

hope soon to hear of some dashing exploits in the way of captives. She has a picked crew, and her commander is known to be a most brave and valorous sailor, and he has under him a most gallant set of officers.

She is commanded by Raphael Semmes, a native of Maryland, and formerly a commander in the U. S. Navy. It is supposed she is on the look-out for the California steamers; though if she should fall in with one of them it might prove to be catching a Tartar.

GENERAL McCLELLAN'S ADVANCE.

The Northwestern Virginia railroad extends from Parkersburg, on the Ohio river, due east 100 miles to Grafton, where it intersects with the Baltimore and Ohio railroad, at a point 198 miles west from Harper's Ferry. Our history left General McClellan's column advancing slowly from Parkersburg, the bridges of the Northwestern Virginia road having been burned by the Secessionists. When General McClellan reached Clarksburg, 82 miles east from the Ohio, he left the line of the road, and turned to the south-east, passing through Buckhannon, and proceeding towards Beverly, a small town on the west side of the Alleghany Mountains. This movement was in conformity with orders, which he had received from head-quarters, to drive the Secessionists out of Western Virginia.

BATTLE OF RICH MOUNTAIN.

As General McClellan approached Beverly, on the 11th of July, he found that a body of Secessionists, under Colonel Pegram, were intrenched across his road to oppose his advance. He detached Colonel Rosencranz, with a portion of four regiments, to make a detour through the woods, turn the enemy's intrenchments, and attack him in the rear. Colonel Rosencranz, who is a young West Point officer, executed the movement in the most successful manner; though he must have encountered serious obstacles in cutting his road through the woods, as it took him 12 hours to accomplish a march of eight miles. At three o'clock in the afternoon he reached the road about three miles in the rear of the main body of the Secessionists; but, as he descended a steep hill into the road, he was attacked by a force of some 800, who had fallen back and partly entrenched themselves to give him battle. It seems that one of General McClellan's couriers lost his way, and rode right into the Secession camp, and by this accident they obtained a knowledge of Colonel Rosencranz's movement. The battle lasted about three-quarters of an hour, resulting in the complete dispersion of the Secessionists, and the capture of their two pieces of artillery. The delay caused by this fight prevented Colonel Rosencranz from making the attack on the main body. General McClellan waited till nightfall, and then gave up the attack till next morning. In the night, however, the enemy fled through the woods, leaving their camp and everything it contained.

The following dispatches from General McClellan give the history of the subsequent operations in very brief form:

HEADQUARTERS, DEPARTMENT OF THE OHIO, }
RICH MOUNTAIN, VA, 9 A. M., July 12, 1861. }

COL. E. D. TOWNSEND: We are in possession of all the enemy's works up to a point in the right of Beverly. I have taken all his guns, a very large amount of wagons, tents, &c.—everything he had—a large number of prisoners, many of whom were wounded, and several officers prisoners. They lost many killed. We have lost, in all, perhaps twenty killed and fifty wounded, of whom all but two or three were in the column under Rosencranz, which turned the position. The mass of the enemy escaped through the woods, entirely disorganized. Among the prisoners is Dr. Taylor, formerly of the army. Col. Pegram was in command.

Colonel Rosencranz's column left camp yesterday morning, and marched some eight miles through the mountains, reaching the turnpike some two or three miles in rear of the enemy, defeating an advanced post, taking a couple of guns. I had a position ready for twelve guns near the main camp, and as the guns were moving up, I ascertained that the enemy had retreated. I am rapidly pushing on to Beverly, a part of Col. Rosencranz's troops being now within three miles of it.

Our success is complete, and almost bloodless. The behavior of the troops in the action and towards the prisoners was admirable.

(Signed)

G. B. McCLELLAN,
Major-General Commanding.

BEVERLY, July 13, 1861.

COL. E. D. TOWNSEND, Washington, D. C.:—The success of to-day is all that I could desire. We captured six brass cannon, of which one is rifled, and all the enemy's camp equipage and transportation, even to his cups. The number of tents will probably reach two hundred, and more than sixty wagons. Their killed and wounded will amount to fully one hundred and fifty, with at least one hundred prisoners, and more coming in constantly. I know already of ten officers killed and prisoners.

Their retreat was complete. I occupied Beverly by a rapid march. Garnett abandoned his camp early this morning, leaving much of his equipage. He came within

a few miles of Beverly, but our rapid march turned him back in great confusion, and he is now retreating on the road to St. George.

General Morris is to follow him up closely. I have telegraphed for the two Pennsylvania regiments at Cumberland to join General Hill at Rowlesburg. The General is concentrating all his troops at Rowlesburg, and will cut off Garnett's retreat near West Union, or, if possible, at St. George.

I may say that we have driven out some ten thousand troops, strongly intrenched, with the loss of eleven killed and thirty-five wounded. Provision returns found here show Garnett's force to have been ten thousand men. They were Eastern Virginians, Georgians, Tennesseans, and, I think, Carolinians. To-morrow I can give full details as to prisoners, &c. I trust that General Cox has by this time driven Wise out of the Kanawha Valley. In that case I shall have accomplished the object of liberating Western Virginia. I hope the General-in-Chief will approve of my operations.

G. B. McCLELLAN,
Major-General, Department of Ohio.

The same day General McClellan sent the following to General Scott:

I have received from Colonel Pegram propositions for the surrender with his officers and remnant of his command, say 600 men. They are said to be extremely penitent, and determined never again to take up arms against the general government. I shall have near 800 to 1,000 prisoners to take care of when Colonel Pegram comes in. The latest accounts made the loss of the rebels, in killed, some 150.

COMPLETE ROUT OF THE SECESSIONISTS.

On Saturday, July 13th, some twelve hours after the secessionists left their camp at Laurel Hill, Gen. Morris' command, consisting of the Fourteenth Ohio, and Seventh and Ninth Indiana Volunteers, started in pursuit of the enemy. They succeeded in overtaking the rear guard at Carrick's Ford. The enemy made a stand, and a sharp conflict ensued, which lasted for twenty minutes.

By a clever maneuver on the part of Gen. Morris, of the Seventh Indiana Volunteers, the enemy were outflanked, and made a precipitate retreat. It was then that the rebel General, Garnett, in trying to rally his forces, met with his death by a rifle wound at the hands of private Francis Burlingame, of Company E, Seventh regiment of Indiana.

The ball passed through his spine, and out at the right breast. He fell dead on the sand. His body, packed in ice, has arrived at Grafton. It was to be embalmed and kept, subject to the order of friends. He was a graduate of West Point, and formerly belonged to the United States Army.

The following is Gen. McClellan's dispatch giving the results of the victory:—

HUTTONSVILLE, Va., July 14, 1861.

COL. E. D. TOWNSEND, Assistant Adjutant-General:—

Gen. Garnett and his forces have been routed, and his baggage and one gun taken. His army are completely demoralized. Gen. Garnett was killed while attempting to rally his forces at Carrick's Ford, near St. George.

We have completely annihilated the enemy in Western Virginia.

Our loss is but 13 killed and not more than 40 wounded, while the enemy's loss is not far from 200 killed, and the number of prisoners we have taken will amount to at least 1,000. We have captured seven of the enemy's guns in all.

A portion of Garnett's forces retreated, but I look for their capture by Gen. Hill, who is in hot pursuit.

The troops that Garnett had under his command are said to be the crack regiments of Eastern Virginia, aided by Georgians, Tennesseans and Carolinians.

Our success is complete, and I firmly believe that secession is killed in this section of the country.

GEORGE B. McCLELLAN,
Major-General U. S. A.

THE GRAND ADVANCE.

The advance of General McDowell's army from Washington, so long anticipated, has at last commenced. At half-past three o'clock in the afternoon of July 16th, General McDowell and his staff left Arlington Heights, and at nightfall his advance guard was ten miles on its way to Manassas Junction.

His force consists of 55,000 men, and an ample force of upwards of 20,000 are left to guard the entrenchments around Washington. The spirit inspired in the soldiers by this movement is shown in the fact that many of those in the hospitals left their beds and joined the march.

SCIENCE IN MODERN WARFARE.

At the Brooklyn navy yard there are a number of old brass cannon which were captured in Mexico, and preserved as trophies. Great care has been taken to give them graceful forms, and they are covered with ornaments.

In the same yard are a number of Dahlgren cannon. These are simple masses of cast-iron, without an ornament upon, and with no attempt at beauty in their forms. But how great is the contrast in the amount of brain-work represented in these two species

of ordnance! The Dahlgren guns are of immense size at the breech, tapering sharply down in the neighborhood of the trunnions, and terminating in a chase but slightly conical towards the muzzle. This disposition of the metal has been determined by a long and costly series of experiments, conducted in the light of an immense amount of knowledge of the properties of metals, with an intelligent consideration of the forces of expanding gases, of the laws of moving bodies, of the results of chemical decomposition and combination, nearly all of which knowledge has been acquired by mankind since the Spanish cannon were cast.

Before Capt. Rodman cast his 450-pounder cannon, illustrated on page 305 of our last volume, he made a series of experiments to determine not only the best kind of iron to be used in the casting, but also the proper form for the mammoth ordnance. The extent and variety of knowledge made available in determining the form of this simple mass of cast-iron, may be judged by the following list of only a small part of the subjects discussed in Capt. Rodman's report:

"Of the various kinds of strains to which a gun is subject at each discharge.

"Tangential strain.

"Longitudinal strain.

"Crushing force.

"Transverse strain.

"Expressions for tendencies to rupture different kinds of resistance.

"Bursting effects of different weights of powder and shot in guns of different caliber.

"Position of shot when maximum pressure is attained.

"Experiments made for the purpose of determining the relative endurance of guns made from the same iron, but melted in furnaces of different construction.

"Deflection of bars under loads equally distributed along their whole lengths.

"Thickness of metal in the breech.

"Effects of compressibility.

"Termination of bore."

After these, and over forty other subjects of a similar character, are discussed in detail, with many pages of algebraic computations, the lines of the gun are finally drawn, and the mixture of cast iron, with its number of meltings, the form of furnace, &c., is prescribed, and the gun is cast.

Even these facts give but a faint idea of the amount of knowledge and study that is embraced in the production of one of our large pieces of ordnance! The books, which it would be the grossest folly not to read before the experiments are commenced, would form no inconsiderable library.

And all this has reference to only one species of cannon, that which is adapted to sea-coast defense. The ordnance department embraces the various varieties of field artillery, with their carriages, locks, powder and projectiles, round and elongated shot, shells, case, grape, canister and shrapnell. The arming of the infantry and cavalry is a not less extensive study. All of the details of arms for all classes of soldiers have been the subject of costly experiments by the leading governments of Europe, and of elaborate discussions by the foremost minds of all civilized nations.

But the arming of soldiers is only a small portion of the art of war. The equipment, the subsistence, the organization, the transportation of armies, is each a science in itself.

All history proves that the success of military operations depends almost wholly upon the intelligence with which they are conducted. The American people, aware of this, have, with prudent forecast, made ample provision for the education in the military art of a sufficient number of our citizens to lead our armies in case of war.

The politicians who had the control of our affairs at the time of the Mexican war, set aside these men who had made the art of war the study of their lives, and entrusted the command of our brigades to men who had spent their lives in learning something else—lawyers and politicians like themselves. In this war, we rejoice to see that the popular intelligence, always in advance of that of the politicians, is endeavoring to enforce a different policy. Our educated volunteers insist on being led by skilled officers, who, if they do sacrifice the lives of their soldiers, will not do it uselessly in securing defeat.