

SILVERING IRON.

A new Austrian patented process for silvering articles of iron is thus described: The article is first plunged in a pickle of hot dilute hydrochloric acid, whence it is removed to a solution of mercury nitrate and connected with the zinc pole of a Bunsen element, gas carbon or platinum serving as the other pole. It is rapidly covered with a layer of quicksilver, when it is removed, washed, and transferred to a silver bath and silvered. By heating to 300° C. (572° F.) the mercury is driven off and the silver firmly fixed on the iron. To save silver the wire can be first covered with a layer of tin; 1 part of cream of tartar is dissolved in 8 parts of boiling water and one or more tin anodes are joined with the carbon pole of a Bunsen element. The zinc pole communicates with a well cleaned piece of copper, and the battery is made to act till enough tin has deposited on the copper, when this is taken out and the ironware put in its place. The wire thus covered with tin chemically pure and silvered is much cheaper than any other silvered metals.

TEN GOOD THINGS TO KNOW.

1. That salt will curdle new milk, hence in preparing milk porridge, gravies, etc., the salt should not be added until the dish is prepared.
2. That clear boiling water will remove teastains and many fruit stains. Pour the water through the stain and thus prevent its spreading over the fabric.
3. That ripe tomatoes will remove ink and other stains from white cloth, also from the hands.
4. That a tablespoonful of turpentine boiled with white clothes will aid in the whitening process.
5. That boiled starch is much improved by the addition of a little sperm salt or gum arabic dissolved.
6. That beeswax and salt will make rusty flat irons as clean and smooth as glass. Tie a lump of wax in a rag and keep it for that purpose. When the irons are hot, rub them first with the wax rag, then scour with a paper or cloth sprinkled with salt.
7. That blue ointment and kerosene mixed in equal proportions and applied to the bedsteads is an unfailing bed-bug remedy, as a coat of whitewash is for the walls of a log house.
8. That kerosene will soften boots or shoes that have been hardened by water, and render them as pliable as new.
9. That kerosene will make tin tea kettles as bright as new. Saturate a woolen rag and rub with it. It will also remove stains from varnished furniture.
10. That cool rain water and soda will remove machine grease from washable fabrics.—*The Sanitarian.*

THE VALUE OF COVERING STEAM PIPES.

In the *Michigan Engineer's Annual*, which is the report of the proceedings of the Michigan Engineering Society, of January, 1889, Prof. M. E. Cooley, M.E., of Ann Arbor, gives the following experience on the value of covering steam pipes:

"The benefits of covering steam pipes to prevent radiation, are strikingly illustrated by the following example:

The Thomson-Houston Electric Light Plant in Ann Arbor has about 60 feet of 7-inch pipe connecting the boilers with the engines, and two large steam drums above the boilers.

In March, 1887, the steam at the far end of this pipe was tested to determine the amount of entrained water, the pipes and drums at the time being uncovered. An average of nine experiments gave 31.01 per cent of moisture. In June of the same year, after the pipes were covered with magnesia sectional coverings, the quality of the steam was again tested, the average of five experiments giving 3.61 per cent moisture. The tests were made by the same men, from the same connections, and in the same manner. The pipes and steam drums in March were subjected to a draught, which, of course, aided the condensation. Enough water passed into the cylinders to retard the engines, producing a disagreeable noise. In June, the weather was warmer, and the pipes and steam drums were well protected; the quality of steam at the boilers was tested in June, and showed about three per cent of moisture.

Assuming that 100 I.H.P. were being developed at the time, and that each horse power required 80 pounds of steam per hour, we would need 8,000 pounds of steam. If the steam is assumed to have 25 per cent entrained water due to condensation in the pipes and connections, then 4,000 pounds of steam will need to be produced in the boilers, or 1,000 pounds more than necessary. To produce this steam will require about 125 pounds of good coal per hour or 1,000 pounds per day of eight hours. One-half ton per day at \$3 per ton for 300 days = \$450, which at six per cent pays the interest on \$7,500. The actual cost of the covering put on complete, probably did not exceed \$150."

PAINTING FLOORS.

A French writer observes that painting floors with any color containing white lead is injurious, as it renders the wood soft and less capable of wear. Other paints without white lead, such as ochre, raw umber, or sienna, are not injurious, and can be used with advantage. Varnish made of drying lead salts is also said to be destructive, and it is recommended that the borate of manganese should be used to dispose of the varnish to dry. A recipe for a good floor varnish is given as follows: Take two pounds of pure white borate of manganese, finely powdered, and add it little by little to a saucepan containing ten pounds of linseed oil, which is to be well stirred and raised to a temperature of 360° Fahr. Heat 100 pounds of linseed oil in a boiler till ebullition takes place, then add to it the first liquid, increase the heat and allow it to boil for twenty minutes. Then remove from the fire and filter the solution through cotton cloth. The varnish is then ready for use, two coats of which may be used, with a final coat of shellac, if a fine polish is required.

The *Medical Record* says: The alkaline bichloride treatment of yellow fever, as suggested by Dr. Sternberg, was carried out during the epidemic at Jacksonville, and Dr. Sollace Mitchell reports that it was very effective. The formula finally used was:

R. Sodii bicarbonat..... gr. x.—lx.
Hydrarg. bichlorid..... gr. ʒi.
Aque pura..... ʒ iv.

M. Sig.—Give ice cold drink every hour during the day, and every two hours during the night.

The bichloride has a powerful diuretic effect on the kidneys, lessening the albuminaria. The alkaline corrected the acidity of the intestinal contents.