

WORKSHOP NOTES.

For a quick filter The Druggists' Circular recommends the employment of chamols skin, freed from thin pieces, cut to the desired size, washed in a weak solution of sal soda or any alkali to remove any grease, and thoroughly rinsed in cold water. By means of it tinctures, elixirs, syrups, and even mucillages are said to be filtered rapidly. If it is washed well after each time it is used this filter will last a long time.

REMOVAL OF OIL SPOTS FROM MARBLE.—Oil spots, if not too old, are easily removed from marble by repeatedly covering them with a cream of calcined magnesia and benzine, and brushing off the former after the dissipation of the latter. Another recipe reads as follows: Slaked lime is mixed with a strong soap solution, to the consistency of cream; this is placed upon the oil spot and repeated till the oil spot has disappeared. In place of this mixture another one may be used consisting of an ox gall, 125 grams of soap-makers waste lye, and 62.5 grams oil of turpentine, with pipe clay to the consistency of dough.

FUSIBLE CEMENT.—According to the *Journal Suisse d'horlogerie*, a good, easily fusible cement for fastening glass and porcelain upon metallic surfaces can be prepared as follows: Brass powder in form of a sediment, which has been prepared by laying zinc in a solution of sulphate of copper, is placed into an iron or enameled mortar, and mixed with concentrated sulphuric acid of 1.85 To this paste add 70 parts quick-silver to 20 to 30 or 36 parts brass, according to the hardness desired. When the mixture has been well united, it is carefully rinsed in warm water, in order to expel every trace of acid from it, after which it is left to cool. After a few hours the ready cement will be so hard that tin can be scratched with it. For use it must previously be warmed so that it can be worked in the mortar, whereby it becomes as soft as wax. In this state it is spread out upon the metallic surface, and the object to be fastened (glass or porcelain) is pressed upon it. When the cement has become sufficiently cold it retains with great intensity.

GOLD FILINGS.—The following process is very useful for working up filings and scraps of gold, gold-plated jewelry, etc. It does not, of course, refine the gold as in the usual process of quartation, but merely destroys the filings of copper, silver, German silver, brass and other metals acted upon by the acid. It will "eat" the solder or brass out of hard-soldered or plated goods, leaving the thin shell of gold. The iron filings are thoroughly separated from the mass by the repeated use of the magnet. All pieces of soft solder and lead should be picked out, and if there is much soft solder in any of the plated articles, it should be melted out, and the residue then placed in a shallow glass or china vessel and rather more than covered with good nitric acid. When the bubbles cease to agitate it, the acid should be poured into another cup, and if there is any base metal left, more acid should be added, and the mass stirred occasionally with a strip of glass. When no bubbles appear on adding new acid, that may also be poured off, and the filings washed two or three times, or until perfectly clean, letting them stand a minute or two to settle before pouring off the water. They are then dried and melted. The filings and scraps

treated in this manner seldom require more than one melting to make them easily worked and fit for jobbing. There is no skill required, only considerable care in the handling. The silver remaining in the acid may be precipitated in the ordinary manner with common salt. The chloride obtained may be melted into a button, and being pure silver, used as an alloy for other gold.

STRENGTHENING THE EYESIGHT.—To a query in the columns of *Deutsche Uhrm Ztg.*, in which the interrogator complains of weak eyesight, and also for advice from his fellow craftsmen, a number of answers are given, from which we select the following "A professor lately deceased, recommended me in 1867 to use bi-concave No. 30, feebly blue spectacles, and at the same time bathe forehead and temples with a mixture of Ol. balsam 8.0, spir. lavender 120.0. I have used this remedy diligently, and my eyes have become so strong thereby that I have dispensed with the use of spectacles since 1873, therefore over ten years. Repeated tests of my eyesight with the optometer have resulted in 'No spectacles necessary' " The next answer recommends spirits of fennel seed, mixed with distilled water, as an excellent lotion for the eyes. "I suffered with weakness of sight about thirty years ago, since which time I still employ it up to to-day with excellent results. There was a certain patent medicine which really possessed excellent curative powers, it was analyzed some time ago, and the result published in a certain paper as follows: Fill a good sized bottle three-fourths full with absolute alcohol, put into it enough of fennel seed to fairly fill the bottle, cork it, and let it stand for several days in moderate heat, until the alcohol has colored green; now decant the clear fluid and mix with a little ethereal oil of fennel from the drug store. For use, employ a second bottle, in which pour to one part of this essence five parts of distilled water or filtered river water, and shake the mixture well, by which it changes into a milky fluid. With it moisten a linen cloth and dab the parts around the eyes morning, noon and night. It does not hurt if a little enters the corners of the eye. For continued use it may be taken a little stronger; if it should bite in the commencement, dilute it a little more.

OTHER NOTES.

As a rule, the Old Testament revisers have performed their work well. But they were not particularly happy in rephrasing "vanity and vexation of spirit." They have made it "vanity and a striving after wind." This, it must be admitted, is somewhat colicky.

THE HYDRAULIC CLOCK IN THE GARDEN OF THE TUILLERIES.—The visitors of the garden of the Tuilleries lately pause before a timepiece of extraordinary dimensions, which has been erected upon a terrace at the water's edge. It consists of four columns, painted green, about 8½ yards high, while the dial, glittering in the tints of the "Grande Republique," surmounts the columns. The large hand, about 2 meters long, points out the date, while the small hand indicates the day of the week. Beside this the clock contains a smaller dial with hour and minute hands; the striking work tells the hour on a bronze bell. The action of this "chronometric turbine" is as follows: At the

out is located a metallic drum through which runs a streamlet of water. The drum contains two small turbine wheels which are actuated by the running of the stream. The axes of the turbines, prolonged upward, end in endless screws by which the wheel work, provided with a fly, is propelled. It is obvious that the reservoir from which this stream of water is obtained must always stand at the same level, otherwise the hydraulic pressure would change.

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