

We have already taken up more time and space than we had intended in touching upon such a subject, but we cannot conclude without saying that Mr. Patterson need be under no misapprehension that the Wholesale Jewelers of Canada are in anyway afraid of his competition. If he pays his duties his rivalry is not to be feared, and if he smuggles in his goods as before he will soon find himself in the clutches of the law, so that in either case the trade need not take the shakens over the prospects before them. Mr. Patterson cannot buy his goods any better, if as well as regular Canadian Wholesale Merchants in good credit, and therefore he has no advantage over them in any way. It was only when his goods were brought in by the underground railway that he was able to offer any wonderful inducements. This being the case we would advise the trade to stick to their regular legitimate Canadian Houses who do business upon old fashioned but honest principles, for by so doing they will save themselves the annoyance of Custom House investigations and perhaps the seizure of their goods.

### WORKSHOP NOTES.

To clean gilt metal surfaces, dissolve 30 grains borax in 1 kilog water, and gently rub the article with it; rinse with clean water, and dry with a soft linen rag.

LARGE springs, which are exposed to breaking, are best annealed by rubbing them with tallow and letting it burn off over a gentle fire. Springs thus exposed do not break so easily, and are very elastic.

**COLD SILVER WASH**—The articles intended to be silvered, of brass, copper or iron, are well cleansed. Iron must be dipped for a moment in a very diluted solution of sulphate of copper, and then rinsed, whereby it receives a thin copper coating to which the silvering adheres. Then prepare the following powder: 3 parts dry chloride of silver are pulverized together with 3 parts of cooking salt, 2 parts prepared chalk, and 6 parts potash. Take a small quantity of this powder, dampen it with a few drops of water, and take some of this paste on cork and rub the clean metallic surface with it, until silvered.

**BURNISHING A BRASS WHEEL**—When the wheel has been riveted upon the pinion, turn a groove around both, lay the wheel upon a flat cork and grind out the strokes and marks with a blue waterstone, take care not to touch either pinion or wheel. Finish by giving it a fine smoothing, again laying the wheel upon a cork, and grind with a three-cornered file and fine water stone and oil. Then clean it carefully with a soft brush and warm soap water, and polish with a well-cleaned burnisher. Before doing this, lay a few thicknesses of silk paper upon the cork and burnish it with short strokes and with easy pressure.

A MECHANIC who is always in a hurry is incapable of doing good, honest work. The excitable man, who is always "flying around," and whose tools are never at hand when wanted, does not amount to much, he may be busy all day, and apparently—in fact, does work hard, and seems to get over a great deal of ground, but what he does do is neither fine nor substan-

tial. The cool, calm workman, who allows himself neither to be driven nor persuaded to do more than a solid day's work, is the man who leaves his impress on each piece of work he turns out, and years hence it may be found as good and as solid as the day he completed it, but where will be the work that was thrown together at the same date by the man who was always "flying around?" Don't hurry your work too much.

SAYS a writer in a German periodical for goldsmiths The art of counterfeiting silver has at present arrived at such a state of perfection that the silversmith, when buying broken pieces, should take great pains to examine each carefully. Especially is this true with regard to the present German silver. The color of this is always somewhat yellowish grey, and never as clear and white as 13 part silver. Its appearance upon the touchstone is a little reddish, playing into a steel grey. The surest proof is the test upon the touchstone, with pure nitric acid. If of German silver, the stroke will evanesce within a few seconds, without leaving a trace, while silver appears like milk-white lime. pure acid must be used. One kind of this acid destroys the proof of the silver, and this might accidentally be deemed a counterfeit.

### SCIENCE AND OTHER NOTES.

ENGLISH steel castings are made by some firms from old files in connection with other material, and are said to be sound and very strong. It is said that the excess of carbon in the stock is found no disadvantage.

**THE LIFE OF A SOVEREIGN**—The average life of an English gold sovereign is about 18 years, that is, the coin loses three-quarters of a grain in weight in about that length of time. It then ceases to be legal tender. It is said that of the \$100,000,000 of British gold coinage, 40 per cent is worn down below the legal weight.

**NEW INVENTIONS IN WATCHMAKING**—A veteran watchmaker at Vouvry, Switzerland, claims to have invented a process by which watches will run for years without winding up. A sealed box containing two watches intrusted to the municipal authorities on the 19th of January, 1879, has just been opened and the watches found going.

**THE NUMBER OF THE METALS**—According to Professor Ordway, the number of metals now known is seventy-seven. Within five years fourteen new ones were recognized: but none of them "have such novelty of character as to require the remoulding of chemical hand books." The names of many of them simply serve "to burden our memories with symbols of things remote from daily life."

AN IRISHMAN once saw a clock which showed the Greenwich and Dublin time, and he saw that the Dublin time was twenty minutes behind that of Greenwich. He asked how that was, and it was explained to him that Dublin being to the west of the first meridian, must have its time later than that of Greenwich. "Then be the powers!" says Pat, "there is another injustice to old Ireland."

THE New York Court of Appeals has decided that a watch is not jewelry. It is not carried or used as a jewel or ornament, but as a timepiece or chronometer, an article of ordinary wear by most

travelers of every class, and of daily and hourly use by all. It is useful and necessary to a guest in his room as out of it, in the night as the day-time. It is carried for use and convenience, and not for ornament.

THE difference in time between New York and London is a curious feature in ocean telegraphy. The London banker is in the full swell of traffic when the New York agent is first thinking of "getting up." At noon the London markets are closed to this city, where they arrive at seven o'clock in the morning of the same day. The London agent of the New York press telegraphs the most important news issued in the London Times at six o'clock in the morning. It is received at one o'clock in the morning, just in time to be inserted in the New York journals, whose readers have the same matter that the Londoner digests with his breakfast.

A reporter of the Fort Wayne (Ind.) Gazette who is an amateur electrician, tried an experiment the other day in telephoning which was of a novel character. Proceeding to the top of the building, he disconnected a wire, and holding the severed ends one in each hand, allowed the current to pass directly through him, he completing the circuit. The parties at the telephones talked through him without the slightest difficulty, and the reporter experienced no inconvenience from the current. Conceding the success of the experiment, it is not easy to see what practical use can be made of it, as there are very few reporters who would be pleased with an assignment to the tops of buildings as telephone conductors, at least until the Gazette man has so far perfected his discovery that the reporter can understand what is going through him. Such a man would be invaluable for any newspaper, and might pick up a good deal of interesting news, not attainable in any other way.

IN NO TRADE has machinery more thoroughly displaced hand-labour than furniture-making. One would think that the limit of human ingenuity in this direction has been reached. But an English inventor has made another step possible by contriving a process for inlaying by machinery. A veneer of light-coloured wood is glued over dark, or vice versa. On top of this is placed a thin zinc plate, in which is perforated the design to be inlaid. The whole is now steamed and made to pass between two powerful cast-iron rollers. The zinc is by this means crushed into the veneer and the latter into the solid wood beneath. The zinc sheet peels away ready, and all that has to be done is to plane the surface and polish. The work done by this process is singularly perfect, the joints being finer than any that could possibly be made by hand. Henceforth inlaid work in whatever design will be within the reach of short purses.

FROM data received at the Mint Bureau, the director, in his annual report just issued, estimated the production of the United States during the last fiscal year to have been, of gold, \$86,600,000 and of silver, at its coining value, \$12,107,000,—total of \$98,600,000. The inquiries heretofore in regard to the annual consumption of gold and silver in the arts and manufactures have been continued, and with gratifying results. Manufactures of jewelry and other articles and materials of gold and silver reported a consumption of over \$10,000,000 in gold and nearly \$3,500,000