

Every consideration leads to the conclusion that the *line* is in reality the proper disposition for attack or defence, notwithstanding the revolution in the art of war which modern improvements in arms and projectiles have effected. Colonel Tressiger shows that as far as artillery fire is concerned it may be safely disregarded at 800 yards, and that *two deep* formation is that which suffers least from its effects; for infantry fire he does not seem to think it effective beyond the distance named, and in dealing with its action on an advancing line he quotes from Major TELLENBACH's work on "The Art of operating under the enemy's fire with as little loss as possible," as follows:—

"In the field one has to deal with fire more or less, well aimed and more or less blindly delivered. It is customary to consider the first description of *line* only as effective and to look upon the last as thrown away. Both descriptions, however, fill up a certain space of ground with projectiles.

"In peace we very properly set value only upon aimed fire, and in war we very properly desire our soldiers to aim; but a leader should be aware notwithstanding that the enemy's unaimed or badly aimed fire has a great importance, the shot which misses its mark can produce effect near it. If it passes over the mark it makes the ground beyond unsafe. Shot do not only produce effect on the mark aimed at, but creates an unsafe region along the whole line of their course, and unaimed shot kill and wound as well as aimed.

"In any case this fact deserves the greatest consideration, viz., that under small-arm fire we have never anything to deal with more than 25 per cent of shot which are aimed."

The same authority lays down that firing is as a rule too high, it therefore follows that nearly 75 per cent go over the mark, and depth of formation must entail a loss which will go far to neutralize the advantage which an extended order must of course, give to the attacks when under fire of breech-loading rifles.

It is evident then that the line in reality presents in action a far less tangible mark for infantry fire than the column or any other mode of formation, and if continually advancing will reduce the effective fire of the defenders to less than the ratio allowed as quoted, as experience has proved that not more than 16 per cent or *one shot in six* will kill or wound, the aim of the best trained marksman being confused by the change of distance and the excitement, so that except *in range* alone the rifle in action is no more effective as a weapon than the old smooth-bore.

It cannot of course be denied that the *two deep* line when it approaches within easy rifle range of the enemy's position presents a target which it ought to be easy to hit.

"A direct attack, however, upon a determined enemy can never be made without heavy loss, whatever the formation in which it is made may be, and until it can be shown that in making such an attack the loss is increased by troops in the skirmisher swarm formation is so much less than troops in *two deep* line formation, as to entirely compensate for the mixing up, confusion, and want of control, which the former formation entails, I consider any such radical change in our tactical formation is clearly to be deprecated.

"It is, of course, impossible to lay down arbitrarily any system of attack or defence which will be applicable to all circumstances and to all kinds of grounds.

"I submit, however, for consideration the following form of attack for a single battalion, in order to show, if possible, that not only as a target but also as a tactical formation, the line is superior to the skirmisher-swarm.

"In advancing under artillery fire the line having necessarily to adapt itself to the formation of the ground must try as far as possible when it has to break up its component parts to do so in such a manner as will only present a *two deep* line as a target.

"Thus if the fire upon the line be direct an advance in short echelon will give the requisite flexibility, and at the same time offer in no way a more favourable target. Should the fire come diagonally from one flank of the position an advance in echelon from the opposite flank, will meet the requirements of the case.

"It must entirely depend upon the severity of the fire and the formations of the ground whether the advance under artillery fire shall be general and continuous, or whether it shall be made by a succession of rushes. In the latter case, each company in succession would run forward at speed to a certain distance and lie down each forming up in line on the one that precedes it.

"By this means, the first 1,200 yards ought to be got over without much loss of life.

"During the last 800 yards however, the advance becomes really difficult, and every possible means must now be taken to diminish the effect of the enemy's infantry fire, which sooner or later must now come into play.

"Rapidly of movement and a formation offering the most unfavourable target possible are excellent precautions against infantry fire, but would not be sufficient to insure a successful advance. Now, as formerly, skirmishers must cover the front and upon them must devolve the arduous duty of protecting and aiding the advance up to the moment when the final rush has to be made,

"A position defended by breech loaders

is now so strong as to necessitate its being approached in a manner somewhat like that which is laid down for the escalade of a fort or for the storm of a breach. The fire of the defenders must be kept down by troops specially told off for the duty, and this duty must devolve upon the skirmishers.

"Skirmishers should thoroughly understand that wild unnecessary firing is worse than useless, as it does the enemy, little harm and tends to give him more confidence.

"A steady well directed fire on the other hand kept up on every man that shows his head above the cover of the position will nearly invariably produce its effect and will certainly tend to lessen the value the enemy's fire, and thus facilitate the advance of the attacking force."

The dispositions point at once to the necessity of collecting the *marksmen*—the crack shots of a battalion—into the flank companies thereof; a course advocated by the Volunteer Review more than two years ago, and we advised that the action of our rifle associations should be steadily directed to the training of soldiers with a soldier's weapon for this purpose. A very great mistake has been made in allowing the annual target practice to take place over measured ground. Troops should be trained in judging distances as well as in accurate shooting or aiming, and they never will be taught this by being allowed to fire off banquettes whence the distance from the target has been carefully measured and known.

Each company should be trained on ground where no distances have been measured, and the best shots selected for the flank companies.

Colonel Tressiger advises that in order to cover the front of the line and to give it greater freedom "that the requisite number of skirmishers should be sent out from each company, so many from each section."

We think this the only weak point in the case. Skirmishers should be as a class, men of judgment and coolness taking them indiscriminately from the rank and file will not supply that class. But taking as the proper tactical unit a battalion of ten companies, and having in such an organization two of 55 men each as sharpshooters, or flank companies, one fifth of the whole can be thrown forward to cover the advance of the remaining four-fifths and those companies can resume their places in line without confusion, when that point in the advance, beyond which skirmishers cannot go is reached.

The disposition sketched out supposes the battalion to be in *two deep* line with a front of five companies, two of which is thus thrown forward to cover the advance of three which will give the necessary extended order for skirmishers. The companies so formed can rush forward alternately, as Colonel Tressiger is