

by beating it to a cherry red, and then simply plunging it into water, the same as though you were going to temper steel.

**POTATO CELLULOID.**—According to a Vienna journal, a substance may be produced from potatoes possessing the properties of celluloid. For this purpose the peeled potatoes are boiled for 36 hours in a fluid consisting of 8 parts sulphuric acid and 100 parts water, then dried between blottin, paper and relieved of the superfluous water by pressing. Pipe bowls are at present made therefrom in France that can barely be distinguished from real meerschaum, and billiard balls are likewise made from it by strongly pressing.

**REPAIRING CYLINDER WATCHES.**—It frequently happens that the cylinder edges are worn off, and it does not pay to put in a new cylinder; the watch may, nevertheless, be put into keeping a good rate by altering the escapement. Look at the cylinder and see if there is room either above or below the old wears to shift the action of the wheel. If the wheel holes are of brass, make one a little deeper, and put a shallower one on the other side—this may perhaps be sufficient. This must be done according as you want your wheel up or down. If the holes are stone, shift your wheel on the pinion by a new collet, or turning away more of the old one, as the case may require. If you raise your wheel, see that it works free of plate and top of cylinder, and that the web of wheel clears the top of passage. This last fault may be altered by polishing the passage a little wider, if the rub is slight. If shifted downward, see to freedom at the bottom of the cylinder, etc.

**CHAIN RUNNING OFF FUZZE.** In the first place, you must look and ascertain the cause of the difficulty. If it results from the chain being too large, the only remedy is a new chain, if not too large and yet it runs off without any apparent cause, change it end for end, that will generally make it go all right. In cases where the channel in the fuzee has been damaged and is rough, you will be under the necessity of dressing it over with a file of the proper size and shape. Sometimes you will find the chain naturally inclined to work away from the body of the fuzee. The best way to remedy a difficulty of this kind is to file off a very little from the outer lower edge of the chain for its entire length; this, as you see, will incline to work it on, instead of off. Some workmen, when they have a bad case, and a commoo watch, change the standing of the fuzee so as to cause the winding end of its arbor to incline a little from the barrel. This, of course, cannot do otherwise than make the chain run to its place.

#### OTHER NOTES.

The silver ore of Nevada mines is so intimately associated with lead that nearly one-half of the miners who handle it become afflicted sooner or later with wrist-drop, palsy, or half paralysis.

Smoke will soon be at a premium. From 2,800,000 cubic feet of smoke given out by say 1,000 cords of wood, it is said 12,000 pounds of acetate of lime, 200 gallons of alcohol, and 25 pounds of tar may be obtained.

The Western Union Telegraph Company has estimated the durance of telegraph poles as follows:—Cedar, 16 years; chestnut, 13; juniper, 13; spruce, 7 years. Cedar, chestnut and spruce are used in the Northern States; juniper and cypress in the Southern States, and red wood in California. Poles cut in the summer will not last as long as those cut in the winter by five years.

The *Mechanical Engineer* tells a curious story of the effect produced on wrought iron forging by a human hair. The forging was in a powerful cold press for finishing, where it is subject to a pressure of 200 tons to the square inch. A hair taken from the head of a bystander was placed on the face of the forging and the full pressure applied. The result was that the hair was driven into the forging and imbedded in it, the hair itself remaining uninjured and being readily removed.

It has been discovered that the best disinfectant for sewer-gases is the washings from gas-works. This serves a double purpose, that of annulling the poisonous effect of the sewer-gas, and at the same time enabling persons having defective traps to detect it by the strong pungent odour arising therefrom, while sewer-gas alone, almost odourless, permeates the building, carrying sickness and death with it. The washings from water gas-works, at least, will not clog or obstruct even the smallest of sewers, while their presence, as above stated, might save valuable life.

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