

given, the rough line sprang up the bank and the enemy gave way." (Records, 52nd l. 1., p. 210). Order is the rule, and such circumstances demand exceptional measures. Under modern long ranges such cases will occur more frequently.

The nature of the intervening ground and the enemy's fire must determine the question. That formation will be the most suitable which will enable the assailant to traverse the intervening space with the least loss, in the best order to guard against interruptions, and from which he can form line most readily before entering upon the arena of the attack proper.

Even the Prussian "small columns marching swiftly," might be accepted as a means if suited to the ground, provided they deploy before entering upon the arena of the attack proper.

Across ground the nature of which renders an advance in line impracticable, and except where it is so exposed to fire that the extension and successive dashes of the whole (as with skirmishers and supports, p. 23) advisable, the flank march of fours, from the wider freedom which it offers to the exercise of judgment among subordinates, whether for divergence, variety of pace, or temporary loosening of files, seems likely to combine the greatest facilities for getting over the ground, taking advantage of all cover, and maintaining an amount of order, from which the order of the whole can most readily be resumed. It might almost be denominated the independent march of companies but not quite so—order must be the rule, independence the exception.

Advance of the second line—The circumstances under which the advance of the first line across the space to the holders of the attack proper is made, differs somewhat from those of the second. The first line follows the skirmishers while they are still in motion. During their progress the enemy are comparatively slightly engaged (though the artillery must endeavour to make up for it), and they might even share with the skirmishers a small portion of the aimed fire; the unaimed shot sphere is continually varying with the mark; and the firing generally is more scattered. When the skirmishers and the first line have reached their position the enemy will be more hotly engaged, the direction of their fire will be more steady, and the shot spheres pretty constant. The second line (except for the enemy's artillery), when the time arrives, may advance in almost any formation that the ground will admit, avoiding the unaimed shot spheres. If the ground admits, the four loop line will often be the best for present and future purposes.

From this it will be seen that if the attack is opened by bodies separated from each other by 400 or 500 yards special facilities will often be afforded for bringing up the second line with little risk. These dispositions may then be converted into converging attack by inclining towards the centre, or a flank, during the attack proper.

(To be continued.)

RUSSIA IN CENTRAL ASIA.

(From the New York Times.)

The question is asked what is the meaning of this restless and determined advance of Russia eastward and southward? It is mere lust of conquest that prompts her to absorb the Khanates now, and to use them afterward as a stepping stone towards British India? Partly so, perhaps, but not en-

tirely so. It has been the misfortune of Russia to have acquired an empire as large of this continent, on the wrong side of the backbone of the Western Hemisphere. In Europe and Asia alike the immense plains which constitute the Dominions of the Czar, slope in the wrong direction. Her great rivers have either no viable outlet at all, or flow into the Arctic Ocean. Did the people at the North Pole need her grain, her hemp, or her fur, and were the girdle of perpetual ice removed, she would take rank as one of the foremost commercial and maritime powers of the world. But as the great highways of western commerce are the Mediterranean, the Atlantic, and the Indian Ocean, and as she possesses very inadequate means of reaching any of them, the greatest problem of Russian statesmanship must continue to be as it has been for the last two hundred years, how to obtain for her a southern seaboard? Elihu Barritt published, in March 1871, a little pamphlet composed of contributions inserted in the *Times* and other journals, in which the view of the subject is very fully illustrated. Here are some points from his argument:—

"Russia is virtually a riverless empire. It is full of rivers, great and small, but either they run to no ports of her own or they are worthless for commerce. Imagine a great bayou of the Mississippi, just below Vicksburg, of the dimensions of the Black Sea. Imagine all the rivers in the United States from Maine to Texas, to run into this salt-water bayou, and that all the commerce that floats on those rivers has through that short length of the river that connects the inland sea with the Gulf of Mexico. Then realize, if you can that this short and narrow strait is called the Bosphorus, and that New Orleans is Constantinople, and that all the commerce of the United States, east of Rocky Mountains, that finds its way to the Atlantic, has to pass between the ports of a foreign nation, of a race, language, and religion as alien to us as any pagan people can be. See what long rivers run northward into the Arctic Ocean, as the Ob, Yenisee, Lena, and others. Look the other way and see the length and course of the famous Volga and Ural. These fall into the Caspian a warmer sea; but they might as well run into our Lake of the Woods; so far as ocean connection and commerce are concerned."

The political and geographical necessities of Russia means one and the same thing. Trace the long line of her southern frontier, and you have a key to the past, present, and future problems of Russian diplomacy. Denmark holds the entrance to the Baltic; Prussia debars her Muscovite neighbor from getting a port on the North Sea; Austria lies between her and the Adriatic, and she must conquer Turkey to command the Dardanelles, where a fort or two could at any time neutralize all the benefits of the few hundred miles of seaboard between the mouth of the Dnieper and the mouth of the Dan. Then comes Asiatic Turkey, then the land-locked Caspian with Persia on its southern shore, cutting off access to the Persian Gulf, and then, assuming the ultimate conquest of Turkistan there are Afghanistan, and Beloochistan, interposing a solid wedge of territory between Russia and the southern ocean. From that point onward to the far distant Pacific, half a continent lies between Russia and the southern seaboard of Asia. Nicholas has tried to pierce this wall of territorial adamant at its weakest point, in the Danubian Principalities, and found reason to repeat his rashness. His son is driving the wedge

of military possession in now as far as he dare, with the view of striking some day for Persia or Afghanistan, and so giving Russia a broad ocean outlet for products which she at present carries by many tortuous and narrow channels to the markets of the world. It may seem that he might as well continue his father's policy and by intrigues and money in Greece, Roumania, and Servia pave the way for another armed attempt to clutch at the sick man's inheritance. But then he would have to fight Austria, and perhaps Germany as well as Great Britain. In Asia on the other hand, there is only the British to deal with and an effete dynasty to topple over, whether Herat or Teheran be made the objective point of advance. It is difficult to see on what grounds the usually well-informed *Independence Belge* assumes that there is no necessary divergence between the interests of Great Britain and Russia in Central Asia. Keeping in view the fact that England might as well quit India at once, as allow Russia to command the coast of the Arabian Sea, it is very hard to see how she can avoid drifting into war about Persia or Afghanistan some day.

STRATEGICAL RAILWAYS.—The Prussian Minister of Commerce has laid before Parliament a scheme of new Government railways, 113 millions; works to be entered upon forthwith, and in order to complete communication with all parts of the country. One line is to be built at once between Coblenz, Trier, Driedenhofen (Thionville), and by this means there will be direct communication between Metz and the Russian frontier through Berlin. Other short lines are also to be made, so that there may be a concentration of several lines of railway on the new frontier and there will never again be the same delay as in the last war in sending troops on to the front.

An ingenious English inventor has turned electricity to a new account, but not as yet with complete success. His object is to use it as a motive power for the propulsion of vessels in lieu of steam, and he tried the experiment the other day on a yacht named the *Miranda*, with a screw detached. The result was the driving of the shaft at such an immense velocity that before the machine could be stopped, it had broken away the fastenings, being to powerful by half for all the work it had to do. The inventor of the machine, which is called the "Electro Magnet Motor," estimates the number of its revolution at full speed at from 1,400 to 1,600 per minute.

The French papers continue to dwell upon the letter of the Duc de Gramont. It is stated that the Duc de Gramont is to communicate to the Commission of Inquiry several important documents to prove that Austria had intimated to France its occurrence in the war against Germany. Among these documents is said to be the authentic draft of a treaty of alliance between the two Empires. On the other hand, it is stated that the most emphatic contradictions of the statement made by the Duc de Gramont are received from all quarters. It is specially stated that the draft treaty in question had no connection with the events of 1870. The publication of these documents, which has become indispensable, is anxiously looked for.