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NEW SERIES.

Improved Paging Machine.

There is a great deal of ingenuity displayed in the construction of the machine illustrated by the accompanying engravings. It is designed for paging account books, and operates in the most rapid, accurate and perfectly successful manner. Copper type are formed on flat plates of brass which are hinged together to form a long endless chain, *a a a*. This chain is arranged in a vertical frame—passing round pulleys at the top and bottom, and along horizontal plate, *b*, so as to bring the several type plates in succession at the point, *a*, where the printing is performed. The book to be paged is laid upon the table, which is adjusted at the proper height; the book being placed in such a position that the corners of the leaves will come over the type at the point, *c*. The operator turns the leaves up, holding them with the fingers, and allows one at a time to drop down upon the type; at the same time pressing down the treadle, *e*, which brings the cushion, *f*, down upon the corner of the leaf over the type with sufficient force to produce the impression.—The foot on the treadle is then raised, when a spring throws the treadle up, carrying the type chain along one link, and bringing the type of the second number forward to the point, *c*. This motion also turns the revolving finger, *c*, half over upon its short axis, thus bending down the corner of the leaf that has just been printed and bringing it below the type plate that has been carried forward beneath the

horizontal bar, where at the next depression of the treadle, it is printed on the opposite side. Thus a leaf is printed on both sides at each depression of the treadle. The cushion, *f*, is pressed down upon the

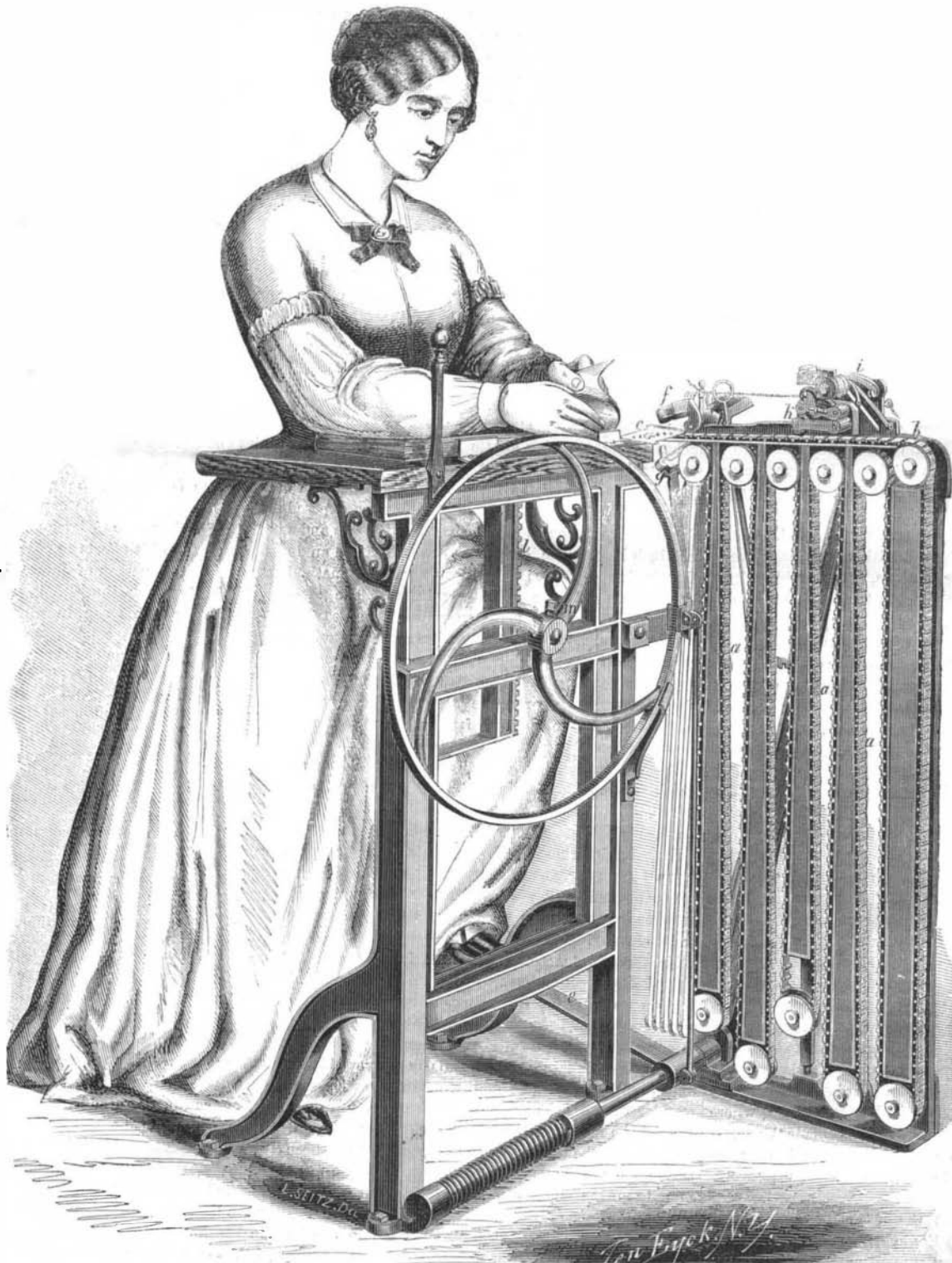
under the cushion, *f*, and over the corresponding cushion below; this tape receiving a motion at each depression of the treadle sufficient to carry a clean portion under the cushion. The inking apparatus, *i*, is attached to the arm which rises from the fulcrum of the treadle, and is thus carried forward along the bar, *b*, at each motion of the treadle. The ink is contained in the cup, *j*, from the bottom of which it passes by a series of distributing rollers to the roller, *k*, which transfers it to the type. An elevation on the bar, *b*, holds the roller, *k*, clear of the type till it arrives in the vicinity of the point, *c*, when it is let down upon the type; thus printing only two or three of these near the printing point. The arm which actuates the toggle jointed lever is connected with the lever by a horizontal bar, which may be lifted from its hold upon the lever by pulling up a wire whenever it is desired to pass a page without printing it.

The table, *d*, upon which the book rests, is supported by a vertical rack, *l*, that meshes into a pinion upon the axle of the wheel, *m*, and at each motion of the treadle this wheel receives a slight turn, just sufficient to carry the table down a distance equal to the thickness of the paper; by which arrangement the paper that is being printed is kept constantly level with the type.

The introduction of the revolving finger, *c*, and of the self-operating downward movement of the table with the other modifications, greatly facilitate the work, and increase the amount that can be done by this machine in comparison with the invent-

M'ADAMS'S ACCOUNT-BOOK PAGING MACHINE.

type by a toggle-jointed lever, which is actuated by an arm rising from the fulcrum of the treadle. To prevent the freshly impressed ink from setting the page, an endless belt of clean tape is carried



or's earlier machines which did not have these improvements; while the operation is far less laborious. By arranging two of the type frames in connection with one table, a machine is made to print four pages at each motion of the treadle. In this case the paper is paged before it is bound into books, and one workman will page about 90 reams per day. Such a machine is of course suitable for large establishments only. The inventor also makes a simpler and cheaper machine, for paging one side of the leaf only at a time.

This machine is the invention of John McAdams, who invented his first paging machine in 1851, and has been directing his attention since to various improvements, all of which are embraced in our illustration.

Orders for either the single or double machines, or any inquiries in relation to the matter may be addressed to the inventor, at 44 Chatham street, New York.

NOTES ON MILITARY AND NAVAL AFFAIRS.

THE SITUATION.

The week ending Nov. 16th is made ever memorable in the history of our country. The news of the success of the great naval expedition in taking Port Royal, S. C., and the arrest of Messrs. Mason and Slidell on board the British steamer *Trent*, while on their way to Europe as Commissioners from the Confederate States, are events of thrilling interest to every loyal heart.

The facts concerning the taking of Beaufort harbor have been spread out in all their length and breadth in the daily press, and it is unnecessary to enter into details. Suffice it to say that the fleet, after a most terrific bombardment of Forts Walker and Beauregard, drove the enemy out in great confusion. The casualties on board the vessels were very slight, comparatively, only eight being killed and some twenty wounded. There are now 16,000 troops under Gen. Sherman upon the soil of South Carolina, and another expedition will soon sail from Annapolis and Fortress Monroe, probably to reinforce Gen. Sherman's column or to strike at some other point.

ARREST OF MASON AND SLIDELL.

The arrest of Messrs. Mason and Slidell, although a subject in itself of great rejoicing, is nevertheless causing a good deal of apprehension. The general opinion, however, seems to be that, according to the highest British authority the act was justified. There are several examples where British vessels have overhauled vessels of other nations, and forcibly taken off persons who were engaged in treasonable schemes against the government. The facts of the arrest are simply these: The steam frigate *San Jacinto*, Capt. Wilkes, was returning home from the coast of Africa, where she had been for several months past engaged in suppressing the slave trade. The frigate stopped at Cienfuegos and there learned of the escape of Messrs. Mason and Slidell. Proceeding thence to Havana, it was understood they had taken passage on the 7th inst. on the British mail steamship *Trent*, plying between Vera Cruz, by way of Havana, and St. Thomas and Southampton. While the *San Jacinto* was in the narrowest part of the Bahama Channel, about twenty-four miles to the westward, she met the packet, and, as usual in such cases, fired a shot across her bows and brought her to. Two boats were sent to her, under the command of Lieut. Fairfax, who, boarding the packet, arrested Mason and Slidell, who were personally known to him. They at first objected to being removed without the employment of force for that purpose. However, they were soon after removed without further trouble, and conveyed to the *San Jacinto*. Their respective secretaries, Eustis and McFarland, were also brought on board. The prisoners were sent to Fort Warren, in Boston harbor, where they are now confined. Capt. Wilkes made the arrest wholly upon his own responsibility, he having received no instructions to act from the Federal government.

Many apprehend that the action of Capt. Wilkes will lead to a war with England, but we cannot think so. We believe our government will act right in the premises, and if a wrong has been done to a friendly power, all proper reparation will be made.

GRAND REVIEW.

On the 20th inst., General McClellan, the Commander-in-Chief reviewed a division of the grand army of the Potomac of 60,000 men, near Ball's Cross

Roads. It was the most extensive review, and by far the most imposing spectacle, ever witnessed in this country.

This system of reviewing troops is somewhat novel in our army operations, and many who are not familiar with its objects regard such demonstrations as unmeaning. Gen. McClellan's experience in the Crimea in 1855 fully convinced him of the importance of such reviews. Frederick the Great, Napoleon, Wellington and all great military commanders were in the habit of holding frequent grand reviews, and the system is kept up in all European nations. It is very inspiring, not only to the troops, but also to the officers.

MISSISSIPPI RIVER FLEET—NEW GUN BOATS.

An expedition down the Mississippi is rapidly in progress and will move upon the completion of the iron-plated gunboats in course of construction at Carondelet, Mo., and other places. The President has appointed Captain A. H. Foote flag officer of the fleet. A powerful gunboat, named the *Thomas H. Benton*, is now about ready and will be the flag ship of the Mississippi fleet. For eight weeks about two hundred men have been at work upon her, and their labors are nearly completed. The twin hulls of the *Benton* have been connected so as to form one powerful hull of 186 feet in length and 74 feet in breadth. The hull is very staunch, and is sealed up inside with three and four inch plank. It is divided into forty water-tight compartments; thus the *Benton* may be considered one of the safest war vessels it is possible to build, for it would scarcely be possible to penetrate every compartment during the closest and heaviest firing into her for hours. And then her hull, all over to below the water line, as well as every other exposed part of the boat, is covered with heavy iron. That about the middle of the hull is two and a half inches in thickness, and securely fastened by one and a half inch iron bolts, which are riveted inside, the heads of the bolts being countersunk, so that they cannot be knocked off by shot. The wheels are perfectly protected from shot and shell, the wheel house being covered with six-inch timber, and plated with boiler iron. The gun deck is spacious and a model of neatness combined with strength. It is seven feet four inches in height, with a gentle inclination, calculated mathematically, as the safest shape for the purpose. The *Benton* is casemated all round, the timber being in parts twenty-four inches thick, and in less exposed places twelve inches, and all covered with two and a half inch iron. The casemates are built at an angle of forty-five degrees, in the most approved method for throwing off an assailant's missiles. The casemates are pierced for eighteen guns of the heaviest caliber, forward. She will have fore and aft two Parrott rifled cannon, which carry four or five miles. On board this floating battery will be a full complement of all the necessary ordnance stores, and everything that can add to the comfort of the crew, as well as to the confusion of the enemy. It is probable this gunboat will be furnished with "telescope" chimneys, which are capable of being shortened, as occasion requires.

MISCELLANEOUS.

For the information of applicants to the government, too numerous to be answered individually, we are authorized to say that thus far no decision has been made in regard to permitting trade to Beaufort or its vicinity.

Mr. Savage, American Vice-Consul at Havana, had visited Key West on business, and on returning to his post on the 10th instant, reported that 1,500 Confederate troops had been discovered by the federal pickets some twenty miles from Fort Pickens on Santa Rosa Island. The picket guard immediately conveyed information of the presence of the enemy to the commander of the federal fleet, who sent a force and shelled the rebels off the island with great loss. It is supposed the object of the enemy was to concentrate a force of 5,000 or more troops, and by a forced march to make another night attack upon Col. Wilson's camp.

The affair at Guyandotte, Va., noticed in our last number, appears not to have been so serious a matter as at first reported, but few Union troops were killed, and but few buildings were burned in retaliation.

The newspaper sensationists report that Gen. Johnston, commanding the Confederates, is marching at the head of 40,000 troops, threatening Louisville, Cincinnati or Lexington, and that Gen. Buell is con-

centrating his command at Danville to oppose the enemy's march.

Gen. Price is going into winter quarters at Fort Smith, Arkansas, and Gen. Hunter's troops have evacuated Springfield, Mo., and have returned to points on the railroad to await the orders of Gen. Halleck, who is now in command of the Western Department.

Rosecrans's forces have chased Floyd twenty-five miles from Gauley river, and at last accounts he was near Wytheville, Va. He evidently finds it uphill business to subjugate Western Virginia.

A speck of war looms up near Newport News, Va. The Confederate General Magruder, it is reported, is coming down by land and sea to attack the Union forces. Preparations are being made to give him a warm welcome.

It does us good to take up the *Louisville Journal* and the *Louisville Democrat*. These loyal papers are doing battle for the Union and the Constitution in the right spirit, and free from all fanaticism. We wish them abundant success in their good work.

The burning of several railroad bridges in East Tennessee by the Union men has caused great commotion among the Confederates.

Major-General Dix, commanding at Baltimore, has sent a force of 4,000 troops into Accomack County, Va., to protect the Union men there. This county is the residence of that distinguished belligerent, ex-Governor Wise, and is on the east side of Chesapeake Bay. There were some 1,500 secession troops in that region, who retreated in expectation of seeing Gen. Dix's troops. The General's proclamation to the people is a sensible document.

The Cabinet having had under consideration the propriety of granting passes to those who may wish to go through our lines and into the South for the purpose of preserving their property from confiscation, have determined to refuse such permission. There are many reasons why such permission on the part of the government would be manifestly improper, one of the chief of which is that no one can succeed in saving his property without declaring himself an enemy of the government. The government has enemies enough now to contend with without allowing passes to more.

William L. Yancey, the great Southern freeer, who is now acting in the capacity of a commissioner of the Southern Confederacy in Europe, is getting discouraged in his efforts to obtain a speedy recognition. On the person of James Brown, who was arrested in Boston on the 13th inst., a letter was found from Yancey to his son, in which he speaks discouragingly of his prospects.

Mr. Russell, in one of his recent letters to the *London Times*, says:—

One of the main agencies on which the chiefs of the army rely for the establishment of discipline is total abstinence. Never has Bacchus in all his forms and poor John Barleycorn been so prosecuted in any army in the world. The sword has done what the pen never dared, and to all intents and purposes the sale of drink to a soldier is a crime, and drink of any kind is a *malum et prohibitum et per se*. One grim colonel rebukes his captain and threatens him with arrest for "drinking and fiddling in his tent," and intimates it was disrespectful to his commanding officer, possibly on the grounds put by the Indiana colonel for a similar offense. "You are to consider yourself under arrest, sir, for making a row in your quarters and not asking me to it." Another has a judicial decision on the question whether lager beer is or is not an intoxicating drink, and it is decided in the negative to the joy of Deutschland, who soon proves the contrary, and the lager is put in the *index expurgatorius* also.

Orders from Washington have been received in this city for the preparation of lumber for the construction of buildings for a naval depot at Port Royal for the manufacture of all kinds of machinery for naval and other purpose; also to dispatch at once storeships, which are to be permanently stationed at the point. The government intends, in fact, to establish there a permanent depot for naval and military purposes.

An ingenious soldier of the Fifteenth Ohio regiment, now on duty in Kentucky, has devised a method of warming tents, which is an improvement upon the similar contrivance of a Rhode Island soldier in Virginia, noticed sometime ago, and is described as follows: "In the centre of the tent a hole is dug in the ground about two feet square and two feet deep. From the bottom of this hole a small trench leads to the surface of the ground outside the tent, to admit the cold air. From the top another covered trench leads to the opposite side of the tent to conduct the smoke out. The hole is arched over, very