## LINE AND COLUMN.

(From the N. Y. Nation.)
It was Prussia, through the great Fred'k which discovered and put into practice the principle which the genius of the greate Napoleon afterwards turned to suoh wonderful agcount-that in war everything should be sacrificed to.being strongest at the point of attack. It was Prussia, ton, which inahtuced that apparently tifling but important improvement in firearms-the iron ramrod, wbich contributed so much to the rapidity and destructiveness of infantry fire. It was Prussia, too, which first brought to pertection the art of moving men in sold masses by means of minute and painstaking drill, thus enormously increasing the control of the officer over the rank and file, and diminishing the risk of confusion under fire or in retrent. She too, among European powers first put the breech-loader in to the hands of the infantry soldier, in spite of the general belief of the military critics of other countries that it would prove too complicat. ed for practical use, and was amply repaid for her contidence on the field of Sadowa. In the late campaign in France she made one other discovery. which she probably would have made in 1866 had the war lasted longer, and which she is now turning to practical account in training her forceswe mean the discovery that the introduction of breech-loaders has made henceforward impossible the use of those close formations, whether in line or column, in which it has been the custom of armies to attack each other ever since armies were first organized.
All the Continental nations have adhered till now to the custom of attackingin column -that is, of forming the attacking body with a narrow front and long files, and attempting to crush the enemy at the point of contact by merd momentum; while in the English service and in our own, the line two or three deep has been adhered to as giving freer phy to the fire of musketry, and affording pas mark to the enemy. Continental officers
ve never denied the superiority of the line to the coulmn either for attack or de fence, but they have said, and said truly, that in order to use it your men must possess either greater intelligence or greater steadiness and self-reliance than are usually to be found among Continental troops. It was useless, they said, to try to convert the Russian or German peasaut into a soldier who, with only one man behind him and one on each side of him, would either wait resolutely the approach of a denss oblong mass ten men broad and two hundred men deep, or move boldly towards $\mathfrak{i t}$, in the full conti dence of dissipating it with the converging fire of the line. It was useless. too, the French officers said, to ask the Freach soldier, with his liability to panic, and to great demoralization after a reverse, to stand nearly alone, in moments of trial, as he would have to stand if the column were abandoned. General Trochu, in his late work on the French army, reproduces one of Marslial Bugeaud's interesting reminiscences of the Penins:lar war, in which he describes the almost uniform failure of the French column when directed against the British line; but it appears from his story as if no other formation would have suited the French character. He recalls with emphasis the flutterand excitement which ran through the French ranks as they move against the long, thin "red wall"; the apprehension excited by the English silence and refusal to tire till the coiumn was very close, and the demoralizing effects of the fire when it
crme, and the dissolution of discipline pro duced by the English advance with the bayonet, which always followed two or three withering volleys ${ }^{-}$In the United States, also, the national temperament and the character of the social organizationl have made the line the favorite formation.
But both line and column are now to be numbered amongst the things that were. The "column of attack," indeed, which has played so famous a part in modern military history, may be said to belong to the past as completely as the Ifacedonian phalanx or the wooden line-of-bsitle ships. When the Prussian Guard in column attacked the French line at Mars la-Tour. in August, 1870, and lost six thousand men in ten minutes, the days of close formation came to an end. It is now acknowledged, on all hands that it will not do to send men into action in any formation in which they touch elbows or present a continuous front to the enemy's fire. In other words, a total revolution is taking place in tactics which will inevitably greatly diminish the officer's control over the soldier during the progress of the engagement, and render necessary on the part of the latter an amount of intelligence, selfrespect, and fidelity which the soldiers of no nation have, as a class, as yet displayed. The Prussians are now practising a system which opens an engagement by, a heavy fire of artillery, and then attacks neither in line nor oolumn, but with great clouds of skirmishers, to whom it is only possible to indicate their objective point, and who reach it as best they can-advancing across the country by twos, or threes, or singly, carefully avoiding any kind of formation. taking advantage of every hollow in the ground. tree, fence, house, or wall to conceal themselves; running here at the top of their speed, there crawling on their bellies and only firing when they can take steady aim. We believe a column, it is true, comes after them, but only as a sort of reserve to feed the skirmishing horde with fresh men, and hold its con quests.

It can bo readily seen that under this system the superintendence of the officer must at best be slight. He can never have the men "well in hand," to use a military phrase: he must trust during the greater part of the day to their own sense of honor, to their courage, and to the opinion of their comrades to prevent skulking; and it is only at the last moment, when the final rush his to be made, that he can, in the strict sense of the term, put himself at their head. In short, the tactics which chrried Frederick through the Seven Years' War, and Wellington through the Peninsuta and Waterloo, are vantshing Prom the eamp, and in lieu of them comes, of all things in the world, the old Indian bushwhacking under which Braddock's files went down over a century ago at the forus of the Monongahela.

What is most interesting in all this to civilians is, that it furnishes a strikiag illus. tration of the:steadiness with which mind in allfields of human activity retains the supre mucy over cither brute force or animal excitement, and of the certainty with which we may count on the over cultivation of the art of destruction producing its own antidote. When new and more effective instruments of destruction are invented, we find that the whole population has to be raised in the mental and social scale in order to provide soldiers competent to use them; and more than this, we find that after the soldier has been trained to the utmost point, he is of little use to you unless you have kindled in
him a great deal of intelligence and self. respect. The degraded and stupid peasant who used to take us daily allowance of the stick or cat at the hands of the drill sergeant, was not a man whom there would be any use in sending out skirmishing with a breech-loader. He would get into a ditch as soon as the officer's eye was off him, and stay there. Moreover, the new discoveries are:changing the military type of character all over the world. The soldier of ilhe historian as well as of the poet and novelistthe gay, dashing, restless youth, who danced with and made love to the women;and duelled and gombolled with men from post to post, and went under fire with an oath or a song on his lips, who used to be the ideal 'militaire'-has vanished, or is vanishing from the earth. His suceessor is' a grave gentleman with spectactes, whose tuniform smelts of the lamp, whose dreams are of strategy and tactics, and whose laborious drys are passed, not on "boys, or lust, or wine, " but over tigures and diagrams, and among books, to whom the "pomp and pride and circumstance" of war are nothing, and its use as a naked, unadorned, savage, but potent instrument of the national will everything. It may seem that there are' the seeds of tremendous evil in this entrance of educated ability into the service of destruction; but, if the experience of the past teaches us anylhing, it teaches us that we cannot press the mind even into the service of destruction without exalting it ; and diffusing and deepening the popular: reverence for it, and we cannot do this without helping to make war detestable. No one can sincerely respeot the mental endowments or acquirements of a Moltke without feeling within him a growing sense of the abstrdity and wastefulness and barbarism of the mill: ry mode ofsettling disputes.

The production of iron has doubled within the past sixteen years. In 1856 the total production wая $7,000,000$ tons; in 1872, 14,000,000 tons. In 1856 the average consumption of iron in the world was about seventeen pounds a head; in 1872 it was thirty pounds a head. In 1856, in Great Britain the consumption per head was 144 pounds; in the United States it was eighty four pourds. In 1872 the consumption in Great Britain was 200 pounds per head. The consumption of iron bats been considered by politicosscientists an indication of the social progress of a people. If this be so the United States is rapidly assuming the most advanced position socially of any nation on the globe.

Fleet of Alabama for Germany.-The Borsen Zeitung, of Berlin, says that two corvettes on the "Alabama" principle, the "Ariadne" and the "Louiss," are now being built by the German Government, and that two more-the "Freya" and "Thusnealda" -are to begun immediately. In three years at the litest the German floet will thus pos. ses four "Alabamas," armed with heavy guns, and so swift that they would be capa ble of sugtaining a conflict even against iron-clads covered with 8 inch plates. "It is stated," adds the writer, "that thirly such Alabamas would be more than sufficient to destroy the mercantile marine of England and to attack her navy with a good chance of success; and there would be no diff. culty in adding this number of ships to the German navy, as all the materials are procurable from German manufacturers."

