

"Oberste," meaning highest or supreme, and his assistants are called "Oberstlieutenant" and Major. All of these officers are known as "regimental officers" or "battalion officers," because their duties are general in the regiment or battalion, and have nothing to do with the details of service in any particular company. They are also sometimes designated as "field officers." The "general officers" are those above the grade of colonel, and, beginning with the lowest, are, in our own and the English services, brigadier general, or general of brigade; major general, lieutenant general, and in the English army, field marshal. In the French army there are generals of brigade, generals of division, and marshals. In the German army the brigade is habitually commanded by a major general, the division by a lieutenant general, the corps by a general of infantry, cavalry, etc., while the proper command of a field marshal is an army. In Austria the term lieutenant general is replaced by that of "Lieutenant Feldmarschall," and that of general by "Feldzeugmeister."

But whatever may be the particular terms employed, there is in every well organized European army a grade of general officer for the special command of each great unit, viz, the brigade, division, corps, and army. Of course it happens not unfrequently that a general officer exercises a command higher than that to which his grade entitles him, and it often happens in war that brigades are commanded by colonels.

We may now revert to the considerations which should regulate the strength and composition of the various component parts of an army. As already stated, the company of infantry is the lowest organized unit of that arm of service. In other words, it is never broken up, never removed from the immediate supervision of its commander, unless for a strictly temporary purpose; as, for example, when a guard, an escort, patrol, or similar detachment is required for a few hours or days of less force than a company. Not only is the company the smallest organized unit, but it is also the most important; for it is here that the young soldier receives his whole military education, and passes from the raw recruit into the thoroughly disciplined and instructed veteran. The company is the soldier's family and home, and as the company is, so will the soldier, the regiment, and the army be. The army, after all, is only an aggregation of companies, and the intermediate units are simply subordinate aggregations of companies made for convenience, but in which the companies are never merged, and never lose their identity and individuality. There is no point in the organization of armies more important than that of securing the best possible company officers and non commissioned officers; with them a good army can always be made; without them it is impossible. The company commander is in immediate contact with all his men, and is directly responsible for their health, comfort, good order, discipline, and efficiency; he conducts them personally in battle, and directs their individual movements—all this with the assistance of his lieutenants and non commissioned officers, but with the direct responsibility always resting on his own shoulders. It is impossible to overrate the importance of the captain's duties, and the absolute necessity of the post being held by competent and fully instructed gentlemen. It follows from all this that the strength of a company should reach and not exceed the

limit up to which a good officer can properly exercise this personal supervision. Just here occurs one of the broadest and most important distinctions between the Germans and Russians on the one hand, and the French, English, and ourselves on the other—a distinction which widely affects the entire army system. It is the question of large versus small companies. The German companies on the war footing consist of 250 non commissioned officers and privates, while with the English, and French, and ourselves the maximum number is about 100, although the French in some cases increase the number somewhat. The full number of company officers in the German army is five, while with the small companies it is three, so that for every 1000 men the Germans provide twenty company officers, while the French have thirty. The German arrangement results in a great economy in expense and material if the smaller number is sufficient, which the experience of recent wars seems only to prove. In fact, in consequence of the then recent increase in the strength of their army, the Germans seldom had the full number of officers with their companies during their late wars. It is true that they experienced considerable inconvenience from the short supply, but it is clear that the full number would have been ample. The Germans have in each company twenty non commissioned officers, in addition to twenty four lance corporals and re-enlisted men serving in the ranks, but available to replace at once any disabled non commissioned officers. The French have fourteen non commissioned officers per company, while we have only ten.

Experience seems to have demonstrated that 250 men are quite within the control and personal supervision of a captain, aided by good lieutenants and non commissioned officers, both with regard to the purposes of administration, discipline, and instruction, and to their proper employment in battle. A company of this strength forms a compact mass which is very effective in battle, and is found to be far more readily handled and controlled than the French battalion, while a company of 100 men is too weak to effect any important purpose by itself. The wars of 1806 and of 1870-71 afford many instances in which single companies, properly supported, effected important results, and clearly established the value of these strong companies, which are really the effective units of battle as well as of instruction and administration. It may be remarked, in passing, that in the German service the captains of infantry are mounted. The sound conclusion with reference to the strength of the company, based upon ample experience, would seem to be that, in a well organized army, with intelligent and well disciplined soldiers and competent and well instructed officers and non commissioned officers, the German system of large companies is in every respect the most efficient and economical, and that it permits most readily a rapid expansion on the outbreak of war. In the contrary case it may be preferable to employ the weak companies, especially when the battalion commanders are fully competent, and can partly supply the deficiencies of the company officers; but in such cases it would probably be found advisable to reduce the number of companies in a battalion below ten.

Both in England and France this question in regard to the proper strength of the company of infantry is a subject of great

interest and much discussion among the most intelligent officers, but no official action has yet been taken in either of these armies to modify the old company organization, and it can not be said that there is any probability of immediate action in this direction by either. But it is probable that ultimately there will be considerable increase in the strength of the companies.

(To be continued.)

FRENCH RIFLE TARGETS.

The shooting-ranges at Havre, where a party of our Volunteers are trying their skill against French marksmen, are peculiar in their arrangement. There are ten ranges, enclosed between brick walls, and the shooting is entirely under cover. The person shooting stands at a species of window, and he shoots through a series of small oblong squares, at the end of each being the target. The bull's eye is of oblong formation also, instead of round, like those of the English targets. The distances, of course, are measured by metres which very nearly assimilate to our English yards, being a fraction over 39 inches in length. The first or shortest range of the Tir is 65 metres for small weapons. The target is composed of a small piece of white cardboard, about 4 metres square, with a number of concentric circles round the bull's eye, which is about an inch in length and a quarter of an inch in width, the bull's eye being black. The bull's eye count 5, the next circle 4, and so on outwards to 1. This is the principle upon which the whole of the targets are constructed. The ranges run at 170 metres, 225 metres, and 300 metres, which is the greatest distance, and which means in English exactly 327 yards. There is also a range for pistols, or *pistolets de tir*, at 20 metres, with a bull's eye of 4 centimetres, and a range for the Carbine Hobert, used for teaching boys the dimensions of the carton, being 10 centimetres, on the model of that used at the Societe Centrale of Paris. The novelty of the arrangements evidently affected the shooting of the English competitors on the first day, when the best of them came in third.

The first torpedo vessel of the British navy has been launched at Pembroke Dockyard. She is called the *Vesurius*. The *Broad Arrow* describes her as a handsome little vessel, which when fully equipped will have her hull only some three feet above the water, and the screw below. Her principal dimensions are—length between perpendiculars, 90ft.; breadth extreme, 22ft.; depth in hold 11ft. 4in.; displacement in tons, 341. She is propelled by twin screws driven by engines on the surface condenser principle, of 360 indicated horsepower, with boilers bearing a pressure of 70lbs. to the square inch. She will not produce any smoke—coke only being used, and the funnel is a horizontal one, lying along the deck, which is semiroval. The crew will be stationed below, and ventilation will be provided by a draught of air produced in furnaces by hand, until steam is got up, afterwards generated by means of a donkey engine, which drives a fan in addition to her large engines used for various purposes. She was designed by the chief naval architect at the Admiralty.