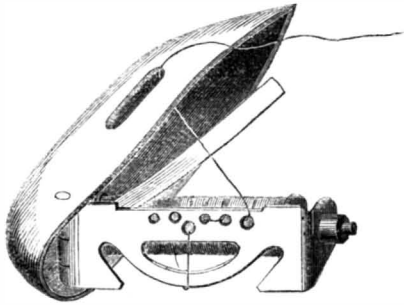


during every stitch back and forth through the needle eye. This further admits the use of a finer needle for the same thread, which, in shuttle sewing, is of the utmost importance, because a large hole with a fine thread will not cover the joints of the thread, and very much weakens the strength of the seam in all unelastic goods.

It is well known that, in machines having a take-up, the exceedingly rapid back and forth motion of the thread through the needle eye will, in many kinds of work, heat the thread and needle so as to



burn the thread; therefore, but very slow speed can be used, and a very large needle must be employed to avoid this effect.

6. There is almost no friction on the shuttle, it bearing on its front against the driver; while, in other shuttle machines, this front bears against the race, and the friction is therefore very great.

7. The stop motion and the take-up being dispensed with, the machine is thus much simplified.

Application has been made for a patent for this invention, and further information in relation to it may be obtained by addressing the Grover & Baker Sewing Machine Company, at No. 495 Broadway, New York.

THE WAR.

The great importance of the following proclamation induces us to give it in full:—

HEADQUARTERS OF THE WESTERN DEPARTMENT,
ST. LOUIS, August 31.

Circumstances, in my judgment of sufficient urgency, render it necessary that the Commanding-General of this department should assume the administrative powers of the State. Its disorganized condition, the helplessness of the civil authority, the total insecurity of life, and the devastation of property by bands of murderers and marauders, who infest nearly every county in the State, and avail themselves of the public misfortunes and the vicinity of a hostile force to gratify private and neighborhood vengeance, and who find an enemy wherever they find plunder, finally demand the severest measures to repress the daily increasing crimes and outrages which are driving off the inhabitants and ruining the State. In this condition the public safety and the success of our arms require unity of purpose, without let or hindrance to the prompt administration of affairs.

In order, therefore, to suppress disorders, to maintain as far as now practicable the public peace, and to give security and protection to the persons and property of loyal citizens, I do hereby extend, and declare established, martial law throughout the State of Missouri. The lines of the army of occupation in this State are for the present declared to extend from Leavenworth by way of the posts of Jefferson city, Rolla and Ironton, to Cape Girardeau, on the Mississippi river. All persons who shall be taken with arms in their hands within these lines shall be tried by court martial, and, if found guilty, will be shot. The property, real and personal, of all persons in the State of Missouri, who shall take up arms against the United States, or who shall be directly proven to have taken active part with their enemies in the field, is declared to be confiscated to the public use; and their slaves, if any they have, are hereby declared free men.

All persons who shall be proven to have destroyed, after the publication of this order, railroad tracks, bridges or telegraphs, shall suffer the extreme penalty of the law.

All persons engaged in treasonable correspondence, in giving or procuring aid to the enemies of the United States, in disturbing the public tranquillity by creating and circulating false reports or incendiary documents, are in their own interest warned that they are exposing themselves.

All persons who have been led away from their allegiance are required to return to their homes forthwith; any such absence, without sufficient cause, will be held to be presumptive evidence against them.

The object of this declaration is to place in the hands of the military authorities the power to give instantaneous effect to existing laws, and to supply such deficiencies as the conditions of war demand.

But it is not intended to suspend the ordinary tribunals of the country, where the law will be administered by the civil officers in the usual manner and with their customary authority, while the same can be peaceably exercised.

The Commanding General will labor vigilantly for the public welfare, and in his efforts for their safety hopes to obtain not only the acquiescence but the active support of the people of the country.

(Signed) J. C. FREMONT,
Major-General Commanding.

THE NAVAL EXPEDITION.

The Atlantic coast of the United States, from the middle of Long Island to the southern point of Florida, is of very peculiar formation. Throughout almost the whole of this 1,200 miles there are narrow ridges of sand at a short distance from the main land, leaving long shallow sounds inside, with narrow inlets communicating with the ocean, through which all the shipping must pass. The sounds thus shut in on the North Carolina coast are Albemarle and Pamlico, both broad, navigable sheets of water, which, in times of peace, have been whitened with the sails of numerous sloops and schooners, bearing away the products of the great pine forests of that State—rosin, tar, turpentine, plank, timber, and pine wood. These sounds communicate with each other and are both separated from the ocean by a low sand ridge 200 miles in length. At about the middle, a point of this ridge runs out easterly into the Atlantic, and is called Cape Hatteras, a point much dreaded by mariners from the storms which prevail in its vicinity. With the single exception of Wilmington, a place of 7,000 inhabitants in the south part of the State, all the harbors of North Carolina lie behind this ridge of sand, and consequently, almost the entire commerce of the State must pass through its navigable breaks or inlets, of which there are but two—Hatteras Inlet, 15 miles south-west of Cape Hatteras, and Ocracoke Inlet, 12 miles still further to the south-west. There is a third opening through the sand ridge far to the north of Cape Hatteras, called New Inlet, but as it has only five feet depth of water, it is not navigable for vessels of any considerable size. The two principal inlets, besides serving as gates for the North Carolina commerce, furnish a water communication from the ocean, by the way of the Dismal Swamp Canal, with Norfolk and the ports on James River, in Virginia.

The great and manifest importance of these two inlets caused the secessionists to make early and very vigorous efforts to secure the control of them, and the erection of fortifications was commenced at both places under the direction of William Beverhout Thompson, Chief Engineer of the North Carolina Coast Defence. The United States Navy Department also appreciated the importance of these two inlets, and before the late session of Congress a plan was formed for capturing the fortifications at both places, but various delays occurred in carrying out the plan, and the expedition did not get away from Fortress Monroe till the 26th of August. This was the secret naval expedition, the sailing of which was mentioned in our last number.

The fleet, consisting of seven war vessels and two transports, all steamers except one, under the command of Commodore Stringham, U.S.N., with about 800 land troops in the transports under the command of Major General Butler, sailed from Hampton Roads on Monday, August 26, and arrived off Hatteras Inlet about four o'clock in the afternoon of the next day. On Wednesday morning, the 28th, the transports with the troops were sent in close to the shore, about two miles north of the inlet, under the protection of three of the smaller naval vessels, and the landing of the men was commenced. But the surf ran so high that the boats were all soon swamped or stove, and only about three hundred of the men were got ashore.

In the meantime the large ships of war took up positions at long range and opened a bombardment on the only fort that could be seen from the outside. At

10 o'clock the *Wabash* fired the first gun, the 11-inch shell striking near the battery with tremendous force. The battery, which was of sand, covered with turf and mounting five long thirty-twos, instantly returned the fire, the shot falling short. The *Minnesota* and *Cumberland* immediately opened fire and rained nine and eleven-inch shell into and about it. The fire was terrific, and soon the battery's responses were few and far between, save when the frigates suspended fire for a while to get a new position, when the enemy's fire was most spirited.

No damage was sustained by our ships, and when they again took their position the cannonading was intensely hot, the shells dropping in the enemy's works or falling on the ramparts, exploding in death-dealing fragments, and carrying death and destruction with them. The small wooden structures about the fort were torn and perforated with flying shells.

At eleven o'clock the immense flag-staff was shot away and the rebel flag came down, but the fire was still continued by them.

At twelve o'clock the *Susquehanna* steamed in, and, dropping her boats astern, opened an effective fire. The cannonading on our part was incessant, and the air was alive with the hum and explosion of flying shell; but the enemy did not return the fire with any regularity, the battery being too hot for them, from the explosion of shells that dropped in at the rate of about half a dozen a minute.

The enemy ceased firing a little before two, and after a few more shells had been thrown in, the Commodore signalled to cease firing.

In the meantime the land forces advanced, and, discovering that the battery was abandoned, entered it and raised the United States flag in order to prevent the fleet from wasting ammunition upon it. The rebel garrison fell back upon another fort in the rear which was out of sight of our ships, and as the *Monticello* entered the inlet to protect our land forces, this second fort opened fire upon her at short range. At the same instant she got aground, and stuck fast, the enemy pouring in a fire, hot and heavy, which the *Monticello* replied to with shell sharply. For fifty minutes she held her own, and finally getting off the ground she came out, having been shot through and through by seven 8-inch shell, one going below the water line. She fired fifty-five shells in fifty minutes, and partially silenced the battery. She withdrew at dusk for repairs, with one or two men slightly bruised, but none killed or wounded. This ended the operations for the first day. The next morning the vessels proceeded more closely in shore and renewed the attack. They fired nearly half an hour before the battery responded, when it answered briskly. Our fire was more correct than on the previous day. The range had been obtained, and nearly every shot went into the battery, throwing up clouds of sand and exploding with terrific effect. The fire was so hot that all of the enemy that could do so got into a bomb-proof in the middle of the battery. Finally, at five minutes past eleven A. M., an 11-inch shell, having pierced the bomb-proof through a ventilator and exploded inside near the magazine, the enemy gave up the fight and raised over the ramparts a white flag. We immediately ceased fire. Gen. Butler went into the Inlet and landed at the fort and demanded an unconditional surrender, which, after some parleying, was consented to, by the commander of the forts, who proved to be Commander Barron, formerly of the United States Navy, and at the time of his capture Assistant Secretary of the Confederate Navy. By the surrender we came in possession of one thousand stand of arms, thirty-five heavy guns, ammunition for the same, a large amount of hospital and other stores, two schooners—one loaded with tobacco, and the other with provisions; one brig loaded with cotton, two lightboats, two surf boats, &c. The prisoners surrendered numbered 45 officers and 665 non-commissioned officers and privates. They were placed on board the *Minnesota* and sent to New York, where they arrived on Monday, Sept. 2d, just a week after the sailing of the expedition from Fortress Monroe.

If this operation is followed up by the capture of the forts at Ocracoke Inlet, all but one of the ports of North Carolina, as well as those of Virginia, will be hermetically sealed; and by stationing sufficient forces at the two inlets, all this stretch of coast may be effectually blockaded without the employment of any vessels.

PRIVATEERS IN HATTERAS INLET.

Among the papers taken at the capture of Fort Hatteras were copies of letters by Major Andrews, at one time in command of the place. The following is so instructive that we give it in full:—

HEADQUARTERS CAMP HATTERAS, }
August 2, 1861. }

His Excellency Henry F. Clark:—

GOVERNOR—Since my last the privateer steamer *Mariner* has brought into this port as a prize the schooner *Pricilla*, of Baltimore, from Curacoa, with six hundred bushels of salt. I had some doubt as to the legality of the prize, but having seen that Baltimore vessels, laden with coffee, had been seized in the mouth of the Chesapeake and sent to New York as prizes, I ordered her up to Newbern to-day. The *Winslow* has a large brig at the bar laden with sugar and molasses, and the *Gordon* has two schooners coming over the bar now. The *Mariner* has taken a schooner into Ocracoke, and is now in pursuit of another. These will all be fully reported as soon as the captains report to me. I am doing all I can to prevent the news of captures spreading, but so long as the crews are sent up to Newbern immediately, it cannot be prevented. Your despatch through the Adjutant-General's office of the 27th instant, is received.

The directions of Captain Barron, with regard to Hatteras Light-House, will be followed. You did not direct me what to do in regard to the coffee. I am trying to save the copper on the bark *Linwood*, and will await your order how to dispose of it. I suppose it is needed to make percussion caps. Yours, very respectfully,

W. S. G. ANDREWS,

Major Commanding Fort Hatteras and Dependencies.

A SKIRMISH IN WESTERN VIRGINIA.

Our account left General Cox pursuing General Wise up the valley of the Kanawha, which runs northwardly through the western part of Virginia. On the 26th of August, General Cox had reached Gauley Bridge, some 40 miles above Charleston, and had sent one regiment, the Ohio Seventh, to Summersville, a few miles up the Gauley River, a stream that enters the Kanawha from the east.

As Col. Tyler's men were taking their breakfast on the morning of the 26th, they were suddenly surrounded by three regiments of Secessionists, who hoped to take them prisoners. But they fought their way through the enemy's lines, and most of them reached the main body at Gauley Bridge in safety.

WRECK OF THE PRIVATEER "JEFFERSON DAVIS."

The privateer *Jefferson Davis* was wrecked at 6 o'clock on Sunday morning, August 12th, while trying to enter the harbor of St. Augustine, Fla. The vessel struck on the bar, and became a total wreck. The crew were all saved.

OBSEQUIES OF GENERAL LYON.

On Saturday, August 31st, the remains of General Lyon reached this city on their way to their last resting place in his native town, Eastford, Conn. In all the principal cities on the route—St. Louis, Cincinnati, Pittsburgh, Philadelphia and New York—the citizens testified their respect for the departed hero by celebrating the passage of his remains with imposing funeral ceremonies. Along the route it was remarked that there was a peculiar depth and earnestness in the grief of the people for the death of this brave soldier. In all the numerous histories that will be written of this war, his name will stand out with remarkable prominence, for his career was remarkably heroic. He never shrunk from battle, whatever the odds, and as long as he lived he was never defeated. Contending against greatly superior numbers, he finally sacrificed his life in a desperate attempt to save the city of St. Louis from the clutches of the secessionists, and with it, the State of Missouri from the crushing military despotism that reigns in the seceded States. There is great satisfaction in reflecting that the effort was successful. The people have appreciated his sublime devotion, and the hushed breaths and bended heads which accompanied the passage of his coffin mark the beginning of a fame that will grow brighter with the lapse of time.

Parr's American Camp Chest.

This excellent article, which was illustrated in No. 5, present volume of the SCIENTIFIC AMERICAN, is on exhibition at Messrs. Ball, Black & Co.'s, on Broadway, and is attracting unusual attention from army officers and others interested in the comforts of camp life. The demand for these chests has exceeded the ability of the inventor to supply, and we learn that Messrs. Gray & Potter, of 202 Broadway, who are making "army supplies" a specialty, have become the proprietors of the patent, and will very soon be able to fill any and all orders. Messrs. Ball, Black & Co. will, we learn, continue to have the agency for this city. We understand that this useful invention is meeting with the success it deserves.



From a Washington Correspondent of the "Scientific American."

WASHINGTON, D. C., August 29, 1861.

MESSRS. EDITORS:—Since my last communication to your highly-prized journal, there has been great activity in the military department under Gen. McClellan, and all fear of danger from a surprise has vanished and given place to a feeling of perfect security. It is not a little amusing to see the great anxiety expressed sometimes by persons living at a distance for the safety of this city, when we who live here, and who would probably be the greatest sufferers in case the city should fall into the hands of the enemy, feel perfectly at ease, and have full confidence in the preparations and ability of Gen. McClellan. The reason of this fear, however, is but natural, when we consider the fact that all knowledge of military movements on our side is suppressed, while we read accounts daily of the activity and the near approach of the enemy to our lines; thus leading many to suppose that our preparations for offence and defence are not as certain as those of the enemy, which is very far from being the case.

The business of the Patent Office has fallen off some since our troubles commenced; and, in consequence thereof, some changes have been made in this department, only, however, as regards the force employed and the compensation of those who are retained. I notice that a great many improvements have been made in military accouterments, the better to provide for the comfort and convenience of our soldiers during the present struggle. Inventors will find a broad field open for them here to display their ingenuity, as there are hundreds of little wants which could be readily supplied by the inventor, and those who, through disabilities, cannot enter our regiments, might contribute their share in this way.

We have a Provost Guard in this city, whose especial duty it is to arrest drunken and disorderly soldiers, and to arrest and fine persons for selling or giving liquors to soldiers. All soldiers are required to have a pass from one of the officers of their respective regiment, with which pass they can attend to their private business about the city; without a pass, the soldier is liable to be arrested. We therefore have very little disturbance in our streets, night or day.

Army wagons and horses continue to arrive every day in large numbers; and I notice that many of the wagons are dragged through our streets with the wheels locked! This is an injury both to the horses and wagons, and attention should be called to it immediately.

The Washington Navy Yard has become quite a lively place, and many hundred workmen are employed day and night in and about the various shops, turning out cannon, making shot and shell, gun carriages, &c., &c. This yard is now a very convenient place for keeping in good repair the gunboats used on the Potomac, some of which visit the yard every day or two.

Steamers run between this city and Alexandria, Va., every hour, but all persons leaving the wharf for the latter place are required to show a pass. These passes are only obtained upon the representation of some well-known Union citizen, and much inconvenience has been felt by certain persons whose opinions are somewhat tainted with secession because of this pass system. This channel to Virginia has been blockaded effectually, and as every floating craft on the river, from a "dug-out" to a long boat, has been taken possession of by our river guard, those whose character deprives them of the privileges of a pass must be content to live among us until they show, by their good works, that they are indeed Union-loving citizens.

The system of oath-taking at first adopted by our government has ceased to exist, and those who prove disloyal and treacherous to the confidence reposed in them are sent where they will neither be harmed themselves nor harm others. Thus has the Mayor of our city been arrested and imprisoned "for cause;" many ladies of this city having taken advantage of the privileges accorded to their sex to aid the enemy,

have been arrested and held, so far, only, as to prevent the recurrence of such things.

Rumors say that we are to have a battle on the other side of the river soon; the circumstances on which they are based amount to little more than the gradual advance of the scouting outposts of Beauregard's army to points almost within range of the guns of our fortifications. These scouting parties, however, remain only a sufficient time to make reconnoissances, shoot down our pickets, and then retire; but Gen. McClellan will soon put a stop to these movements of the enemy, and if persisted in, we may expect to hear at any moment of a considerable affair between the outposts of the two armies at some place not more than three or four miles from this city.

Finally, I will add that, as all of our military affairs have been confided to men of military knowledge and experience, everything goes on smoothly and harmoniously, leading us to believe with great confidence that all will end well, and to the glory and honor of our Republic.

R. T. C.

MESSRS. EDITORS:—Will you have the kindness to inform me, through your popular scientific journal, the title, price and where I can purchase the best scientific work on mechanical engineering published in this country, and much oblige an attentive reader? Yours, truly,

JAMES DEVINE.

Frankford, Pa., August 27, 1861.

Similar letters of inquiry to the above come daily to this office, and it would relieve us of answering a great many letters of no profit to us, if dealers in scientific and mechanical books would advertise their works in our columns. At the same time, they would find it a profitable business transaction.

MESSRS. EDITORS:—At the request of one of your patrons who receives your paper at the news depot here, I write for advice upon the subject of steam engineering, he desiring to purchase one of about twenty horse-power; he wishes "all the modern improvements." Whose engine do you consider the best? Your reply will be conferring a great favor. Respectfully yours,

A. D. McDONALD.

Hamilton, C. W., August 26, 1861.

The same editorial advice as rendered to booksellers in the above is applicable to manufacturers of steam engines and all kinds of machinery, inquiries about which are being constantly made at this office.

The secret of success in all kinds of business is advertising; and the duller the times, the more should manufacturers or others having anything to sell avail themselves by advertising in papers of large circulation, and especially in such papers as are circulated among the class of persons likely to patronize their wares.

The New Postage Stamps.

The new postage stamps have made their appearance. There are eight classes—one, three, five, ten, twelve, twenty-four, thirty, and ninety-cent stamps, embracing line-engraving heads of Washington, Franklin, and Jefferson, from portraits painted by Stuart, Trumbull, and Houdon.

The one cent stamp is green with a profile bust of Franklin. The three cent is a delicate carmine with a portrait of Washington. The five cent is brown with a likeness of Jefferson. The ten cent is green with a head of Washington. The twelve cent is black also with a head of Washington. The twenty-four cent is purple—same likeness. The thirty cent has a bust of Franklin and is printed in orange. The ninety cent is dark ultra-marine, and concludes the list with a portrait of the father of his country.

PROGRESS OF THE WORK ON THE FORTRESS AT SANDY HOOK.—The fortifications at Sandy Hook are progressing very rapidly under the superintendence of Capt. J. G. Foster, U. S. Engineer corps.

Twenty-seven casemates are completed, and the guns will be mounted in a few days. This part of the work will command the entrance of the main and Swash channels. Thirty-seven guns have been ordered down immediately. A large portion of them will be rifled, and of a new and improved pattern; 8-inch columbiads will make up the complement to be used at present.

A magazine is nearly completed, and as soon as entirely finished a large quantity of shot and shell will be sent down.

At a recent exhibition in England, a couple of bullets were shown which were picked up on the field of Inkerman. A French and a Russian bullet had met in mid air and were flattened against each other. So says the London *Mechanics' Magazine*.