

regiments of garrison artillery, numbering from 11 to 14 (the Field Artillery regiments are numbered 1 to 10). Each regiment consists of 15 companies and 1 depot, and is divided into 4 garrison brigades or battalions, three of four and one of three companies. The total strength of the Garrison Artillery on the peace establishment is: 320 officers, 6364 non-commissioned officers and men, and 96 horses. 4. Coast Artillery, and Artillery and veteran companies. There are also two instruction batteries, and a school battalion for training Artillery non-commissioned officers. The total peace strength of the Artillery corps is: 1168 officers, 20,951 non-commissioned officers and men, and 6736 horses. It can be augmented from the Militia in the event of war.

The Engineer Corps is composed as follows:—1. The Engineer staff, including the members of the standing committee, the territorial and local engineer office, &c. 2. Two regiments of Engineers, each consisting of 4 pontooners, 16 sappers, and 3 Train Companies, and the depot. Formerly the pontooners were a part of the Artillery. The total strength of the Engineer regiments and staff, on the peace establishment, is 482 officers, 4906 non-commissioned officers and men, and 336 horses.

The troops of the Line comprise Infantry and Cavalry. These two arms have also standing committees for the consideration of technical questions pertaining thereto. A general of division being the president, and four other general officers members.

The Infantry comprises:—1. Ten regiments of Bersaglieri (Riflemen), each of 4 battalions and 1 depot. 2. Eighty regiments of infantry, each of 3 battalions and 1 depot. 3. Sixty-two district commands, answering, it would seem, to our out-pension districts, except that they provide for the organization of reserve men, not pensioners, and comprising 176 sub-districts, and 24 Alpine companies. 4. Staff of garrison and fortified places. The total strength of the infantry on the peace-footing is 6458 officers and 118,700 non-commissioned officers and men. The full war strength of a regiment of Bersaglieri is 100 officers, 3270 non-commissioned officers and men, 30 draught and 15 saddle horses; and of a regiment of infantry, 76 officers, 2187 non-commissioned officers and men, 21 draught and 12 saddle-horses.

The Cavalry consists of:—1. Twenty cavalry regiments of 6 squadrons each, and a depot. 2. Two remount depots. Each squadron of a cavalry regiment numbers 120 horses in peace and war alike. Each cavalry regiment maintains, in addition to the above establishment, a half squadron of picked troopers, to serve as staff guides. The full war strength of the cavalry is: 930 officer, 26,600 non-commissioned officers and men, and 16,840 horses.

The corps of Carabinieri or Gendarmes is localised in 11 territorial and 1 instruction legions. It numbers 466 officers, 261 clerks, 19,725 non-commissioned officers and men, and 3154 horses.

The Sanitary Corps numbers 609 medical officers, of whom one ranks as a general and fourteen as field officers, and 16 sanitary companies.

The Commissariat Corps numbers 290 officers, eight holding field officer's rank.

The Veterinary Corps has 108 veterinary surgeons, including one veterinary field officer.

In addition to the above there are:—A corps of Invalids; a body of military apothecaries, military artificers, the officials in the Judge Advocate's, the Topographical and other military departments, &c.

The educational establishments include:—1. A practical school of artillery and engineering. 2. A military school for infantry and cavalry officers. 3. A military academy for Artillery and engineer officers. 4. Military colleges for preparing youths for the military academy. 5. The infantry normal school (musketry). 6. The cavalry normal school (equitation, &c.). Also, three instruction battalions of infantry, of four to six companies each; three instruction squadrons; three instruction batteries; for training non-commissioned officers for the three arms.

The army establishment also includes some disciplinary companies for provost purposes. The army reserve of officers is modelled on the German system.

Turning now to the Militia Mobile, we find that it consists of 960 companies of Militia Infantry, 60 companies Militia Bersaglieri, 60 companies Militia Artillery, and 10 companies of Militia Engineers. In war time, four companies of Militia Artillery would be attached to each regiment of Field Artillery in the Regular Army, and five companies of Militia Artillery to each garrison Artillery regiment. In like manner, the Militia Engineer Companies would be attached to the Regular Engineer regiments.

The Infantry Militia could be regimented and brigaded, either by itself or in combination with the Regular troops. The Militia officers are appointed by the King. The Militia staff is composed of officers of the Regular Army. The force is armed and clothed by the War Department.

To provide a competent railway staff, officers of the Commissariat Department are attached, in peace time, to the management of the several lines of railway, so as to acquire, practical knowledge of the details of railway administration and traffic management.

In the event of war, the army would be divided into two or three field armies. Each army would consist of two or more army corps. Each army corps would consist of two divisions and a reserve. Each division would consist of two brigades. Each brigade would have 2 regiments of infantry of 3 battalions each, 2 squadrons of cavalry, 3 batteries (1 brigade) of artillery—two light and one heavy battery. The reserve of each army corps would consist of 8 squadrons of cavalry, 1 regiment of Bersaglieri of 4 battalions, 2 to 4 battalions of artillery, 2 camps of Engineers, and bridge equipment for 160 yards of bridge. Attached to the staff of each division would be a strong force of horse and foot gendarmes, and also 4 squads of cavalry guides of 24 men each. These guides, as before stated, are supplied by the cavalry regiments, and from them two standing orderlies, mounted, are assigned to each regimental commanding officer of infantry or Bersaglieri in the division—an excellent arrangement. Each army ammunition park carries 100 rounds per gun and 50 rounds per rifle in the corps. Each division park carries 200 rounds per each gun and 50 rounds per each rifle in the division. Field battalions carry 160 rounds per gun for 7 centimetre guns, and 96 rounds per gun for 12 centimetre guns. There are no battalion ammunition cars. Each man of the infantry and Bersaglieri carries 88 rounds on his person. The ammunition-parks, together with the staff-wagon, the ambulance, the field ovens, ration-wagons, &c., are horsed by the companies of artillery train, which, as we have seen, form a part of each field artillery regiment. The Engineer parks, the field telegraph, the pontoon equipment are, in like manner, horsed by the companies of Engineer train.

The armies are numbered 1–3; the divisions, 1–20; the brigades, 1–40. In the field, the cavalry, artillery, and Engineer troops of the several armies are distinguished by the name of the division or brigade with which they are serving, as the cavalry of the Second Division, the artillery of the 25th Brigade and so on.

We shall make no apology to our readers for copying the following article from the *United States Army and Navy Journal* of 11th February, on a proposed project of a Mr. WIARD for rifling the celebrated Rodman Guns—the best specimens of cast iron smooth-bore Ordnance in the world—and of the experiments connected with which we had occasion to write some time ago.

All artillery problems or experiments are sufficiently important to deserve extended notice.

"The public has lately been treated to wonderful accounts of the 'triumph achieved by the 'Wiard Gun.' These accounts appeared simultaneously in all the daily papers, with the usual variations common to vendors of quack nostrums, and were republished in a pamphlet, a copy of which is now before us. A correspondent elsewhere in this number exposes some of its fallacies. We will here refer to others.

"When the professional reader examines these reports, he finds that the so-called 'Wiard Gun' is our old reliable 15in. Rodman, the value of which was never doubted except by Mr Wiard, and persons influenced by his pamphlets on the 'Inefficiency of our Heavy Ordnance.' This gun is rifled by Wiard on a plan which is neither new nor good, firing a special shot in which the part that is good is not new, and the new part not good. Furthermore, Mr. Wiard proposes to alter, on this plan, all our heavy guns, which he estimates at 6,000 in number, at a cost of \$500 per gun, or \$3,000,000 in all. This is emphatically a clever project, when we consider the actual cost should not exceed \$20 per gun; there are in fact machinists not ten miles from this office who would be glad enough to undertake the work at that price. The practice of rifling cast-iron guns, and continuing to fire spherical projectiles from them has in it nothing new, and is indeed the practice in the Navy at this date; every rifle gun having an allowance of spherical projectiles for special occasions.

"Let us examine his claims to originality as the inventor of the first combined rifle and smooth bore gun. From about 1854 numerous persons, prominently Mr. Bashley Britton, in England, have persistently advocated the conversion of the large number of smooth bores then on hand into rifled pieces firing elongated expanding projectiles with such charges as would produce strains and recoil, equivalent to the regulation charge and spherical shot. Mr. Britton says: 'All I intended to do to the guns was to rifle them with a few broad shallow grooves about a sixteenth of an inch deep. My object was not only to utilize the present stock of guns, but also that of the spherical projectile we have.' It is evident that Mr. Britton was on the right track. For the purposes for which he proposed to use the guns, namely, at distances beyond 1,000 or 1,200 yards, where precision at an increased range was required, numerous official trials proved that they were rendered much more effective while their ability to fire common shell, round shot, and grape, were not