

**Dangerous Pottery.**

Having had occasion to examine some common pieces of pottery which were suspected of having led to accidents of lead poisoning, I have been able to demonstrate that a great number of these objects are, despite assertions to the contrary, glazed with lead salt, and that their glazing contains a quantity of lead which is a menace to health, since I was able to detect in 100 grammes of milk, which was allowed to ferment or sour in one of these vessels, the large amount of 0.23 gramme of sulphate of lead.

It is also well known that M. Constantin has discovered a process more economical and entirely harmless, for glazing by means of the borosilicate of lime, and that chemist, who has been honored by the Academy, has generously given his discovery to the public.

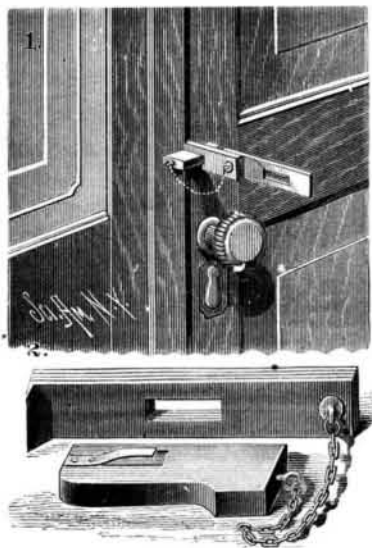
The glazing of fine earthenware, both French and English, has been greatly helped by the addition of boric acid and borate of lime, which permits a large reduction in the amount of carbonate of lead used, which formerly was considerable. These latter vessels give to fermented milk or soup but a small percentage of lead; but, it being granted that this metal is the most dangerous of the common metals, it is beyond doubt that if these vessels are incapable of producing as acute poisoning as those glazed with lead salt, they nevertheless can by constant use cause accidents which are so much the more alarming, as the elimination of this poison requires a long time, during which time also small doses can accumulate to dangerous proportions.

In my experiments I noticed that the vessels in which I had at first permitted the milk or soup to ferment brought this fermentation on much more rapidly when I repeated the experiment, even after they had been carefully cleaned. I then thought that perhaps the cracks and chinks which always occur in the glazing of earthenware which has been used for some time had something to do with it. I thought that these small crevices, in spite of repeated washing, retained a certain number of the germs, which started the fermentation of the new liquids I inclosed in the vessels.

It seems to result from my experiments that the cracks can screen the germs, and from analogy it is quite possible that such vessels, being used for the sick suffering the attacks of contagious diseases, can spread the disease of the patients whose food they contain. The report of M. De Mussy on the epidemics of 1880 mentions the fact that 23 men contracted typhoid fever at the hospital where they had been received for quite different complaints. I should not be surprised that the disease was conveyed by just such vessels, etc., under the conditions I have indicated above. It seems prudent therefore in hospitals not to use the earthenware, at least for patients with contagious diseases upon them. Glass and porcelain are the only entirely safe materials to use in the sick room. Metal itself presents unevenness, where the germs may settle and remain attached, although washed and cleaned with boiling water.—*E. Peyrusson in Cosmos Les Mondes.*

**DOOR SECURER.**

A strip of steel is provided at one end with a sharp edged prong, and on the opposite side of the other end is a series of flat strips, shown in Fig. 2, fastened by a pintle, which terminates in a ring on the side of the plate from which the prong projects. To the ring is fastened a chain or cord, at whose free end is a bolt of such size as to pass through the slots in the strips. The bolt is retained in place by a spring.



**LEAMING'S DOOR SECURER.**

By means of the strips the device can be made to fill the space between the free edge of the door and the jamb. The prong is placed against the jamb and the door is closed, thereby forcing the prong into the wood; passing the bolt through the slots secures the door.

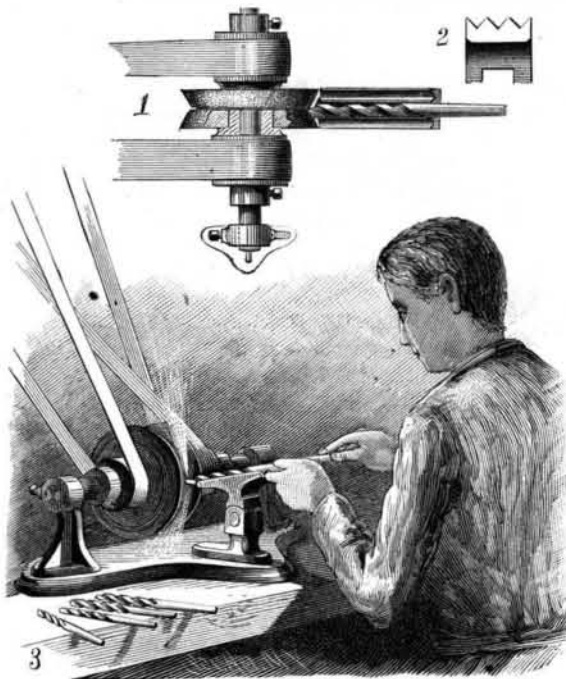
This invention has been patented by Mr. Christopher Leaming, and has been assigned to Mr. W. H. Carlson, of Newhall, California, who is the present owner.

**French Shoe Dressing.**

Vinegar, 2 pints; soft water, 1 pint; glue (fine), 4 ounces; logwood chips, 8 ounces; powdered indigo, 2 drachms; bichromate potass., 4 drachms; gum tragacanth, 4 drachms; glycerine, 4 ounces. Boil, strain, and bottle.

**EMERY WHEEL.**

The accompanying engraving represents an improved emery wheel for grinding twist drills and other tools, Fig. 1 being a plan view with part of the wheel shown in section, Fig. 2 a sectional elevation of the tool rest, and Fig. 3 showing the way the wheel is used. Two standards support the two ends of a shaft upon which revolve two pulleys, kept in place by collars and set screws, and having the inner ends of their hubs squared to fit into apertures in the centers of two emery wheels. The inner sides of the emery wheels are close together, and the faces are inclined inward at such an angle as will give the required inclination to the edge of the tool. The pulleys are driven in contrary directions. On the forward part of the bed plate is a standard to which is



**LANDERS' EMERY WHEEL.**

hinged a lug formed upon the lower side of the tool rest. Upon the upper side of the rest are formed grooves for receiving the tools to be ground, the central groove being intended for tools requiring a conical face, and the others being for tools having an inclined face. The tool to be ground is placed upon the rest, which is then turned upon the hinge to bring the forward part of the tool into proper position against the beveled faces of the emery wheels.

This invention has recently been patented by Mr. Francis Landers, of Stroudsburg, Pa.

**How a Union Soldier Made a Fiddle.**

It was at the "Brandy Station," Va., in the winter of 1863-64, says the Westfield (Mass.) *Times*, that George M. Colt, Company C, Second Vermont Volunteers, proposed to make the cheer-giving instrument; and with a hatchet, jack knife, file, and a piece of a junk bottle as his only tools, he cut a piece of maple from a stump that grew on the bank of the Rappahannock River, and set to work. The back and sides of the fiddle are made of one piece—a "regular dug out." The top is of hemlock taken from a box which brought some "goodies" from their friends in "Vermont." The bow is of maple. The keys were made from the horns of some Confederate cattle that fell into our hands and were devoured by our carnivorous soldiery, so that the poor brutes contributed to our mental as well as physical welfare. The hairs were pulled from the tail of the Colonel's horse, who was fond of music and never raised a foot in resistance. It is said he even signified his willingness to furnish enough of his hoofs for glue, but that was found elsewhere, and the instrument was completed, and in the hands of a modern "Paganini," who rose for the occasion, gave forth its soul-stirring strains. It conjured up "stag dances," serenaded headquarters, and was admired and cherished by the officers and men of the "Green Mountain Boys." The rest must be left to imagination, as far as its army record is concerned. Suffice it to say, it was "honorably discharged," and has been the hero of several occasions since the war, receiving the first premium at the Vermont State Fair. Rude as is its origin, its tone is remarkably sweet and expressive, especially in the rendering of "Old John Brown" and other airs that were offsprings of the war, which seem to revive in it the memory of the exciting scenes of its early existence. Its maker and owner still lives, though he received wounds after the production of his instrument that have nearly disabled him for active duty.

**The Deepest Well in the World.**

The McGuigan gas well, the light from which can be plainly seen from the top of Wheeling Hill, is the pioneer gas well of this vicinity. It led to all of the others now making such a turmoil in this valley. It was sunk for oil, not gas, and the great gaseous reservoir was tapped unawares. Just three miles nearer us the Buchanan well was sunk, and is now the deepest well in the world, having reached 4,300 feet, and is still going down. When a depth of about 3,000 feet was reached the tools broke and were left there, and for some time the well was deserted. Then a new concern took

hold of it, and is now vigorously drilling for the greasy fluid. The rope broke in March, and the cable, between 4,000 and 5,000 feet in length, and weighing several tons, parted seven hundred feet from the top, and all efforts to catch hold of it and draw it out with the great iron shaft, or drill, at the lower end failed.

The workmen were then discharged and the public supposed the well abandoned. Superintendent Crocker had no thought of quitting the work. Additional tools were procured, and at a recent date work was resumed. The well, which was dry, was filled with water to assist in floating the cable, a proper instrument was inserted, and the rope was caught and lifted out. It was supposed that after getting the rope taut a "sucker rod" would have to be sent down to loosen it from the drill at the bottom, as that was fast and could not be lifted with the weakened rope. Fortunately the rope cut itself off where it was attached to the shaft, and thus saved a great deal of trouble. The next thing to do was to remove the water from the well, and pumping was resorted to, when nearly a barrel of very fine crude oil was obtained. The well is cased to the depth of 1,200 or 1,400 feet, and is dry. When the water is removed, which will be done in a day or two, a "spear" will be sent down after the drill, and no difficulty is anticipated in bringing it to the surface. When this is accomplished, the work of deepening the well will be recommenced. Mr. Crocker states that the machinery he has on the ground will enable him to go 500 feet deeper, and by increasing its power he could go to the depth of 7,000 feet, but he hopes to reach oil in paying quantities at a small additional depth.—*Wheeling (W. Va.) Register.*

**Milk and Infectious Diseases.**

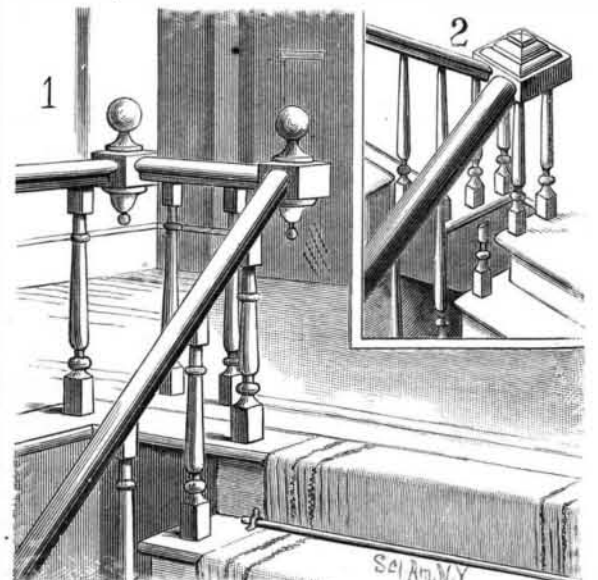
The sanitary inspector who investigated an outbreak of typhoid fever in a populous London district traced the epidemic to a dairy farm where the vessels used for milk were washed with water from a well that had been contaminated by the drainage from a cesspool. In the houses of those who worked on the farm there had been cases of the fever, and the theory was that the milk had been infected with disease germs. Wooden pails are used in England for milking, and naturally furnish a better lodgment for germs than the tin pails used in this country.

It is reported that a similar outbreak has occurred at Port Jervis, N. Y., and the milk from a certain farm is supposed to be the spreading cause, since 56 out of the 75 persons attacked were supplied with it. How it became infected is being studied by chemists and sanitarians.

Proper sanitary precautions at all times and extreme vigilance during the prevalence of disease on the farm would banish such outbreaks. Too much care cannot be exercised in the disposal of the excreta from persons suffering from typhoid fever. Under favorable conditions the germs are washed by water, which will carry them along with it; if allowed to dry, they permeate the air; in both cases endangering health. Burying deep in the earth is not a sure way, since they will not lose their power in years. Burning seems the most reliable method of destroying them.

**HAND RAIL FOR STAIRWAYS.**

The engraving represents a hand rail consisting of blocks or caps, provided at each bend of the rail, and against which the ends of the rail sections abut, thus doing away with



**SIMONSON'S HAND RAIL FOR STAIRWAYS.**

posts and curved rails. In open stairways composed of several successive sections the sections of the stair rail are arranged in such a manner that they run out at the same height, the risers of the stairway being arranged accordingly. Between the abutting ends of the rail sections are placed blocks, to which the ends of the rails are secured, the blocks being more or less ornamental. These blocks are supported entirely by the rails which they unite. No part of the hand rail need be twisted, its section is not changed, less material is required, no posts are needed, and the cost of the stairway is much reduced. The engraving shows the construction very clearly.

This invention has been patented by Mr. Theodore Simonson, whose address is Chicago, Ill.