possible, behind the barrel.

2nd. As soon as the word of command is fully given, take a gripe of the firelock, and push the muzzle a little forward, grasping the bayonet with the left hand, the elbow kept well forward so as not to interfere with the left-hand man, and fixing it with the utmost celerity. The instant this is done, return, as quick as possible, to the order, as above described, and stand perfectly steady.

5th. Shoulder Arms.—1st. As soon as the word Shoulder is given, take a gripe of the firelock with the right hand, as in fixing bayonets.

2nd. At the last word, Arms, the firelock must be thrown, with the right hand, in one motion, and with as little appearance of effort as possible, into its proper position on the left shoulder. The hand crosses the body in so doing, but must instantly be withdrawn.

6th. Present Arms.—1st. Seize the firelock with the right hand, under the guard, turning the lock to the front, but without moving it from the shoulder.

2nd. Raise the firelock up from the shoulder to the poise, by placing the left hand (smartly and with a tell) upon the sling, fingers pointing upwards; the wrist upon the guard, and the point of the left thumb of equal height with, and pointing to the left eye: the piece to be kept perpendicular in this position, the left elbow close to the butt, and right elbow close to the body.

3rd. Bring down the firelock with a quick motion as low as
the right hand will admit without constraint, making it tell with the left hand, drawing back the right foot at the same instant, so that the hollow of it may touch the left heel. The firelock in this position with the guard to the front, to be totally supported in the left hand, and opposite to the left thigh; the right hand lightly holding the small of the butt; the fingers pointing rather downwards; the body to rest entirely on the left foot; both knees straight.

7th. Shoulder Arms.—1st. By a turn of the right wrist, bring the firelock to its proper position on the left shoulder, making the motion tell, the left hand grasping the butt, and bringing up the right foot at the same instant to its original position.

2nd. Quit the right hand briskly, and bring it down to the right side.

8th. Port Arms.—At one motion throw the firelock from the shoulder across the body, meeting it smartly with both hands at the same instant, to a diagonal position, in which the lock is to be turned to the front, and at the height of the breast; the muzzle slanting upwards, so that the barrel may cross opposite the point of the shoulder, with the butt proportionally depressed.

The right hand grasps the small of the butt, and the left holds the piece at the swell, close to the lower pipe; the thumbs of both hands pointing towards the muzzle; both elbows close to the body, the fingers of the left hand between the stock and barrel.

9th. Charge Bayonets.—Make a half face to the right, the right toe straight off to the right, and the left toe full to the front, and bring down the firelock to nearly a horizontal position, with the muzzle inclining a little upwards, and the right wrist resting against the hollow of the thigh below the hip.
10th. Shoulder Arms.—1st. Throw the firelock up to its proper position on the left shoulder, the left hand falling smartly on the butt, and grasping it, and at the same instant coming to your proper front.

2nd. Quit the right hand smartly, and bring it down to the right side.

11th. Advance Arms.—1st. Seize the firelock with the right hand under the guard, turning the lock to the front, but without moving it from the shoulder.

2nd. Raise the firelock up from the shoulder to the poise, by placing the left hand upon the sling, fingers pointing upwards, the wrist upon the guard, and the point of the left thumb of equal height with, and pointing to, the left eye; the piece to be kept perpendicular in this position.

3rd. Bring the firelock down to the right side with the right hand as low as it will admit without constraint, at the same time striking it smartly with the left hand at the swell, the guard between the thumb and fore-finger of the right hand, the three last fingers under the cock, with the guard to the front.

4th. Quit the left hand.

12th. Order Arms.—At this word the left hand is brought smartly across the body, and seizes the firelock, with the fore-finger in line with the point of the right shoulder.

2nd. Bring the firelock down as low as the left arm will admit, to the right side; at the same time let the right hand seize the top of the ramrod, between the second joint of the fore-finger and thumb, the whole of the fingers shut in the hand.

3rd. Let the firelock drop on the ground, and the right hand be smartly brought to the position of ordered arms, quitting the left hand short away, at the same instant.

13th. Advance Arms.—1st. At the word Advance, the thumb of the right hand is slipt quickly in rear of the barrel.
THE MANUAL EXERCISE.

At the word Arns, it is brought to the advance by a sharp cant of the right hand: the left arm is brought across the body, to steady the firelock to the shoulder.

2nd. Quit the left hand.

14th. Shoulder Arms.—1st. Bring up the left hand, and seize the piece at the swell, raising it about one inch; at the same instant slip the thumb of the right hand under the cock, by a turn of the right wrist.

2nd. Throw it smartly to its proper position on the left shoulder, the left hand falling smartly on the butt, grasping it.

3rd. Quit the right hand, and bring it to the right side.

N. B.—In these motions great care must be taken to preserve the squareness of the body, and to avoid raising or sinking the shoulder.

15th. Support Arms.—1st. Seize the small of the butt, under the lock, with the right hand, the thumb pointing upwards.

2nd. Bring the left arm under the cock.

3rd. Quit the right hand.

16th. Stand at Ease.—At this word of command the right hand is brought smartly across the body, and seizing the firelock at the small of the butt close up under the left arm, with the thumb of the right hand pointing upwards, the right foot drawn back, the left knee bent, and the firelock a little sloped.

17th. Attention.—At this word of command the right hand is dropped smartly to the right side, and the right foot brought in line with the left.

18th. Carry Arms.—1st. Seize the small of the butt under the left arm, with the right hand.

2nd. Smartly place the left hand grasping the butt, the firelock kept steady.
3rd. Quit the right hand. At the same instant allowing the left arm to sink to the full extent.

19th. Slope Arms.—In sloping arms the upper part of the arm is not to move, the guard of the firelock is to be raised so as gently to press against the hollow of the shoulder, the hand in a line with the elbow, the toe of the butt in a line with the centre of the left thigh.

20th. Stand at Ease. — On the word Ease, bring the right hand smartly across the body, placing it on the left hand, both thumbs on the fore part of the heel of the butt, that of the left hand uppermost, and drawing the right foot back at the same instant, the left knee bent.

21st. Attention.—At this word of command resume the attitude of attention, by bringing the right hand smartly to the right side, and the right foot in line with the left.

22nd. Carry Arms.—1st. Drop the left arm to its extent, and bring the right hand smartly across the body; the fore part of the finger to meet the small of the butt, as in the first motion of the Secure.

2nd. Quit the right hand.

23rd. Order Arms.—As prescribed before.

24th. Unfix Bayonets. — At the word Unfix, slip the thumb of the right hand in rear of the barrel; at the last sound of the word Bayonets, force the muzzle a little forward, bring the left hand smartly to the upper loop, the thumb pointing upwards. Strike the bow of the bayonet with the heel of the right hand so as to unfix it; let the bow fall over the thumb, and the two fore-fingers on the top of the socket, with the left hand force the muzzle of the firelock back to its proper position, at the same instant bring the thumb of
the left hand on the top of the scabbard, for the purpose of
guiding the bayonet into it; and bring the right hand smartly
to the position of ordered arms.

25th. Stand at Ease.—As before directed.

It is to be understood that whenever a battalion in line
charges with bayonets, the whole are in the first instance to
advance at a firm quick step, with shouldered arms; at the
word "Prepare to Charge," the firelocks of the front rank
will be brought to the long trail, and those of the rear rank to
the slope;—at the word "Charge" the firelock of the front
rank will be thrown smartly to the charging position, and the
pace increases to double march, carefully avoiding too much
hurry. The enemy being routed, it will depend on the officer
commanding to give the word "Halt," when both ranks will
shoulder arms, and proceed as may be afterwards directed.

In marching any distance, or in standing at ease, when
supported, the men are allowed to bring their right hand
across the body, to the small of the butt, which latter must,
in that case, be thrown a little forward; the fingers of the left
hand being uppermost, must be placed between the body and
the right elbow; the right hands are to be instantly removed
when the division halts, or is ordered to dress by the right or
left.

TIME.

The motions in the Manual Exercise are to be performed,
leaving one pause of the slow time of march between each
motion, except that of fixing bayonets, in which a longer time
must be given. One pause should also be made between the
first and last parts of the words of command; for instance,
shoulder (one pause) arms, both in manual and platoon.
PLATOON EXERCISE AND DIFFERENT FIRINGS.

Eight or ten learners being formed in a single rank, at close files, and shouldered firelocks, are thus taught to fire before they are formed in two ranks.

1st. As a front rank standing.
2nd. As a rear rank standing.
3rd. As a front rank kneeling.
4th. As a rear rank kneeling.

As Front Rank Prime and Load.—1st. Upon the command make a quarter face to the right, which will bring the left toe direct to the front, the right foot to be drawn back six inches in a diagonal direction to the right, at the same time bring down the firelock to the priming position with the left hand at the swell, the elbow close in front of the left hip, the sidebrass touching the right hip, the thumb of the right hand placed in front of the steel with the fingers clenched and wrist a little turned out, the firelock nearly horizontal.

2nd. Open the pan by closing the elbow to the side, fingers straight along the lock-plate, pointing towards the muzzle.

Handle Cartridge.—1st. Draw the cartridge from the pouch.
2nd. Bring it to the mouth, holding it between the forefinger and thumb, and bite off the top of the cartridge.

Prime.—1st. Shake some powder into the pan, and place the three fingers on the steel.
2nd. Shut the pan by closing the elbow.
3rd. Seize the small of the butt with the above three fingers.

'Bout.—1st. Turn the piece nimbly round to the loading position, meeting the muzzle with the heel of the right hand, the butt within two inches of the ground, and the flat of it against the left ankle; at the same time bring up the right shoulder to the front, and square the heels.
2nd. Place the butt on the ground without noise, raise the elbow square with the shoulder, shake the powder into the barrel, putting in after it the paper and the ball, after which the fingers are straight, with the second joint of the fore-finger resting on the head of the ramrod, and thumb pointing downwards, elbow square with the shoulder.

In this position each learner must feel the guard against the centre of the left shin, the thumb of the left hand pressed against the centre, and in front of the left thigh, the muzzle of the firelock to be brought in front of the breast-plate, and the barrel to the front.

3rd. Drop the right elbow close to the body, and seize the head of the ramrod with the second joint of the fore-finger and thumb.

Draw Ramrods.—1st. Force the ramrod half out, and seize it back-handed exactly in the middle, with the elbow square with the shoulder.

2nd. Draw it entirely out with a straight arm above the shoulder, turning it at the same time to the front, put it one inch into the barrel; the ramrod is thus held between the two fore-fingers and thumb, with the two last fingers shut in the hand.

Ram down Cartridge.—1st. Push the ramrod down, holding it as before exactly in the middle till the second finger touches the muzzle, elbow close.

2nd. Press the ramrod lightly towards you, and slip the two fore-fingers and thumb to the point, then grasp it as before.

3rd. Push the cartridge well down to the bottom.

4th. Strike it two very quick strokes with the ramrod.

Return Ramrods.—1st. Draw the ramrod half out, catching it back-handed, with the elbow square.

2nd. Draw it entirely out with a straight arm above the
shoulder, turning it to the front; put it into the loops, and force it as quickly as possible to the bottom, the fore-finger and thumb holding the ramrod as in the position immediately previous to drawing it, and after a pause of one pace of the slow time bring the firelock with one motion to the same position as at the word Prime and Load; at the same time resuming the half face to the right, and carrying the right foot diagonally to the rear.

As Front Rank Ready.—Place the thumb of the right hand on the cock, and fingers behind the guard, and cock the piece; then take a grasp of the butt, fixing the eye steadfastly upon some object in front.

P'sent.—Bring the firelock up to the present slowly and independently, until in line with the object the eye had fixed upon; then pull the trigger without a jerk, and when fired, remain looking on the aim until the word "Load" is given.

Too much pains cannot be taken to prevent the learner from raising his firelock with a jerk; it must be deliberately raised until aligned with the object that the eye is fixed upon, and so that he may lay the right cheek on the butt without too much stooping of the head: particular care must be taken that the learner in this position shuts the left eye in taking aim, looking along the barrel with the right eye from the breech-pin to the muzzle.

Load.—Bring down the firelock to the priming position, and take hold of the cock with the thumb and fingers behind the guard, and draw it back to the half cock; the loading will be performed as before directed.

Shoulder Arms.—Seize the small of the butt, and place the firelock on the left shoulder, bringing the shoulders and heels square to the front.
PLATOON EXERCISE AND DIFFERENT FIRINGS. 157

As Rear Rank, Ready.—Make a half face to the right, which will bring the left toe direct to the front, and step with the right foot as far to the right as will bring the right toe of each man close to the left foot of his right-hand man, and pointing to the right; at the same time bring down the firelock to the right side, seizing it with the left hand at the swell, the side-brass to be four inches above the right hip, and cock the firelock, fixing the eye on some object in front, as before directed.

P'sent.—Bring up the firelock to the present slowly and independently, and pull the trigger when the object is covered, as before directed, for front rank.

Load.—Bring down the firelock to the position described for making ready as rear rank, and half-cock, as before directed.

Handle Cartridge.—As before directed.

Prime.—As before directed.

'Bout.—Turn the piece nimbly round to the loading position, meeting the muzzle with the heel of the right hand, the butt within two inches of the ground, and the flat of it against the inside of the left ankle, bringing the right shoulder square to the front, and keeping the right foot fast.

2nd. Place the butt on the ground without noise, inside the hollow of the left foot, and proceed as before directed.

Draw Ramrods.—As before directed.

Ram down Cartridges.—As before directed.

Return Ramrods.—As before directed; and after a pause of
one pace of slow time, bring the firelock to the position of prime and load, resuming the right half face.

**TO FIRE KNEELING.**

As Front Rank Kneeling. Ready.—Sink down smartly on the right knee, which is to be drawn back about six inches from the left heel, the left leg to be perpendicular, the head and body erect, the firelock to be brought down to the priming position, the side-brass in line with the haunches; then cock the piece, and grasp the small of the butt, at the same time fixing the eyes steadfastly on some object in front.

P'sent.—Raise the firelock slowly until in line with the object, and fire, as already directed, for front rank standing.

Load. Handle Cartridge. Prime.—As before directed.

'Bout.—With the left hand pass the firelock round in front of the left knee, and bring it to the left side close to the thigh, the butt to the rear, the sling upwards, the muzzle about three inches further back than the left knee.

Load. Draw Ramrods. Ram down Cartridges. Return Ramrods.—As before directed, and bring the firelock round in front of the left knee to the priming position, by shifting it through the left hand.

N.B. When the word "Order Arms" is given, the men are to spring up to the standing position, bringing the firelock to the "Order."

As Rear Rank Kneeling. Ready.—Sink down smartly on the right knee, which is to be drawn back about six inches diagonally to the right of the left heel; the left leg to be perpendicular, the head and body erect, the firelock to be brought down to the priming position, the side-brass four inches above
the haunches; then cock the piece, and grasp the small of the butt, at the same time fixing the eyes steadfastly on some object in front.


'Bout.—Turn the body to the right, and lean to the rear, and with the left hand reverse the firelock, bringing the butt to the front, the sling upwards, the muzzle about the same height as the right elbow.

The learners, being thoroughly grounded in the foregoing instructions, are then practised in two ranks, at close order, in the different firings as a company in line, as a wing of a battalion, as a battalion firing a volley, file firing, &c. &c.

From twenty to thirty files are then formed into two ranks at close order, with shouldered arms and fixed bayonets.

Half-cock Arms.—Place the thumb of the right hand in front of the cock-screw, and the fore-finger at the same time upon the trigger; the cock is then to be drawn a little back, and the trigger to be drawn so as to disengage the catch; the cock to be gently let down till the edge of the flint touches the hammer; then quit the trigger, and draw back the cock to the catch of the half-cock; the small of the butt to be seized with the right hand, and the right foot brought up to the left.

N.B.—A company, wing, or battalion, can prime and load, or make ready from the Order, with the same ease as from the Shoulder.

For instance, at the words "Prime and"—slip the thumb behind the barrel, and at the word "Load" according to direction.

Any movement can take place from Ordered Arms, as occasions may require, in the following manner:—Upon the first word of the caution, bring the fingers round the barrel, and
TO KNEEL FIRING.

raise the butt about one inch from the ground, with the muzzle close against the hollow of the shoulder; and at the word "Halt," resume the position of Ordered Arms.

Trail Arms.—Slip the right hand down to the swell of the stock, and lower the muzzle to a horizontal direction; at the same time the rear rank will fall nimbly back a short pace, so that the muzzle of the firelock shall touch the cuff of the front-rank man's jacket.

Change Arms.—Change from one hand to the other, as often as may be necessary.

The learners, having a thorough knowledge of the preceding portion of the drill, are now formed in four ranks, and practise to receive cavalry with two ranks kneeling, as it is necessary to do so in square four deep.

Prepare to resist Cavalry. Ready.—The first rank kneel as front rank, the second rank kneeling as rear rank, both bringing at the same time the butt of the firelock in front of the right knee, the lock turned uppermost, the right hand lightly grasping the small of the butt, holding the firelock firm with the left hand at the middle of that part between the third loop and the swell, the lower part of the left arm resting upon the thigh, the muzzle of the firelock slanting upwards, so that the point of the bayonet will be about the height of a horse's nose.

The third rank make ready as a rear rank, with this difference: they will carry the right foot only six inches to the right; the fourth rank make ready as rear rank; in this the kneeling ranks do not cock, the two standing ranks will commence File Firing at the close of the Preparative, or at the word "Commence Firing,"—and at the close of the General,
or at the word "Cease Firing," they will load, and come to
the front with ordered arms (at the right side), and shoulder
by word of command, with the kneeling ranks, who will also
shoulder from the right side; the kneeling ranks may be
fired if necessary, for which the commander will give the
words "Kneeling ranks—ready—p'sent," and which they do
as directed in the foregoing instructions; then, with a quick
motion, bring the firelock down to resist cavalry as before, and
remain perfectly steady till the word "Load" is given.

N.B. When the word "Load" is given, after firing in a
square, the kneeling ranks load as front ranks.

FIRING.

When the learner has attained a perfect knowledge of the
Platoon Exercise, he is carefully habituated in taking aim: to
this great object too much care and attention cannot be de-
voted; it is the means by which the soldier is taught to fire
with precision, or, in other words, to kill his enemy; and it
cannot be too strongly inculcated, that every man, who has no
defect in his eyes, may be made a good shot at a fixed object.
The firelock is placed in the soldier's hands for the destruction
of his enemy; his own safety depends on his efficient use of
it, and no degree of perfection he may have attained in the
other parts of his drill, can, upon service, remedy any want of
proficiency in this; indeed, all his other instruction in march-
ing and manoeuvring, with perfect steadiness and precision,
can do no more than place him in the best possible situation
for using his weapons with effect. The true principles upon
which correct shooting may be taught are extremely simple;
they are to be found in the natural connexion that exists
between the hand and the eye: the eye is the guide and
regulator of every action of the hand, which can only act the
part of a subordinate agent; and constant practice must,
therefore, be employed to perfect the connexion, and enable
them so to act together, that the hand will readily raise
the firelock in a line with any object that the eye is fixed
upon. In training the learner to the use of his musket, the following instructions are to be carefully attended to.

The Traversing Rest.

A Traversing Rest is found most useful in teaching the learner individually the principles of taking aim, and it also enables the instructor to ascertain at once whether the learner has any defect in his eye-sight. The rest is a scooped piece of wood, placed on a stand, which receives the firelock, and is made to elevate, depress, or traverse at will; several small bull’s-eyes being painted on the barracks, or wall, the learner, at one hundred yards, is ordered to aim at any one of them. Having done so, he leaves the firelock on the stand, and removes himself, in order that the instructor may take his place, and look along the sight, to point out, and correct, if necessary, any error. The learner thus taught to level accurately, the stand is set aside, and is on no account afterwards used as a rest for taking aim from.

Aiming at an Object.

The learner is next practised in aiming at an object. He is to be taught to fix his eyes steadfastly on the bull’s-eye, or any other object, and with the left eye shut, to raise his firelock gradually and horizontally from the priming position, until it is accurately aligned.

Burning Priming.

The learner having acquired the habit of readily aligning his firelock with any object selected by the eye, he is next taught to burn priming without winking, or in the slightest degree altering the composure of his countenance. The instructor will give the command slowly, "Ready," "Present;" and when the learner has covered his object, he will pull the trigger by the steady pressure of the finger, and without the smallest jerk, continuing to cover the object after snapping, with the cheek down on the butt, until the word "Load" is
given. The slightest motion of the arm or wrist in pulling the trigger must be carefully avoided, as it would, in firing, completely change the direction of the ball; and the more accurate the aim, the smaller would, in consequence, be the chance of hitting the object aimed at. The instructor must watch the learner minutely in this practice, which must be continued until the eye is perfectly indifferent to the flash caused by the ignition of the powder.

**Blank Cartridge.**

The learner, in loading, is instructed to shake the powder well out of the cartridge, and to ram the paper, as wadding, home. The instructor will fire each learner singly by word of command, minutely observing that he fires with perfect composure of countenance and steadiness of body, wrist and eye; the cheek is not to be removed from the butt, or the least motion to be permitted until the word “Load” is given.

The practice with blank cartridge must be continued until the learner becomes perfectly firm and motionless at the explosion and recoil, without which it would be a mere waste of ammunition to commence firing with ball.

**Ball Firing.**

Firing at a target being one of the most essential parts of infantry instruction, it is important that all ranks shall be perfectly acquainted with the theory.

The ball-cartridge is scrupulously reserved for the purpose of proving the learner’s progress or proficiency in shooting; with this view three or four ball-cartridges are given to him, and he is placed before the target, which, in the first instance, should be round, and eight feet in diameter, at the distance of thirty yards, or even nearer, so that it will be almost impossible for him to miss it. This method is intended to produce confidence in the young soldier, and to shew him that his firelock will carry true if accurately aligned: should
the learner prove, by his practice, that he has not acquired the
habit of taking aim correctly, he must, on no account, be
permitted to go on with the useless expenditure of ammu-
nition, but be sent back to aiming drill, and be continued
practising to level until he has got over the deficiency; his
whole attention should be exclusively directed to this object;
and he will soon find it to be for his own interest and advan-
tage to become an expert marksman; for no soldier should
ever be considered as dismissed from drill, or fit to take his
place in the ranks, until he has shewn himself to be a good
shot.

Should the learner, however, prove that he understands the
principles of taking aim, the range will be increased by degrees
to fifty, eighty, one hundred yards, at the same target; and
when the learners can individually shoot well at these distances,
the instructor will fire them by files, increasing the distance
from fifty yards upwards, changing ranks occasionally—then by
sections—and lastly, by platoon.

The learner will now practise at a target six feet by two, as
the last of his drill. This target will be divided by black
lines into three compartments, upper, centre, and lower divi-
sions (the centre division having a bull's-eye of eight inches
diameter in its centre, surrounded at two inches distance by a
circle of an inch broad), and be placed at a range of eighty
yards, which distance will be increased, as improvement takes
place, to one hundred, one hundred and fifty, and two hundred
yards; the instructor taking care to point out the necessity of
the gradual elevation of the musket, as the distance beyond its
point-blank range is increased.

In the beginning of the practice the learner is to be made
to fire two or three times running, due care being taken to
correct the faults which may have been remarked in the
position of the body, or in that of the musket.

The rank and file of each company are divided into three
classes: the first comprehend the best marksmen; the second
class the next best; and the third all the rest.
Fixing Flints.

No man is returned as sufficiently instructed, until he shall have been admitted into the first class.

It is most important that soldiers should be accustomed to judge distances correctly; that they should know how far their firelocks will carry point-blank, and also the exact degree of elevation that is required in order to hit objects at different distances beyond that of point-blank range. They should, therefore, be trained to a knowledge of distances on every kind of ground, and be at all times prepared to answer correctly the following simple questions:—

1st. What is the point-blank range of your firelock or rifle?

2nd. Does it carry to the right or left?

3rd. How many yards distant are you from such an object?

4th. What is the requisite degree of elevation in order to enable you to hit the body of a man at 120, 150, 200, &c. yards.

Fixing Flints.

The learners are individually taught the true principles which direct the fixing the flint. In fixing flints, no uniform mode should be attempted; the flat side must be placed either upwards or downwards, according to the size and shape of the flint, and also according to the proportion which the cock bears in height to the hammer, which varies in different muskets; this is ascertained by letting the cock gently down, and observing where the flint strikes the hammer, which ought to be at the distance of about one-third from the top of the hammer: most diligent observation ought, at the same time, to be made whether every part of the edge of the flint comes in contact with the hammer, so as to strike out the fire
from the whole surface. A flint will often appear to the eye to be carefully and skilfully fixed, and to stand firm and square; yet, on trial being made, as above directed, it will prove to have been very ill fixed, inasmuch as the surface of the hammer in some muskets does not stand square, but stands a little aslant to the cock. Each particular flint, therefore, requires its own particular mode of being fixed, so as to accommodate itself to the particular proportions and conformations of each particular lock. In whatever position the flint should be, it must be screwed firmly,* and the cock should be let down, in order to observe whether the flint passes clear of the barrel.

Whenever a piece has been fired, the first opportunity should be embraced of examining whether the flint remains good, and fixed as it ought to be, and no time should be lost in correcting whatever may be found amiss; which may be done without the learner falling out of the ranks, by his facing to the right if he belongs to the front rank, and to the left if belonging to the rear rank, at the same time seizing the stock at the small with the right hand, and letting it fall into the hollow of the left arm, the left hand will then hold the firelock at the lock, and at the same time assist the right in any alteration which may be requisite with the flint. In this position the learners are also practised in taking off and putting on their locks.

* Two pieces of very soft lead, which will embrace the flint, are recommended to ensure this.
THE RIFLE.

For the barrel of this instrument, the length of about thirty inches appears to be generally preferred.

The thickness of the metal ought to be at least a quarter of an inch from breech to muzzle, for a ball of nineteen or twenty to the pound.

The rifle derives its name from having the barrel cut internally with spiral grooves, like what is called a female screw; these grooves, however, being less inflected, or approaching more to a right line, and generally taking about one turn in thirty inches. The number, depth, and width of the grooves are variable.

To ensure accuracy in shooting, it has been recommended that a cylinder should be fixed at the end of the ramrod, and the charge placed in it; that the gun reversed should then be let down on the ramrod; and that both should finally be turned up, the powder, of course, falling into the chamber, and none being in this case lost by sticking to the damp sides of the barrel.

For long ranges, larger bullets are required. Having proportionally less surface, they are less resisted, and their flight is longer. The influence of the wind across the line of flight is also less. The government rifles, accordingly, receive bullets of nineteen or twenty to the pound; and the same is the case with the cavalry carbines and pistols.

The rifle cartridge-pouch should be so flat as to contain only one row of tin tubes for the cartridges; and the construction of these adopted by the Calabrians, Corsicans, and others,
is, with justice, recommended for imitation by Colonel Macerone. "Their pouches go all round the body, with only a small interval at each hip, occupied by a bayonet on one side, and a pistol on the other; and, when the cartridges are exhausted in front, the pouch is slipped round." For this he recommends support by braces, or by slips from the usual suspenders.

In loading (the ball being large enough to rest on the muzzle), a round patch of calico or flannel, with the side next to the barrel greased, is laid on the mouth of the piece, into which the bullet is driven by a stroke, not calculated to injure the barrel. The best ramrod being heavier than the common iron ones (Colonel Macerone proposes it should be "of about half-inch diameter, except the end applied to the bullet; which, for a couple of inches, should be so large as just to fit easily into the barrel"), with this, or with the aid of a small mallet and the common rod, the ball is pushed home; but not struck hard when down, for that would both injure the surface of the ball, and crush the granulated powder. In this operation, the lead yields to the force of impulsion, and its periphery, where in contact with the rifle, acquires a shape corresponding to the grooved inside of the barrel. The ramrod, finally, is once or twice flung down, as the sound thereby produced proves that the bullet is "home."

In shooting, the piece is directed to "be pointed downwards, at about a yard from the shooter; then to be steadily raised in the line of the object (and the quicker that motion, the truer the line); and, when within some distance of the proposed level, the trigger (if not a detent) is to be gradually pressed, according to the shooter's knowledge of it, so that it may, at the precise moment of reaching the level, go off without any unnecessary pull; for so soon as the perpendicular elevation ceases, horizontal vacillation begins. If, therefore, the aim be unfortunately prolonged beyond the arrival of the sight at the level, the piece must be lowered, and brought up to it again."—Infinite care must be exercised
in using hair triggers, some of which are so delicate, that the slightest touch or pressure, even that of the wind, is capable of firing them.

When the gun is fired, the indented lines of the bullet again follow those of the rifle, and consequently, besides its direct motion, it acquires a circular one which constitutes the peculiarity of a rifle shot.

A rifle becomes inaccurate, in proportion to the frequency of firing without cleaning the barrel. The continuous shots, however, may without great deterioration extend to twenty-five or thirty.

THE MANUAL EXERCISE OF RIFLEMAN.

Of carrying the Rifle.—The rifle is to be carried in the right hand, at arm's length, as in advanced arms, the cock resting upon the little finger, the thumb upon the guard, and fore-finger under it, the upper part of the barrel close in the hollow of the shoulder, and the butt pressing upon the thigh.

Present Arms. Three Motions.—1st. The rifle is to be raised about two inches by the right hand, and brought forward a little from the shoulder, at the same time the left hand is brought briskly across the body, and seizes the rifle with a full grasp, even with the shoulder.

2nd. The right hand brings the rifle even with the face, and opposite the left eye, grasps the small of the stock, turning the lock outwards; the left hand seizes it by the stock, so that the little finger touches the hammer-spring, on a level with the chin, the left elbow close to the butt.

3rd. The rifle is brought in a straight line to the present, the cock turned inwards, and even with the bottom of the waistcoat, the right foot at the same instant is drawn back, so that the hollow of it may touch the left heel, the right hand holding the small of the stock between the fore-finger and
thumb, the knuckles upwards, the three other fingers shut in the hand.

Shoulder Arms. Two Motions.—1st. The rifle is brought quickly across the body to the right side, the right hand slipping round into the original position when shouldered, the left quits its hold, and seizes the rifle again smartly, even with the right shoulder, at the same time the right foot is brought up in a line with the left.

2nd. The left hand quits the rifle, and is brought as quickly as possible to the position of attention.

Order Arms. Three Motions.—1st. At the word "Arms," the left hand seizes the rifle, even with the right shoulder, the rifle as in the first motion of the present, is raised about two inches.

2nd. The right hand quits its hold, grasps the rifle round the muzzle, and brings it gently to the ground, even with the toe of the right foot, the wrist pressing against the side and elbow as close as possible.

3rd. The left hand is brought as before on the left thigh.

Shoulder Arms.—At the word "Arms," the rifle is thrown at once into the right shoulder, by a jerk of the right hand; the left catches it till the right seizes the rifle in the proper place, and is then instantly brought to its original position on the left thigh; but this must be done with the quickness of one motion.

In the performance of this, as indeed of every other motion, the greatest care is to be taken to prevent the rifle falling to the ground, as it is an arm easily damaged.

Support Arms.—The rifle is brought across the body with the guard upwards, by bending the right arm, the left hand is laid across the right.
THE MANUAL EXERCISE OF RIFLEMAN.

Carry Arms.—The rifle is brought smartly on the right side, and the left hand on the left thigh.

Trail Arms.—The left hand seizes the rifle at the second pipe, the right close over the sight, and trails it on the right side at arm's length, the left falls back on the left thigh.

Shoulder Arms.—The rifle is brought to the shoulder, as from the order.

From the Order to Trail Arms.

Trail Arms.—The right hand seizes the rifle as low as possible, without constraint, then raises and catches it just above the sight.

From the Trail to Order Arms.

Order Arms.—The rifle slides gently through the right hand to the ground; when even with the right toe, the right hand again grasps the muzzle.

Fix Bayonets.—The rifle is thrown six inches to the front, the bayonet brought back-handed from the scabbard locket by the thumb and fore-finger of the left hand, and the rifle brought back quickly to its place.

Shoulder Arms.—As before.

Charge Bayonets. One Motion.—The rifle is brought smartly into the hollow of the right hip, the left hand firmly grasped round the barrel with the thumb in rear of the sight, the right hand clear of the guard, and grasping the small of the butt, the right toe to the right, and the left toe to the front: the rear rank to remain at the shoulder.

Shoulder Arms. Two Motions.—1st. The rifle is thrown
smartly into the shoulder, and steadied as before by the left hand.
2nd. Quit the left hand.

Order Arms.—As before.

Unfix Bayonets. One Motion.—The rifle is brought briskly between the knees, the lock in and guard out; the bayonet unlocked by the thumb and fore-finger of the left hand, and knocked off by the right, at which time it is returned to the scabbard, directed by the thumb of the left hand on the top of the scabbard, when the rifle and left hand are brought to their proper position.

Stand at Ease.—The muzzle is brought to the front at the extent of the right arm, the elbow resting on the hip, the hollow of the right foot brought in rear of the left heel, and the left knee bent.

PLATOON EXERCISE.

Prepare to Load.—1st. Is the same as the first motion in the present arms.

2nd. The soldier half faces to the right, and in the motion brings down the rifle to a horizontal position, just above the right hip, the left hand supports it at the swell of the stock, the elbow resting against the side, the right thumb against the hammer, the knuckles upwards, and elbow pressing against the butt, the lock inclining a little to the body, to prevent the powder from falling out. The officer now warns the men, in going through the loading motions,

To wait for the Words of Command.
At the word One.—The pan is pushed open by the right thumb, the right hand then seizes the cartridge with the first three fingers.

Two.—The cartridge is brought to the mouth, and placed between the two first right double teeth, the end twisted off and brought close to the pan.

Three.—The priming is shaken into the pan; in doing which, to see that the powder is properly lodged, the head must be bent: the pan is shut by the third and little finger, the right hand then slides behind the cock, and holds the small part of the stock between the third and little finger, and ball of the hand.

Four.—The soldier half faces to the left: the rifle is brought to the ground, with the barrel outwards, by sliding it with care through the left hand, which then seizes it near the muzzle, the thumb stretched along the stock; the butt is placed between the heels, the barrel between the knees, which must be bent for that purpose: the cartridge is put into the barrel, and the ramrod seized with the fore-finger and thumb of the right hand.

Rod.—The ramrod is drawn quite out by the right hand, the left quits the rifle, and grasps the ramrod the breadth of a hand from the bottom, which is sunk one inch into the barrel.

Home.—The cartridge will be forced down with both hands, giving two distinct strokes with the rod to insure its being so, the left then seizes the rifle about six inches from the muzzle, the soldier stands upright again, draws out the ramrod with the right hand, and puts the end into the pipe.

Return.—The ramrod will be returned by the right hand, which then seizes the rifle below the left.
Shoulder.—The right hand brings the rifle to the right shoulder, turning the guard outwards, the left seizes it above the hammer-spring till the right has its proper hold round the small of the stock, when the left is drawn quickly to the left thigh.

Make Ready.—Bring the rifle with one brisk motion in the same position as at the word "Prime and Load," placing the thumb of the right hand on the cock; cock the rifle, then grasp the small of the butt, and place the fore-finger on the swivel nail, three fingers grasping the guard, right foot drawn back.

Present.—Raise the rifle to the present with the fore-finger within the guard ready to fire; in this too much pains cannot be taken to prevent the learner from raising his rifle with a jerk, it must be raised so high that he may lay the right cheek on the butt, without too much stooping the head; particular care must be taken that the learner in this position shuts the left eye in taking aim, the use of the sights being previously explained, and takes his object.

No word of command given to fire.
APPENDIX.

SKETCH OF THE MODERN SYSTEM OF WAR.
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SKETCH OF THE MODERN SYSTEM OF WAR.

MILITARY POLITICS.

In waging war, certain political, necessarily precede field, operations.

The causes of war, and the grounds of any peace which may be formed, are first understood; alliances and treaties of subsidy are formed; advantage is taken of the constitution and means of the country, of the jealousy of other states, of factions, civil dissensions, and private ambition; and provision is made for occasional hostility.

PLANS OF CAMPAIGNS.

In military operations, the plan of campaign is first determined.

In an offensive war, the part for the principal attack, the points for diversions, and the mode of covering our own territory, are fixed upon.

The magazines are consequently stored; the fortresses are repaired; those which are to form the base of operations are determined; the direction of the lines of operation is traced; and the subsequent conduct of the war is facilitated by rendering mountain roads practicable, by cutting roads through forests, by collecting boats on navigable rivers, &c.
FIELD OPERATIONS IN GENERAL.

Frontiers corps are established; the strength and composition of the army is regulated; the general officers are appointed, and provisional instructions given; and, at the expedient time, the various corps are united with the greatest secrecy, rapidity, and correctness, and as near as possible to the first point of action.

It is unnecessary here to enter into the many details which depend on these, or into the varied combinations which local and other circumstances render necessary.—In all, to deceive the enemy is the first consideration.

FIELD OPERATIONS IN GENERAL.

Field Operations which now ensue, and in which troops move about solely for the purpose of passing from one place to another, are termed Strategics; but, when within reach of sight, they act or seem preparing to act one against the other, these operations are termed Tactics.

Strategics are divided into two parts—encamping, and marching; and Tactics into other two—the forming of the order of battle, and the conduct of the battle itself.

STRATEGIC BASE, LINES, AND OBJECTS.

All Strategic Operations imply three circumstances; namely, a Base of Operation, Lines of Operation, and an Object of Operation.

The Base of Operation is formed by a range of protected magazines on the same line.

The Lines of Operation are formed by the paths of the convoys which proceed from these magazines toward the army advancing against, or retreating from, a particular object.

The Object of Operation is at the point to which these lines proceeding from the base converge.
STRATEGIC BASE, LINES, AND OBJECTS.

With regard to the Base.—An arch inclosing the enemy is the most advantageous form of it, because the enemy can take no tenable position within it; and its best direction is parallel to that of the enemy, because it then best protects the interjacent country. A long base secures convoys and retreats, alarms the enemy, and impedes his diversions.

With regard to the Lines proceeding from the fortresses at the extremities of the base.—In order to be secure and that convoys may not be interrupted, they must form, at the object, an angle of at least 90 degrees or a right angle.* Hence the more distant the object, the wider must be the base; but the length of the lines of operation ought not in general to be above three days march. These lines, pioneers must sometimes clear; roads must be destroyed through which the enemy may steal upon them; and posts must be placed to protect them.

With regard to the Object.—It should rather be the supplies

* The army E, acting from the base A D B, of the right-angled triangle A C B, toward the object C, has no reason to fear being cut off, or that its convoys will be intercepted; for though the enemy may cut off the lines of operation B C, or A C, according to the side from which he comes, he cannot possibly cut off the lines C D, or any other, either between B and D, or A and D. For, if he advance on the rear of the army E crossing the lines of operation B C and A C, which proceed from the extremities of the base A D B, he will himself be cut off from his principal posts. These can be placed only at F G H. But if the enemy advance as far as the line C D, or only to the point I, the army E may easily, by a detachment, cut off his retreat to F, and the fortress B might be able to intercept it towards G and H: so that he would himself fall into the snare he had laid for others.
of the enemy’s army than the army itself. . . . The art of discovering the most important object among those against which operations are carried on, is of the highest importance in a General. This object is called the Strategic Key.

As to the Base in particular.—It is, from its principle and object, evident that, according as an army acting offensively proceeds into the enemy’s country, it must form new bases. The base, therefore, which is situate in the country of the offensive army should have extent enough to cover and secure, by its extremities, the flanks of the other bases established in the enemy’s country by the same army.

If the enemy’s frontiers be provided with fortresses proper for establishing a base, and these be in the army’s possession, it is natural to turn them to that purpose: many of these fortresses, however, deserve rather to be demolished than kept. If the conquered country have no fortresses, such towns, villages, and posts should be intrenched, as may best secure the magazines, lines of operation, and communications of the offensive army.

**STRATEGIC MOVEMENTS.**

Offensive operations must never be tamely suffered, nor defence merely made: the offensive must be assumed.

Parallel positions and parallel defensive marches must, therefore, as soon as possible, be relinquished, in order to follow the mode of active diversions on the rear and flanks of the enemy.

The enemy is better impeded by taking a station on one side than in front—by harassing his rear and flank, acting against his convoys and supplies, and even perhaps invading his country.

Concealed marches and all the calculations which they require, are of the highest importance.*

* The art of computing manœuvres with reference to time and space is called Logistics.
CIRCUMSTANCES MODIFYING THESE PRINCIPLES. 179

As every offensive operation ought to be concentric, every retreat ought to be excentric, in order to alarm the enemy for his lines of operation.* Even in strategics, however, the flanks of the retreating army are somewhat endangered by an excentric retreat.

CIRCUMSTANCES MODIFYING THESE PRINCIPLES.

Varieties in time and place lead to innumerable modes of applying these simple Strategic principles; and it is only observation, genius, and the coup-d’œil acquired in a few campaigns, which can communicate a knowledge of them.

When forced to act on the defensive, the employment of the same principles by the enemy must be guarded against, as well as all the applications of them of which varieties in time and place may suggest the adoption.

Then, the knowledge of one's own frontiers; of the strength and resources of the enemy; of the disposal of his magazines; of his design as to the principal point of action or of important diversion; of what territory should, for various reasons, be left open, and what defended; of anticipating him at the opening of the campaign; of where diversions may be made against him; of the best places for magazines; of the best direction

* An Army which retreats from A B C D E, toward F G H I K, runs no risk of seeing the enemy advance into the arch F K, for, by such a movement, he would be in danger of being surrounded.
of lines of operation; of settling camps; of positions to be occupied; of passes and openings to be guarded, both at first and subsequently, in case of retreat; of avoiding a general engagement; of injuring the enemy by skirmishes; of attacking him on his marches; of falling on his detachments; of enterprises on his depôts and lines of operation; of waiting for him at the passages of rivers, at defiles, and in disadvantageous situations;—the knowledge of these and numerous other considerations, is of the highest importance.

TACTICAL BASE, LINES, AND OBJECT.

To tactical operations, these strategic rules are applicable, by substituting the Order of Battle for the base, the Lines of March and Fire for the lines of operation, and the Enemy's Army for its supplies.

With regard to the order of battle.—It is formed by the deployment of men, as the base is said to be formed by the deployment of materials of war. The most common mode of deploying is the Prussian method, or what the French call à tiroir, in which the divisions move along the two smaller sides of a triangle. This deployment of columns is made out of cannon reach, and covered by a strong vanguard—in plains, consisting of cavalry. The extension of the line of battle resembles the extension of the base in this, that it also permits attacks on the flanks and in rear.

With regard to the lines of march and of fire.—They are evidently continuous, or the former terminate in the latter; and they are precisely as numerous as the soldiers in the first rank of the order of battle. Like lines of operation, they are most effective when concentric; for if they fall on the front and both flanks of the enemy, he must yield or fly.

With regard to the object.—It is evidently now no longer the supplies, but the army of the enemy... The art of distinguishing, before a battle, the point of the enemy's position on which the chief force of the attack should be directed,
especially constitutes the military coup-d'œil. That point is called the key of the position.

As to the order of battle in particular. Troops rarely advance in it; but in close columns. When formed by their deployment, it generally presents from sixty to eighty thousand men arranged in two lines, and divided into three principal corps, with intervals between each, and a corps of reserve.—Valleys and woods are often made choice of to conceal from the enemy the situations of reserves of infantry and cavalry, which are not called into action till, in consequence of faults committed by him, their operation becomes decisive.

The post of commander-in-chief is at the head of the strong and numerous reserve which supports the centre. From that point, all orders are issued; and to that point, with extreme celerity, all communications are made.

The Officers of the Etat-major carry orders to the generals of division, who communicate them to the generals of brigade, and these to the colonels; and they receive from the generals of division the details which they wish to transmit in return.—Each general, however, is free in his manoeuvres except where the marshal or commander-in-chief ordains it otherwise.

The staff officer should be sufficiently instructed to be able to serve as an officer of foot, of cavalry, of artillery or of engineers; and knowledge of the latter kind is especially necessary, because an officer who is skilled in fortification distinguishes, at the first coup-d'œil, all the advantages or disadvantages of any position.*

The moment an enemy is announced, the aid-de-camps and staff-officers mount horse and fly to the advanced posts, examine every appearance attentively, determine whether it is a mere demonstration or a real attack, and make that report which determines the measures to be adopted by the general.

The details of the order of battle depend on localities and

* In the British service, a mere knowledge of drawing plans, forming lines, &c., is too often the substitute of that far more important experience in war—intelligence, activity, and courage, which are most essential in this department.
circumstances; and few commanders indeed are capable of
suiting it to these with all the perfection to be wished for.

KINDS OF FORCE WHICH TACTICS EMPLOY.

In these operations tirailleurs are often as effective as close
ranks, and they are less easily thrown into disorder. As they
extend most, they most easily come upon the flanks of the
enemy. As, then, troops always do in actual engagement
maintain only an irregular fire and very imperfect order, their
acting as tirailleurs has been recommended as at once giving
them all the advantages of that species of force. Perhaps the
very numerous cavalry which would be required to protect an
immense quantity of scattered soldiers, in a level and open
country, affords the greatest objection to the extension of this
system.

Infantry of the line, however, must always form the great
basis of an army, in order that its movements may be made
with the greatest possible unity.

Infantry in general and tirailleurs in particular should always
be supported by cavalry. The best mode of doing this is to
place the latter behind in a second line; because then it may
readily cover the infantry, and, if the enemy yield, may as
readily throw him into disorder.

In order to be of any use, it is absolutely necessary that
cavalry should keep in a body before the enemy.

In a plain, it is the part of the cavalry to meet the enemy;
in woods and mountains, it is that of the foot; and in a mixed
country it belongs sometimes to one, sometimes to the other.
Hence, in such a country, they ought to be intermixed when
marching in columns.

A column is the best form of defence against cavalry.

Experience shews that cavalry, when determined, vanquishes
even columns. This is owing to the mode of arming the latter:
pikes mixed with the bayonets would effectually protect them.
I know, says Bulow, I shall be told of the many instances of
deployed infantry repulsing cavalry, but surely the latter must have wanted courage in those instances. All the officers of cavalry, who have seen service, declare unanimously, that, in general, their troops do not retreat, till after they have received the fire of the infantry, that is to say, when there is almost nothing more to fear. This conduct is unaccountable: it is doing too much, or too little. If the troopers, after receiving the fire, were to clap spurs to their horses, and give them the bridle, they would penetrate the ranks.

Infantry must never, therefore, be left without cavalry to support it, even in countries which seem impracticable for horse.

By not permitting the enemy to approach too near, it is always possible to avoid a battle.

If intending battle, an army should never wait to be attacked in its position, but should ever put itself in motion to attack;* for, though its position may be one from which it cannot be driven by force, yet every position may be turned.

Battle is never offered, nor an attack made, without the position of the enemy having been previously well reconnoitered; and in order to prevent the enemy being equally prepared, all the columns are in motion by break of day.

It is then, when within sight of his adversary, that an able general finally settles his arrangements.

Till he has there reconnoitered the situation and dispositions of the enemy from the front of his vanguard, he retains at once the power of guiding his army rapidly and of making interior movements which escape the enemy’s notice or mislead him, by keeping his army entirely in columns.

These having more or less completely deployed, the headquarters are established at the head of a numerous body of reserve, behind and near the centre of the main body. Thence,

* It is long since Machiavelli pointed out this truth.
all orders proceed, and one impulse is propagated through the whole.—Yet even the subaltern generals who fight at the head of their divisions, should, in order to be prepared for emergencies, be skilled in great manoeuvres.

In vain, however, were this intelligence, if the mass which it should animate were complex or unwieldy. Hence the organization of the army ought to be simple and uniform in the highest degree.

It is this intelligence in the head, and simplicity in the members, which permit that rapidity and harmony without which no successful battle can be fought.

In aid of this intelligence, this simplicity and uniformity, this rapidity and harmony, a powerful reserve is indispensable. For it is scarcely ever the general who merely makes the first movement who decides the victory; but he who, under circumstances not otherwise unfavourable, has at his disposal, after an obstinate engagement of several hours, a formidable body of fresh and select troops.

No sooner, then, is the battle commenced at all points, than this body of reserve, under the immediate command of the commander-in-chief, approaches in order to render the battalion impenetrable, to assist, in any emergency, either of the wings from which it is equally distant, or to make, at a critical moment, some decisive movement.

Such are the almost omnipotent instruments, which only wait the favourable opportunity, afforded by any disorder or fluctuation of the enemy's line, to make an impetuous attack—an attack which is instantly supported by an analogous change in the movements of the whole army, and which almost infallibly produces decisive success.

To obtain this favourable opportunity, and to employ these powerful instruments, let us examine the means employed.

First, a defect in the enemy's situation and dispositions, observed during the reconnaissance, may at once present this opportunity or render the employment of any reserve unnecessary. Secondly, such an opportunity may require previous
manceuvring. Thirdly, a long continued fire of artillery and musketry may alone be able to procure it. Fourthly, it may, in this case, be first obtained by the enemy, whose ill use of it may present the means of his own defeat. Fifthly, it may not be attained at all, and it may be necessary to assume the defensive.

The conduct necessary in the first case, in which a defect of the enemy's situation or disposition presents a weak point, against which a general may rapidly and advantageously advance, need not be here considered.—Modes of attack are described under the ensuing head.

When the second case is resorted to, the general manoeuvring in presence of his adversary endeavours, by misleading him, to induce him to make some wrong movements, of which the general instantly avails himself; or he abandons one position in order to take another, of which the object is to outflank the enemy or to break his line—the only means by which the success of a general battle can be decided.

When the third method seems alone likely to procure the opportunity, the fire of artillery and musketry is tremendous, and no regiment either of infantry or cavalry advances beyond the line of battle for the purpose of breaking that of the enemy, unless a special order has been given.—After a short contest, however, the enemy may, by some feint, be thrown into disorder, and present an opening at a point incapable of resistance. Then the impetuous attack of a regiment may lead to victory: fresh troops rapidly advance to support it: all is in motion to take advantage of the disorder. The cross firing against the troops is murderous, but short. While a brigade rushes through the enemy's line, much or the whole of the reserve takes its place; the enemy are completely occupied in front; and the column forms in order of battle on the flank or rear of the enemy. Unanimity prevails in the attack; but there can be no regularity in the defence of the broken army; and its hesitation or slowness in wheeling to face the assailants, or in adopting an orderly retreat, always augments
its disorder, and frequently incurs its destruction. To insure this, reserve after reserve is brought up; a second reserve of course flanking the party of the enemy which flanks the first: the cavalry, too, acts in a body upon one point, and completes the disaster.

When the fourth case occurs, and the favourable opportunity is first obtained, but ill employed, by the enemy, it is then that the reserve of select troops, commanded by an intrepid general, flies to the point of disorder. The victorious enemy, having scarcely finished its charge, is vigorously attacked in flank. Forced to fly in his turn, he throws his own first line into confusion, and opens a passage to the assailants. Thus, does the first movement often insure defeat instead of victory.

If, in the fifth case, no such opportunity can in any way be obtained, and no attack can be made but with disadvantage, the general may fall back and take a position, in order to wait a more favourable occasion.—Now, he may be assailed by the enemy. If the position be so advantageous as to present only one point of attack, he instantly determines the order of battle. If otherwise, he does not open his defensive dispositions till he well knows what points the attacking enemy proposes to attempt. In columns, on the field to be occupied, he waits the first movements of the enemy, and determines, according to them, the arrangement of his troops. At the principal points of the line he means to attack, the enemy sees only heads of columns, of which he cannot calculate the depth, or imagine the object. If he manœuvre, the army manœuvres also. If he endeavours to mislead, so does the general—either by presenting a point weak in appearance, in order to attract him to a place, whither, by artful measures, he can rapidly collect a powerful force to defend it—or by inducing him to make a wrong movement, which affords an opportunity to attack him to advantage, and to make an offensive counter movement.
MODES OF ATTACK.

It is obviously of the highest advantage to enclose the enemy—that is, to have a larger front than he has. This, too, is effected when an army is on his flanks, even though inferior in number.

The system of fire-arms having necessarily introduced the long and slender order of battle, the weakness of the flanks of a modern army is irremediable; and an enemy is lost if attacked on them.

Hence, weak as an army may be, it will always have more troops than an enemy's flank can oppose, and may always worst him by concentric fires directed to it. So convinced are soldiers of this, though confusedly, that whether infantry or cavalry, all fly when vigorously attacked in flank.—It is also owing to the advantages of concentric lines of fire proceeding from besiegers, and the disadvantages of excentric ones proceeding from the besieged, that fortresses are reduced.—Hence, too, a square battalion, surrounded by tirailleurs, cannot be saved from ruin.

An army ought, therefore, only to amuse and check an enemy's front by an open corps—light infantry, or tirailleurs: its serious attack should be secretly directed to his flanks, and these every effort should be made to turn, or to bring its front to bear on them.

It is indispensable to check the enemy's front in order to prevent his moving the remoter portion of his line into a direction parallel to the attack in flank, the consequence of which would be a battle front to front, the event of which is always doubtful.

When an enemy's flank is worsted, he cannot retreat so excentrically as he otherwise might; his lines of operation are rendered insecure, his convoys may be seized, communication with his magazines cut off, or a diversion made in his country.

Attacks in front are, therefore, less in the spirit of the
modern system; for, if an army, thus attacked and broken in the centre, made an eccentric retreat, and if the assailants did not so greatly preponderate as to be able, at the same time, to check the wings of the broken army, they would then, on both sides, be taken in flank.

An attack on the flanks of an enemy’s army in the oblique order of a single continued line, which was, in modern times, used by Frederick of Prussia, is in general disadvantageous; as, in case of retreat, it exposes its flank: it may also easily be out-flanked, because the oblique line must march diagonally, but the other, by a lateral movement in the straightest and shortest way; or, the nearest wing of the line attacked, may avert the attack by falling back; or, the most distant one may reach the flank of the corresponding wing by an expeditious march.

At all events, it is indispensable to this oblique attack that the army be previously completely upon the enemy’s flank, and that the front of the adversary be checked, and particularly the wing opposite that attacked. A hooked flank, on the most advanced wing, which may turn on the prolongation of the oblique front, and take the enemy in flank, thus, is also very necessary:

\[ \text{Diagram} \]

The oblique order of battle has still this great defect, that it offers to the enemy a flank which may be enfiladed by his cannon; and, if the enemy greatly out-flank it, both the longer and shorter oblique lines are liable to this. If the flank of the attacking wing were covered by a square battalion, then two of its sides might be enfiladed.

The oblique attack in echelons, invented by the King of Prussia, has fewer faults; because, in case of the defeat of the first echelon, disorder is not so easily propagated along the
MODES OF ATTACK.

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divided front; and their flank is better secured. But though this is the case, yet each, as it advances, being exposed to a concentric fire, they may in succession be defeated.

At all events, the first and second echelons should be supported by a second line composed of cavalry, and batteries should be placed to enfilade that part of the enemy's line, which would probably fall back if taken in flank by the first echelon.

There is one species of attack, however, less affecting the flanks than even these forms of oblique attack, being indeed directly in front; but which is superior to the oblique attack, and sometimes equal in value to the attack in flank; yet it derives all its value from its afterwards permitting attacks in flank, and, consequently, proves the justness of that as a general principle; this is the column of Folard.* This column, consisting of, perhaps, thirty files, pierces the enemy's line, and separates lengthwise into two halves; of which one, facing to the right, and another to left, they attack in flank the separated parts of that line.

To the column, cannon firing grape in different directions ought especially to be opposed; yet the effect of cannon is diminished by the narrowness of its front, and by the rapidity of its motion, greater than that of a deployed line.—The column might make an unshaken resistance to cavalry by means of pikes placed on muskets.—Tirailleurs, however, would, if insufficiently opposed by those of the column, pro-

* I need scarcely remark, that Marshal Saxe thinks Folard wrong, only in deeming it the best order in all cases. Recent events prove it to be of yet greater value than even Saxe imagined.
duce the most terrible effect upon it; for, by yielding as it advanced, all their shots would tell: even then, however, if there existed collateral columns, supported by cavalry in a second line, it would be impossible to penetrate between them, in order to take them in rear and flank.

The great rule of some tacticians, is to avoid waiting for the shock of such a colossus, and to come up again upon its flanks and rear, by which means the advantage of the column would, in a great measure, be lost; these movements being covered by cavalry.—But it is evident that the attacking army would not fail, before the attack, to place corps opposite to each of the wings of the army attacked, in order to prevent their movements against the flanks of the column. It might even have had the power of placing these corps so as to make the wings fear being turned by them.

The best way of repelling an attack in columns appears to be—first, to advance a considerable body of tirailleurs, supported by light cavalry and light artillery, in order to check those of the enemy, to conceal the disposition of the army, and to discover, if possible, that of the enemy; and these tirailleurs should, when forced to fall back, retreat à la débandade behind the second line; secondly, to have batteries on the salient parts of the position to fire grape-shot, &c., on the flanks and rear of the advancing columns, whenever the tirailleurs have unmasked them; thirdly, to have the first line of the army supported by corps of cavalry, forming its reserve, and by some pieces of artillery, deployed from the first, in order, at a proper period, to receive the columns with cross fires; fourthly, to have the second line formed in columns at one hundred and fifty paces from the first, supported also by cavalry and artillery, in order, when the first is forced to retreat and form behind it, to move forward in charge step to attack the tottering columns; fifthly, to have the general body of reserve placed behind these, ready in due time to advance to their aid; lastly, to have batteries established behind the army, in order to flank the passages by which, in case of defeat, it must retreat;
or, at least, the situations where these might be placed should previously be reconnoitred.

If columns advancing in three divisions are attacked and must defend, the central division withdraws to permit a cross fire; thus,

Thus, there are three modes of attack; in flank, obliquely, and in front by columns; yet the object of all of them is the same, namely, to effect attacks in flank.

RETREATS, ETC.

Retreats after battle should in general take place excentrically, promptly, and under cover of cavalry. Thus protected, they may be made in disorder, and troops may again immediately form in the most convenient places.

The excentricity of the retreat alarms the enemy's flanks and rear, and prevents pursuit.—An excentric retreat in Tactics, however, is much more dangerous than in Strategies; and an army, broken in the centre especially, ought, perhaps, never to attempt it, unless from local and other circumstances, it is completely secured against the movements of the enemy on its flanks.

An orderly retreat, after engaging with musketry, is impossible. In such a case, troops always fly in confusion; for, otherwise, there would be no occasion for their quitting the field.—Hence the importance of cavalry in a second line, among which the men may then fly in haste.—They must instantly form in the most convenient place—a wood or height; and, returning directly to action with little loss, they
may display a well-founded courage. If thus circumstanced, in an open situation, and without cavalry, infantry must keep together, or it will be cut to pieces.

An orderly retreat, after cannonading, is easy, even if a slaughtering fire of musketry should take place in the course of it.

After losing a battle, fresh offensive operations should immediately be thought of. Not to be beaten, it is only necessary not to believe that you are so. It is proper, then, to begin the lesser war (*petite guerre*), to avoid battles, and to be content with manœuvreing. If a leader were bold and wary upon proper occasions, he would be almost invincible.

**CONCLUDING OBSERVATIONS.**

The precise cause of the ascendancy possessed by a great number of troops over a smaller is, in the modern system of war, the advantage it affords of outflanking the enemy.

The superiority which the modern system thus confers upon number is eminently favourable to defensive war, and even to the insurrection of a people opposed by a regular disciplined army.

It follows also, from the principle of the base and the possession of natural limits by many states, that their military energies are also limited, and must diminish the more, the further they remove from their source.

Hence, these limits will always afford a means of dividing extensive empires.

From the same cause, however, states will always have a tendency to certain boundaries, which it will be equally vain to diminish or extend; and if this should be thoroughly understood, peace of longer duration would result from the conviction.

To the production of this effect, the improvement of war itself will lead; not merely because equal physical advantages and equal knowledge on both sides would render contest
CONCLUDING OBSERVATIONS.

useless; but because the more dreadful war can be rendered, and the more certainly destructive to all who engage in it, the less willingly will it be waged by any.

None will regret that the art of robbery (for death in war is only a means of robbing) should utterly cease; for it, more than other pursuit, destroys sensibility in the best of men, and involves every vice which can debase them to the level of brutes; nor will any one pretend that it would lead to excessive population, who remembers that there is, even in Europe, more desert than cultivated land.

Unfortunately, this result is rendered less probable by the greater or less strength of the physical boundaries of different states, their less or greater population which modifies that strength, and the readiness of the people to defend existing establishments: circumstances, all of which must give origin to war.

One circumstance, perhaps, alone could put a period to war, namely, such improvement in the art, that, of those who took the field, none could escape destruction.

As General Bulow shews, the superiority given by the modern system of war to number over valour, is favourable to defensive war and to the insurrection of a people opposed by a regular disciplined army, provided the former be guided by an intelligent mind; because, on the number of shooters well organized and distributed, depends an army's being attacked on its flanks, and its magazines being unattended.
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