

Science and Art.

Lighting Gas by Galvanism.

The gas jets of the Broadway Theater in this city, are now regularly lighted as often as desired in producing scenic effects, by a current of the electric fluid through fine coils of platina wires, one of which is permanently fixed in connection with each burner. The effect is very striking, and attracts much attention.

An engraving of the device for accomplishing this result, will be published in our next number.

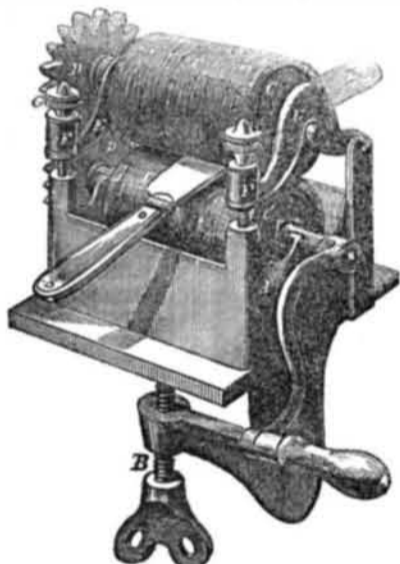
A Wonderful Iron.

A Mr. Howell has invented a secret method of making good puddled iron quite fluid by mixing with other ingredients, and thus produces what is termed in the transactions of the Liverpool Polytechnic Society, "Homogenous Metal," alleged to be as tough as copper and as strong as steel.

Rotary Knife Cleaner.

The accompanying engraving illustrates an admirable improvement in machines for scouring and polishing table cutlery.

A represents a cast iron frame (embracing the trough for holding the polishing-powder) to be secured to a table by the set-screw, B. C C are the revolving scouring rollers, formed of a series of woolen disks on a shaft, forced and confined compactly together and arranged over each other, one in and the other above the trough. These rollers are driven by cog-gearing, D D, which is set in motion by a crank on the shaft of the lower roller, as shown. E E are hinged levers, having bearings which serve as journals for the shaft of the upper roller. F F are india rubber springs, by which a yielding pressure is obtained, accommodating itself to the various thickness of knives, without resort to the set-screws, G G, which are mainly designed to compensate for any wear that may take place in the



rollers. In order to scour a knife with this machine, it is only necessary to fill the trough with some suitable cleansing material.

Having dipped the knife in water, or soap suds, (which is preferable,) place it between the rollers as shown; and then set the rollers in motion by turning the crank; the knife, of course, must be moved back and forth from point to heel as the rollers revolve.

By this machine both sides of the knife are scoured at once, as the lower roller in revolving absorbs the powder, or cleansing material, and feeds it to the upper roller, and both act upon the knife with like effect—all stains and marks are removed, and the knives are polished to look as well as new cutlery.

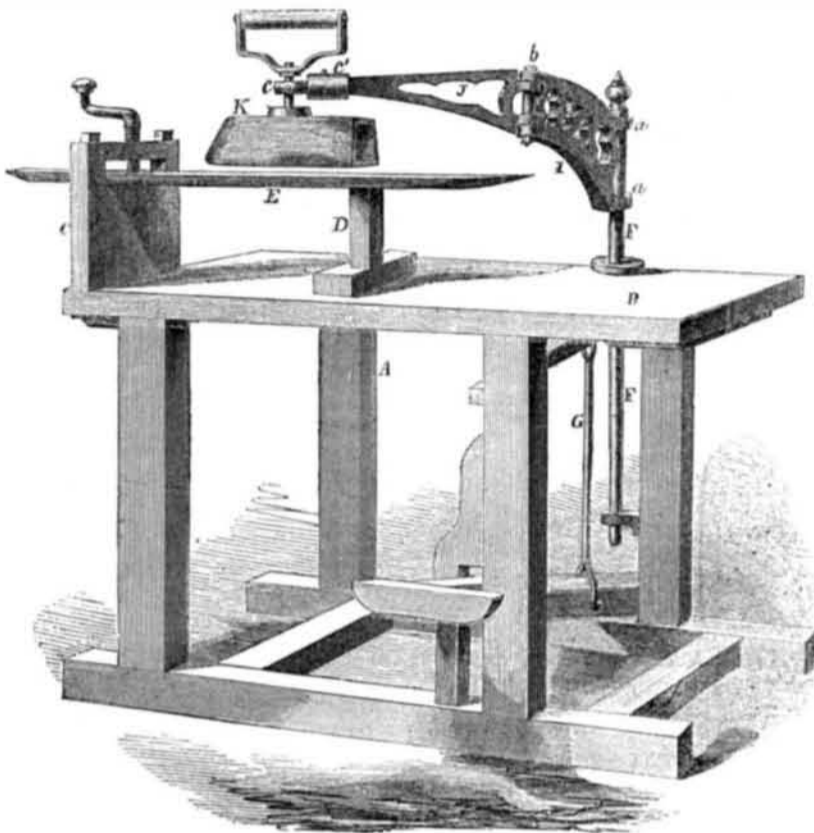
A patent was issued for this machine to Morris & Newton, on Dec. 4, 1855, and it has been improved recently by James Wilcox, of Philadelphia, to whom communications for further information should be addressed. See also his advertisement on another page.

Improved Clothes Ironer.

The device here illustrated is intended to serve as an improvement to aid in pressing clothing. The flat-iron or goose, K, may be in any of the usual forms, and the press-board, E, is constructed and arranged in the ordinary

manner. The invention consists in connecting the iron by the frames, J and I, to the upright rod, F, which latter is capable of traversing vertically through the table, B, and may be depressed by applying the foot to the treadle represented, so as to press the iron, K,

STORRS' CLOTHES IRONER.



to any extent desired. This allows of an easy motion in every direction horizontally, while by the aid of the link, G, forming a connection between the treadle and the rod, F, a degree of pressure for any kind of tailors' work is obtained without difficulty, and in a manner very easy for the operator.

To allow of disconnecting the iron and heating it, or supplying its place with another

the joint, C', where the swivel, C, is attached to the frame, J, is made capable of easy and instantaneous disconnection by a socket and tenon, or by some other suitable means.

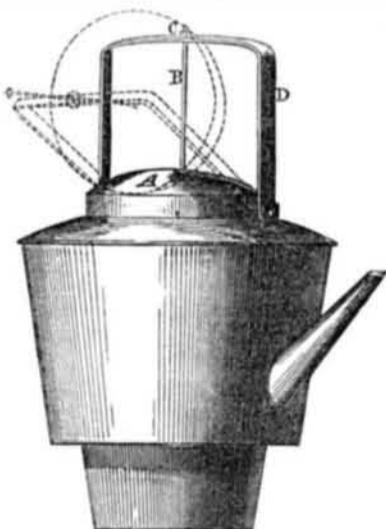
Measures have been taken to secure a patent for this very convenient device. Further information may be obtained by addressing the inventor, I. B. Storrs, Canton, St. Lawrence co., N. Y.

Patent Tea Kettle.

This figure illustrates a very useful improvement in tea kettles. The lid is connected with the handle or bail by a thin bar, in such a manner that it may be lifted off from the kettle without being touched by the hand.

A is the lid fitted with a flange in the neck of the kettle in the usual way. B is a small flat rod attached to the lid near its center; it passes up through the center of the bail, D, into a slot at C, and a pin is inserted through it above the handle.

From this plain description, it will be seen that the lid, A, when fitted within the neck of the kettle, will keep the handle, D, in a vertical position, and if the handle be moved to either side, the lid will be raised as shown



in dotted lines. The handle is not allowed to be in contact with the body of the kettle on the fire, consequently it never becomes unduly heated. It can therefore be always grasped by the hand, and the lid raised with facility, and without danger. The lid is not required to be handled at all; it is both raised from

and put on the kettle by the handle, and it is also prevented from falling off when the kettle is tipped to the one side for any purpose. This is a very useful domestic improvement, both as it regards safety and convenience.

It was patented on the 21st of April last. For more information address the patentee, James Greenhalgh, Senr., (Blackstone Post Office,) Waterford, Mass.

Railroad Celebration.

On the 5th and 6th of June, the ceremonies attending the opening of the Ohio and Mississippi Railroad will be duly celebrated at Cincinnati, Vincennes and St. Louis. This is a broad gauge road, and opens a direct communication between the above important cities. It will no doubt be an occasion of much interest, as it is expected that a large number of distinguished guests will participate in it. We shall endeavor to furnish such incidents in connection with it as may be likely to interest our readers.

A Great Dam.

A short distance above Fredericksburg, Va., a strong dam has been erected across the Rappahannock river, 572 feet between the abutments, and 18 feet high. The water is conveyed into the town by a canal one and three-fourths of a mile long, giving 47 feet fall. This power is intended for manufacturing purposes. The City Council have also passed an ordinance to exempt from taxation all manufacturing establishments for ten years after their erection.

The Frigate Niagara.

This new steam frigate left New York on the 24th of April, and arrived at Plymouth, Eng., on the 12th of May—eighteen days. This passage was longer than was expected but during one day she run 300 miles—an average speed of twelve and a half knots per hour, which is very good, but not extraordinary.

Another Search for Sir John Franklin.

A very strong screw steamer is now on the docks at Aberdeen, Scotland, fitting up to make a last effort in the search of the lost Arctic navigators, Sir John Franklin and his crew. The vessel is built on the diagonal principle, and is getting a doubling of African teak, between which and the outer planking there is a thick covering of felt. She measures 132 feet of extreme length, 25 feet of extreme breadth, with a depth of hold of 13 feet, and a draught of water of 11 feet. The screw is being fitted with lifting gear, and the engines are of a very powerful character. The work is so far advanced that she will be ready for sea by the beginning of July. She will have a crew of thirty men and officers—most of them volunteers. They will be chiefly from the north of Scotland, and well accustomed to the hardships of an Arctic voyage. The commander is Capt. McClintock, an old Arctic navigator, he having served under Capt. Ross and Austin.

This expedition appears to us to be foolhardy, but Lady Franklin has sold large estates which she had in Australia to fit out the expedition, and the commander is enthusiastic that he will be successful and bring home some satisfactory accounts of the lost vessels, *Erebus* and *Terror*, belonging to Franklin and his party.

The Vanderbilt.

The new steamer Vanderbilt made a very quick passage to England from this port, considering it was her first trip. She left New York on the 5th ult., and arrived at Cowes on the 15th, in the evening—the time being less than ten days. This is the fastest first voyage made by any new steamer across the Atlantic.



Inventors, and Manufacturers

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