

regard, and that this attached the city of London the great commercial emporium to their interests throughout the contest which ensued.

THE tone of the English press and the wishes of the monied class is aptly epitomized in an article on "Our Position in Europe," which appeared in *Broad Arrow* of 12th June, and which will be found in another column.

The writer assumes that a position of dignified neutrality which resulted in the contemptuous abrogation of the Treaty of Paris by Russia would be the role that England would be compelled to play in the case of hostilities on the continent of Europe—while at the same time the vulnerability of Germany, or rather Prussia of the Lower Rhine is forcibly pointed out. It might be added that she is equally vulnerable on the Upper Rhine, and it would cost less to restore the *status quo ante bellum* on that River than it did to acquire Strasbourg and Metz during the war of 1870, provided England took a hand in the next contest.

There are abundant reasons why she should do so, Wilhelmshofen on the Oler is not more than four hundred miles from Portsmouth, and if Boulogne was looked on as a standing menace in the contest at the beginning of this century the same reasons exist for looking at Prussian preparations then as nothing better.

The German Empire, so called, whose shadow like Frankenstein monster has loomed large and terrific over Europe partakes in a great measure of the characteristics of that monster. It is composed of incongruous elements held together by a mere military despotism and a shadowy enthusiasm, which latter is sure to fail before the stern logic of facts, while the former will fall to pieces when the first stout blow is struck at it.

Napoleon le grand was a far more able statesman than BISMARCK, and a greater soldier than von MOLTKE—yet history tells what was his fate. Prussia is vulnerable on the Rhine, and will always be so—she has not a Port inaccessible to English seamen. We know what the late Earl of Dundonald did with a frigate's crew to Du Roust's division in the neighborhood of Wilhelmshofen in 1809, and we hope there are seamen yet in the British Navy, spite of Whig improvements, who could manage to compel 40,000 Germans to retreat with the same means at disposal as the gallant Dundonald had.

We cannot therefore see what is the cause of all this furor—is it not rather to be found amongst the English monied classes than amongst the people generally—and notwithstanding the bellicose articles of Prussian military journals, BISMARCK will think twice before he meddles with either France or Belgium.

The defence of Antwerp is on the Rhine; it was a mistake of Whig policy to allow the

Prussians to get possession of its left bank—it is the national boundary of France, and the corner England recognizes that fact the sooner the cobwebs which now surround European politicians will be swept away, and the sooner we shall have peace.

The same issue of the *Broad Arrow* contains an article on "The French Army"—which if not written in the most friendly spirit is at least true.

Commenting on the same theme two leading Prussian papers leave England out of account altogether: the question of peace or war which so lately agitated Europe, and seem to ignore her altogether in any complications which may follow.

Yet the most casual observer must see at a glance that it is none of the so-called great powers that will determine the fate of any future contest. They have not done it in the past, there are no evidences they could do it in the future; but once England enters the field there will be an end of the question.

The *Cologne Gazette*, commenting upon an article in the *Berlin Military Weekly*, says:—"Our leading generals regard the French armaments as very serious; but though peace is possibly endangered by these military preparations, France can hardly be in a position to make war single-handed, while it she indulges in exaggerated armaments without finding an ally she will only exhaust her resources. Under these circumstances, it is of the utmost importance to know whether France has any chance of finding allies. France has no longer reason to count upon Russia as an ally, but she seems to hope that the Austrian alliance, nipped in the bud in 1870, might be completed in the event of another war more successfully commenced than the last. Fortunately, these hopes are sure to be disappointed as long as Count Andrassy is the leading Minister of Austria, but as Austrian politics have lately passed through so many different phases, the German Chancellor, no doubt with anxious solicitude, every now and then ponders upon the contingency of the Revenge Party coming into power at Vienna. That these reflections are not foreign to him was proved by the recent remarkable article in the *Vorddeutsche Allgemeine Zeitung*, which appeared much more important to politicians than the leader in the *Berlin Post* partly contradicted by it. These alarming articles have had the beneficial result of producing a flood of pacific assurances from the French Government and press, which are, probably seriously meant, at any rate as regards the present time. The mass of the French people was anything but eager for hostilities in 1870 and the Western Provinces, which experienced the sufferings of war in the late campaign, are hardly very bellicose now. To prevent the ascendancy of revenge by politicians and generals will be the task of German and European statesmen for many a year to come. The task may not be easy, but it must not be despaired of. We need not say that in Germany every one is in favor of peace, what have we to gain by war?"

The *Berlin Military Weekly*, the official organ of the supreme military authorities, declines to believe in the correctness of the explanations recently given by the French semi-official press. It says:

"It is true that a French infantry regiment will henceforth include eighteen companies, instead of twenty one as formerly; but as the twenty-one old companies were

intended to supply cadres for three battalions of 1000 men each, while the eighteen new companies will serve as a framework for the formation of four battalions of 1000 men each, the war strength of the French infantry is by the latest measure increased by 144,000 men."

Other semi-official organs and correspondents insist that the French armaments are verging on mobilization.

Notwithstanding the self-complacent tone of those paragraphs the German Chancellor knows full well that there was no period up to the actual surrender of Paris when English interference would not have sent the German legions in headlong flight over the Rhine; of what then has England to be afraid—is it of the peace at any price party?

The experiments relating to the employment of incendiary liquids as projectiles, made by M. Barret, dockyard engineer at Marseilles, are extremely interesting, as tending to correct some of the extravagant notions entertained on this subject. Some of the experiments appear to have been made as long back as 1869, but it had been deemed undesirable to publish them. This necessity for secrecy no longer exists, and the Scientific Society of Marseilles has accordingly enabled us to lay them before our readers. The first experiments were made with force-pumps. A force pump was fitted with a jet-pipe similar to those used with fire engines, and the pipe, which could be directed by one man, was provided with a nozzle of peculiar shape to which was affixed a lighted port fire. Petroleum oil was thus projected, under a pressure of 50 kilograms per square centimetre (about 120 lb. per square inch) through a nozzle one inch in diameter, and ignited as it left the pipe. It formed a flaming jet, 250 ft. long in shape like a comet's tail, with a diameter of 80 feet at the further extremity. But if the magnitude and intensity of the jet so produced caused astonishment, its very restricted range, M. Barret states, was equally surprising. According to the calculations of all hydraulic authorities, such a jet should have reached at least seven times as far. The reduction of the range was attributed to the increased atmospheric resistance produced by the combustion of the fluid. This view was confirmed by further experiments. It was shown that even with the most powerful force-pumps, say of 1000 nominal horse-power, it would not be possible to project fluids in the manner above described to a distance of even one-fifth of the effective range of these arms now in use. Taking into account the effect of currents of air upon such jets, it appears that, save under very exceptional circumstances, their employment for purposes of attack and defence would prove more dangerous to the users than to their opponents. Similar trials were then made with field-guns. The petroleum oil was lodged in shells and fired. In these cases the oil ignited, or more correctly, exploded, at the muzzle so that the incendiary effect was as brief and instantaneous, and seemed as likely to cause fracture of the shell, as a bursting charge of powder to load in like manner. When lodged in zinccases, specially designed for the purpose, the furthest range obtained was about 30 ft. from the muzzle the flame bursting into fan shape and very instantaneous, as in the previous experiments. When the oil was placed in the bore of the gun, with an airtight leather wad between it and the cartridge, ignition took place at the muzzle. In every case