

OLD TIME AND I.

BY MARK LEMON.

OLD TIME and I the other night
Had a carouse together;
The wine was golden, warm and bright—
Ay! just like summer weather.
Quoth I, "There's Christmas come again;
And I no farther richer,"
Time answered, "Ah! the old, old strain—
I prythee pass the pitcher.

"Why measure all your good in gold:
No rope of sand is weaker;
'Tis hard to get, 'tis hard to hold—
Come lad, fill up your beaker.
Hast thou not found true friends more true,
And loving ones more loving?"
I could but say, "A few—a few;
So keep the liquor moving."

"Hast thou not seen the prosp'rous knave
Come down a precious thumper—
His cheats disclosed?" "I have—I have!"
"Well, surely, that's a bumper."
"Nay, hold a while; I've seen the just
Find all their hopes grow dimmer."
"They will hope on, and strive, and trust,
And conquer!" "That's a brimmer."

"'Tis not because to-night is dark—
No brighter days's before 'em;
There's rest for every storm-toss'd bark."
"So be it! Pass the jorum."
"Yet I must own I should not mind
To be a little richer."
"Labor and wait, and you may find—
Hallo! an empty pitcher."

RANGE FINDING THE PRUSSIAN ARTILLERY.

The following account of the manner in which the captain of a Prussian battery of horse or field artillery regulates the proper elevation of his guns when in action, will not fail to interest those of our readers who belong to the artillery. It was published originally in the *Invalide Russe*, and was copied by it into the Austrian journal, *La Vedette* :—

"After the campaign of 1866, a central school of gunnery was immediately organised at Berlin, and it was decided that four officers per brigade, chosen from the captains and from the lieutenants of some standing should be sent each year to this school to go through a six months' course of instruction. It is this school whence emanated the officers to whom the Prussian army attributed those brilliant results which its artillery obtained in the war of 1870-71; for it was there that they were practised in solving all those practical problems which arise when the question of how an efficient fire should be maintained against the enemy has to be taken into consideration. In order to ensure this, this school, has proposed several methods, which we will now proceed to discuss. According to the instructions of 1867, the method to be pursued was as follows :

"The Captain judges his distance by the eye, then he indicates to the battery the elevation to be given, at the same time specifying in what order the rounds are to be fired. For instance, he would order, at 1600 yards against infantry, commence firing from the right. All the guns of the battery would fix their sights for the distance indicated, and would aim under these conditions at the object to be fired at. The right gun having fired, the captain marks the results of the shot. Supposing the shell goes over the object, the captain orders a less elevation, that for 1500 yards for example. The other pieces immediately alter their tangent scales, and aim afresh. The plan is continued until one of the guns hits the object, when all the guns having got their sights at the same elevation, none of the projectiles appear to strike beyond or short of the object.

"This proceeding is inconvenient from more than one point of view. Thus, when

the first shot misses the object, which is generally the case, it will be admitted that the elevation given is not right for any of the guns at that distance—it is necessary to alter it and take fresh aim, an operation which requires time. Consequently, a delay ensues, which is repeated after each trial shot until the right elevation is found, which in general does not take place immediately. Nevertheless, we may add that in spite of these inconveniences, pointed out in many reports, this proceeding was frequently had recourse to in the last war by a certain number of battery commanders.

"In 1869, another method was substituted for this one, the imperfections of which were recognised. It was ordered to be experimented on at the practice carried on by the brigade during the course of that year. It had probably been tried at the School of Gunnery, where the name *pointage a distance échelonnées* had been given to it. It is as follows :—The captain judges distance by eye, then he calls out the range for which the elevation has to be given. But instead of giving the range which he has judged, he gives one somewhat under it, but he adds the following indication: 'Increasing by a hundred paces in succession,' should the distance be considerable. Thus, supposing the captain orders the elevation for 1800 yards to be given, the first gun gives the elevation for that range, the second that for 2000 yards, the third that for 2200, and so on. This is what is meant by the expression '*regele des distances échelonnées*.' The captain applies this method according to his own judgment, basing it on the observations which he has been enabled to make, after the first shot has been fired. Should it be necessary, he then fires the second, the third, or any other gun, so as to come to a correct conclusion as to the one whose projectile strikes nearest to the mark. This being once settled, and when he considers the range sufficiently known, he orders all the guns to give the same elevation.

"We see that by this manner of proceeding even should the first shot fall short of the object, there are still one or two guns which have nearly got range, and are quite ready to fire. This plan is certainly better than the preceding one, when we come to consider the rapidity with which the firing can be regulated. Moreover, this advantage is of great value when in action against the enemy's artillery, and especially when several batteries are in line at the same time. Since care is taken that the first piece should be fired at a less elevation intention ally than that which would be right for the distances judged, it will not be so difficult to estimate the range to the exact point where the shot strikes—for this reason, that the shell will not burst in the middle of the enemy's guns. An approximate can then be formed as to the elevation suitable for the other guns, which would then go on firing.

"It must be allowed, however, that this method of proceeding is not devoid of imperfections. If it should happen for example, that by chance the first shot hits the object, the elevation would have to be regulated by that gun, but as all the others would have been given a wrong elevation, the captain would have only one gun which he could count upon as being at his immediate disposal. It would be necessary to change the elevation of all the others, and make them take fresh aim, whereby a necessary interruption to the firing would ensue. On the other hand, if the captain, however much he may have wished to have done otherwise, has judged the distance to be greater

than it really is, the first shot will go beyond the mark; consequently, the progressively increasing elevation given to the other guns will be totally useless, it will be necessary to commence afresh, and the firing will be interrupted again.

"Cases may arise where it would be very difficult to observe the effect of the shot. We may instance the case in which the bursting of the shell would escape the eye. It would then be necessary, in order to observe the effect better, to fire two or three guns having the same elevation at once, thus rendering the application of the method of gradually increasing the range impossible. For these reasons, this latter plan was definitely adopted by the Prussian artillery. In the latter months of 1869 a third method was tried, to which the batteries must actually conform when carrying on their practice. It is based upon a speciality peculiar to the system of construction employed in the Prussian gun carriages, which allows the angle of elevation to be rapidly altered by turning the winch of the elevating screw.

"The fact which serves as a starting point is as follows :—When this winch has made one complete turn it gives an increased range of about three hundred paces at the outside, both for the 4 pounder and the 6 pounder (corresponding to the English 9 and 16-pounders). By this method a certain elevation is obtained which though not sufficiently exact for uninterrupted firing kept up for some considerable time, is quite near enough for the rough laying which takes place when first coming into action.

"We know that when the elevation varies between certain limits the deviation of the shot undergoes but little alteration; we may also allow that (considering the large size of the objects aimed at when in action on the field), even for a considerable difference in the range, the variations in the lateral deviations do not require to be taken into consideration. By virtue of this third method, the captain judges the range by eye, and he orders every gun in the battery to give the same elevation. Should the first shell burst short, the captain gives the word, 'Run up the elevating screw for so many paces in addition.' Every gun immediately alters its angle of elevation by means of the elevating handle, but those guns which would not have to fire immediately, owing to their place in the battery (as for instance, Nos. 4, 5, and 6), alter their elevation and direction as required, but so as to cause as little interruption as possible to the carrying on of the firing. On the other hand, each piece, as soon as its turn comes to fire, alters its elevation previously by means of the elevating handle, and, as soon as the shot is fired, makes any correction that may be necessary in its direction.

"The superiority which this method has over the preceding one is manifest. All the guns are aimed in the same way, and when the first shot or a subsequent one strikes the object, the battery can open a really efficacious fire without delay. It allows, moreover, of several consecutive shots being fired at the same elevation, so that a more certain observation may be obtained than is the case with only one trial shot. There is no longer any necessity to give the range as less than what it really is; and it is an advantage in this sense, that when commencing there are sure to be quite enough shots striking short of the object, especially when we come to consider the difficulty when the eye has to emancipate itself from that tendency which leads it to estimate the