

## THE WAR.

Once more, though only for the short space of six weeks, delightful peace smiles upon the lovely plains of northern Italy. The Emperor of the French and Francis Joseph of Austria have agreed to an armistice, or breathing space, between the acts of this terrible European tragedy, of which no one can predict the closing scene. The success of the French has been bought at the cost of the lives of many men, and the numbers they have left dead and dying on the gory field has damped the enthusiasm that otherwise would follow such brilliant victories. It is as we predicted; war has become more bloody, and desperate carnage seems to be the only end at present gained; so many more useful lives swept away, or, as the tyrants think, so much more of the rabble killed. As our readers are familiar with the details of the conflict, from the columns of other papers, we would comment on one fact only, namely, that the battle of Solferino was won by the bayonet. This seems strange when we consider the improved artillery and fire-arms which both armies have in their possession. Inkermann was the same—won by the bayonet. There would seem to be something terrible in the idea of "cold steel" which appals the soldier not accustomed to its use, and the flash of sunlight on the polished blades of an advancing corps of foot probably unnerves the rifleman and distorts his aim. The French bayonet is shaped like a sword, and the soldier is taught to use it as a fencing weapon; indeed the exercise is but slightly different from that of the foil; and when it comes to close quarters and hand to hand fighting, it is next to impossible to break the guard of the bayonet thus used; while he who knows the method, and is master of the system, has it pretty nearly all his own way. This battle teaches us a new lesson in the art of war. In future, armies must not only be provided with artillery, carrying heavy ball a long distance and with perfect aim, and with rifles capable of doing deadly execution, but those rifles must be provided with light but strong bayonets: they must be light, not to injure the orifice of the gun or distort the bore, and strong enough to stand the clash of steel against steel. The soldier in future must not only be a good rifleman, with a steady hand and a true eye, but he must add agility of movement and a perfect command of his piece when used as a sword or foil. The old British triangular bayonet was principally intended for a thrust; the modern one is designed to cut. This makes a vast difference in the form of the charge, which now, instead of being as close and compact as possible, must be open enough to give each man room for the free use of his piece. Thus, we may gain lessons even from disasters; and the results and history of battles serves to enlighten those nations who depend on arms how to keep pace with other nations who might seek to conquer them. We should be especially thankful that our country has not much use for her soldiers, but we should keep them up to the other soldiers of the world for skill and weapons. Hoping that the armistice may lead to the liberty of the Italian and Hungarian people without more bloodshed, although it is almost "hoping against hope," we finish our "say" on the war.

## CULTIVATION OF FISH.

A correspondent of the *Laurensville Herald* thus describes a fish-pond in Sumter (S. C.) District:—

"During my late visit to Sumter, I was shown all over the plantation of my friend, Freeman Hoyt, Esq., and here I met with a perfect model of a domestic fish-pond. Mr. Hoyt told me that the little stream of water running through his place was the main thing that sold him the land. The branch ran through a low place of such a form as to enable him, by a dam of some 50 yards long, to construct a pond of 700 feet in length by 150 in width, with a depth varying from the shores to 12 or 15 feet in the center. This gives him a pond of over 2½ acres, where he could raise nothing else. One year ago this spring, he deposited in this pond eight good-sized trout, and near 300,000 eggs, with a large amount of smaller-sized fish for the trout to feed upon; and he now has the water literally swarming with the finny tribe. His trout are now one year old, and I caught one while there that was over seven inches long. Mr. Hoyt will not catch his trout until next year, and then I think he will almost be able to supply the town of Sumter with fish.

The water running from this dam passes through a seive, so that his fish cannot escape from the pond. A little below the dam is built a small two-story house, the lower story for bathing, while in the upper one is kept all the apparatus necessary for cultivating, feeding and taking the fish. All this convenience has been gotten up with a trifling expense, and will be in the future a large source of pleasure and profit to Mr. Hoyt and his family, and a perfect blessing to his neighborhood."

## INSECTS.

Insects are largely endowed with the faculty of sight; for their eyes, though unable to turn, are infinitely multiplied, and compensate by quantity for their want of motion. To give an idea of the numbers some orders possess, I may mention that to one species of butterfly, by no means among the largest, is allotted nearly 35,000 eyes. These are distributed over every part of the body, and thus, whatever may be the position of the animal, no danger can approach unperceived, as a sentinel keeps watch in every quarter.

The passions of love and fear, and sometimes higher emotions, are exhibited very signally in some orders of insects, and are even expressed in sounds, which, while not without significance to the human ear, are doubtless full of meaning to themselves. The fact may be demonstrated by giving chase to a common blue-bottle, which will immediately raise its note in a surprising manner, the tone being one of unmistakable alarm. In tropical countries I have noticed the same peculiarity, with but little variation, in mosquitoes; and the adroitness with which these little janissaries avoid capture indicates an organization still more subtle.

Few are unacquainted with the alertness or ferocity of spiders, exhibited so constantly within the sphere of familiar observation. Let a fly be thrown on a spider's web and a strange spectacle will follow. The terror and despair of the fly at the first approach of his inexorable enemy, his energetic efforts to escape from the tyrant's clutches, and his last touching death-struggle, with the exultation, rage and malignant cruelty of the spider, are a vivid mimicry of the mightier paroxysms of man, which few will be able to contemplate with apathy or indifference.

I need not dwell here on the affection of insects for their progeny, as that is a passion which, by the wise providence of the Almighty, prevails, with few differences of degree, throughout the whole range of nature. But it would be an omission not to say that they experience more than usual difficulty in providing for the necessities and requirements of their young, yet pursue this object, under every disadvantage, with unwearying forecast, tenderness and perseverance.—*Fulom.*

## AGRICULTURAL COLLEGES.

Our people now appreciate the advantages of science in agricultural as well as other pursuits. At one period—and that at no great distance in the past—it was thought that a farmer, or a mechanic did not require any more education than merely the qualifications of reading, writing and a moderate acquaintance with arithmetic. It was held that clergymen, doctors and lawyers required a pretty good education, but as for farmers, why it was just money mispent, to give them such instruction. All these notions, we are happy to say, belong to a past age, and it affords us pleasure, to consider that we have thrown in our mite of influence to reform public opinion and bring about a better state of things. In several States, there have been established of late years, model farms, agricultural schools and colleges, and in the State of New York, a People's College has been instituted, for teaching mechanics and others, and we are now to have an Agricultural College also. About two weeks ago the foundation of the first building was laid in the town of Ovid, and on the banks of the beautiful Seneca Lake. The State has loaned to its trustees \$40,000 without interest, and 40,000 valid subscriptions have been obtained. And a farm of 700 acres have been purchased, through which their runs a never failing stream that falls into the lake, and it is expected that the buildings will be so far completed by next spring, that 150 young men may be admitted for instruction—the full course for students embracing a term of three years; chemistry, botany, mineralogy, and zoology forming the chief studies. Together with these

studies, we understand that practical farming is to be taught in the most superior manner, and this in our opinion should form the basis of the whole course of tuition. Who shall the trustees of this college employ to teach their students the best mode of keeping cows, milking them, making and preserving butter, cheese and such like, and who will they employ to teach them how to lay out fields, to plow, sow, reap, and a hundred other manual operations? If they do not select thoroughly skillful persons for all these purposes, their college will be a failure. We raise this voice of warning in order that nepotism may not prevail in such an important institution, as it commonly does in our railroads and other institutions, and from which so much evil has been experienced. Let men be chosen to fill their several positions in this college, on account of their abilities alone, and certain success will result, if a different policy prevails disaster will be sure to follow.

## BI-SULPHURET OF CARBON ENGINE.

Prof. Carl F. F. Salomons, whose invention we have previously noticed, has discovered that in some parts of Europe they are using his invention without either giving him credit or pay for it. The invention is the use of a liquid called bi-sulphuret of carbon, which is highly elastic, and boils at 116° Fahrenheit, and which at 212°—the boiling point of water—exerts a pressure of 55 pounds to the square inch (according to Gay Lussac), instead of 15 pounds, which is the pressure of steam at the same temperature. This liquid the inventor deprives of all smell, and his engine is so constructed as to condense the liquid after it has been used once, so that it can be used with very little waste perpetually. A commission of engineers was appointed by Mr. Secretary Toucey, in 1857, to test an imperfect engine that had been constructed at Baltimore; they gave a very favorable report, expressing themselves as follows:—"There was no perceptible deterioration of the fluid from repeated boiling, or injurious action to the metal from its use." And again:—"We believe there is value in the discovery, which deserves a more thorough and perfect trial." This report was signed by D. B. Martin, engineer-in-chief, and H. Hunt, chief-engineer U. S. Navy. Another experiment has since been tried in Brooklyn, L. I., which proved equally successful. The invention should certainly be tried on a large scale with a perfect engine, and we hope to see it done.

A GREAT CANAL PROJECT.—The *London Illustrated News* states that the Bay of Biscay and the Mediterranean are to be united, and 1,200 miles to be saved, by a great canal through the interior of Spain. The project has received the sanction of the government of Spain, and the Queen, by her royal proclamation of March 25, 1859, has granted to its projector, Mr. Charles Boyd, of Barnes, Surrey, England, two years to make the necessary preparations for carrying it into effect. This gigantic work, which is designed for the purpose of shortening the passage of shipping to and from the Mediterranean and the ports of northern Europe by more than 1,000 miles, will be 285 miles in length, 340 feet wide, and 30 feet deep—available for vessels of the largest and most unprecedented dimensions. It will commence at Bilboa, on the coast of Biscay, and proceeding through the Cantabrian mountains and the valley of the Ebro, and passing by Saragossa and Estella, will fall into the Mediterranean at the Bay of Alfaques, in Catalonia. The cost of this enterprise has not yet been ascertained, but it is almost certain that a large portion of the expenses will be borne by the Spanish government.

FROST EVERY MONTH.—Thus far in 1859, there has been frost in some parts of New York, in every month, and that too, in the "Southern tier or counties," where it is generally supposed the climate is not very borean. Both on the first and fourth mornings of July, at Alleghany, there was quite a show of frost. On the 4th, the fences and plank walks were white with an icy covering, but vegetables were not seriously injured. We also heard of frost in several other places through the State, and we shall look for similar reports next month. In September, sure, we shall have it, so that if August escapes we shall have frost in eleven of the months of this year.