

outside firms gave him credit because his stock was not seriously encumbered, and that his honest duty in the matter, when Mr. Jones pressed him for further security, was to have called a meeting of all his creditors, stated his case, and placed himself in their hands. The fact of his quietly securing his largest creditor, without consulting any of the others, and then trying to compromise with them at one quarter of what the goods cost, in our opinion, stamps Mr. Coates as a man unfit to be in business, and the quicker he is put out of it the better. The sooner a few examples are made of such merchants, the moral atmosphere of the jewelry business will breathe all the freer, and honest jewelers get a fairer chance to make a living. We will have more to say about this case as soon as developments justify us in exposing it more fully. Since the above was in type, we learn that Mr. Coates bought the business, he was utterly inexperienced, and has simply been made a tool of by Mr. Jones.

WORKSHOP NOTES.

MAGIC POLISH FOR BRASS.—Add to sulphuric acid half its bulk of bichromate of potash; dilute with an equal weight of water, and apply well to the brass; rinse it well immediately in water, wipe dry, and polish with pulverized rotten stone.

GOLD AND SILVER FROM TEXTILES.—Cut into pieces the gold or silver lace, tie it tightly, and boil in soap lye till the size appears diminished; take the cloth out of the liquid, and, after repeated rinsings of cold water, beat it with a mallet to drive out the alkali. Open the linen and the pure metal will be found in all its beauty.

TEMPERING BRASS.—Brass is rendered hard by hammering or rolling; therefore, when you make a thing of brass necessary to be tempered, you must prepare the material before shaping the article. Temper may be drawn from brass by heating it to a cherry red, and then simply plunging it into water, the same as though you were going to temper steel.

CLEANING DULL GOLD.—Dull gold may be cleaned in this way: Take 80 grams calcium hypochlorite, 80 sodium bicarbonate, and 20 sodium chloride, and treat the mixture with 3 litres of distilled water. It must be kept for use in well-corked bottles. Goods to be cleaned are put in a basin and covered with the mixture. After some time they are taken out, washed, rinsed in alcohol, and dried in sawdust. The articles then have the same appearance as if new.

MOULDING-SAND FOR BRASS OR IRON.—The various kinds of good moulding-sand employed for casting iron or brass have been found to be almost uniform in chemical composition, varying in grain or the aggregate form only. It contains between 93 and 96 parts siliceous, or grains of sand, and from 4 to 6 parts clay, and a little oxide of iron in each 100 parts. Moulding-sand which contains lime, magnesia, and other oxides of metals is unfit for use, particularly for the casting of iron or brass. Such sand is either too close, will not stand or retain its form, or will permit the metal to boil through its closeness.

TO CLEAN BRASS.—The method prescribed for cleaning brass, and in use in all the U.S. arsenals, is claimed to be the best in the world. The plan is to make a mixture of one part common nitric acid

and one half part sulphuric acid in a stone jar, having also ready a pail of fresh water and a box of sawdust. The articles to be treated are dipped into the acid, then thrown into the water, and finally rubbed with sawdust. This immediately changes them to a brilliant color. If the brass has become greasy, it is first dipped in a strong solution of potash and soda in warm water; this cuts the grease, so that the acid has free power to act.

COLORING COPPER.—To produce a dark brown color upon copper, take the white of an egg, beat it into froth, add a little boiled or rain water, and add to this mixture red oxide of iron color; rub them well together in a mortar, and sufficiently thick until the color covers, and may be applied. The copper article is to be pickled and simply washed; no sand must be used, else the color adheres badly. The latter is next applied with a brush until it covers the surface; it is then dried by fire, the article is generally rubbed with a soft rag and red oxide of iron powder, and finally hammered with a hammer with polished face.

OTHER NOTES.

Six hundred freight car loads (\$170,000,000) of silver dollars are piled up in the government treasury vaults, and the mints are still turning them out at the rate of \$2,000,000 per month.

WHAT is undoubtedly the smallest steam-engine in the world is the production of a resident of Arkona, in this Province. The dimensions of this miniature affair are as follows:—Diameter of cylinder, $\frac{1}{2}$ of 1-16 of an inch; stroke, 1-32nd of an inch; weight, $\frac{1}{2}$ of a grain; bore of cylinder, .3125 of a square inch; revolution, 1760 per minute; horse-power, .12490 part of a horse-power. This engine is so small that it can easily be covered with the case of a 22 calibre cartridge.

THE carriage in which the first Napoleon made his famous retreat from Moscow, and in which he as Emperor set out from Paris in the campaign which closed at Waterloo, is now preserved in London among the effects of the Duke of Wellington. It is a two-seated conveyance, and the top, or cover, is lined with thin sheet-iron. There is also a front curtain of iron, which can be lowered at will. The wheels are large and heavy, and the steps at either side silver-finished and of a curious design. The rear seat was the one used by Napoleon. Under the cushion of the seat he carried blankets and pillows.

AN aide-de-camp to the Duke of Wellington had, at the time preceding the escape of Napoleon from Elba, gone to Torquay for the benefit of his health, being in an advanced stage of consumption. On hearing that Bonaparte was again at Paris, the Captain sent for his medical attendant and asked him how long, with care, he might hope to live. "With care, several months," replied the doctor. "Several months only," said the poor invalid; "then I may as well die in battle as in my bed." He joined his regiment, fought gallantly at Waterloo, received a wound which took away all the diseased part of his lungs, and lived many years longer.

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