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## USEFUL RECEIPTS.

### Oil of Roses.

It is principally the Christian inhabitants of the low countries of the Balkan, between Selimno and Carloya, as far as Philippopolis, who occupy themselves with the culture of the "Rosa centifolia provincialis." In good seasons about 400,000 meticals (one metical equals 1½ drachms) are obtained in this tract of country. 400 roses form about 1 oka, 8 okas furnish about 1 metical of oil; In bad seasons only from one hundred to two hundred thousand meticals of oil are obtained. The process followed, contrary to so many statements, is simply a distillation of the roses with water; this is performed in copper retorts, which contain about 30 okas of water and the same quantity of roses. The oil obtained varies in its properties; many places furnish an oil which solidifies more readily than others. The former is more sought after in commerce, but the more fluid oil has the finer odor. The oil is put into copper vessels, called "kunkunns," which contain 100-1000 meticals; these, when filled, are soldered up. The rose-water, which is obtained at the same time, serves as a cosmetic, &c.

### Detection of Cotton in Unbleached Linen.

A piece of the stuff to be examined is well washed with boiling water and dried, then laid in a mixture of 2 parts of dried nitrate of potash and 3 parts of ordinary sulphuric acid, and left in intimate contact with it for 8 or 10 minutes according to the strength of the fabric. After a complete washing and drying, the piece of stuff which has been changed by the nitric acid is decocted with ether, to which some alcohol is added; the more consistent the colloid thus obtained, the more cotton was there in the linen. If no cotton be in it, the ethereal decoction is scarcely thickened. If it is wished to determine the quantity of cotton, it is only necessary to weigh the linen after it has been boiled with water and dried, then to proceed as above, separate the colloid obtained from the residue (which is unchanged linen), wash this well with some ether and alcohol, dry and weigh it; the loss of weight gives the quantity of cotton with tolerable accuracy.

### Cheap Cough Mixture.

Take three cents worth of liquorice, and three cents worth of gum arabic, put them into a quart of warm water, simmer them till thoroughly dissolved, then add three cents worth of paragoric and a little quantity of antimonial wine. Let it cool, and sip whenever the cough is troublesome. It is pleasant, cheap, and good, and will remove a common cough from recent cold. Its cost is fifteen cents.

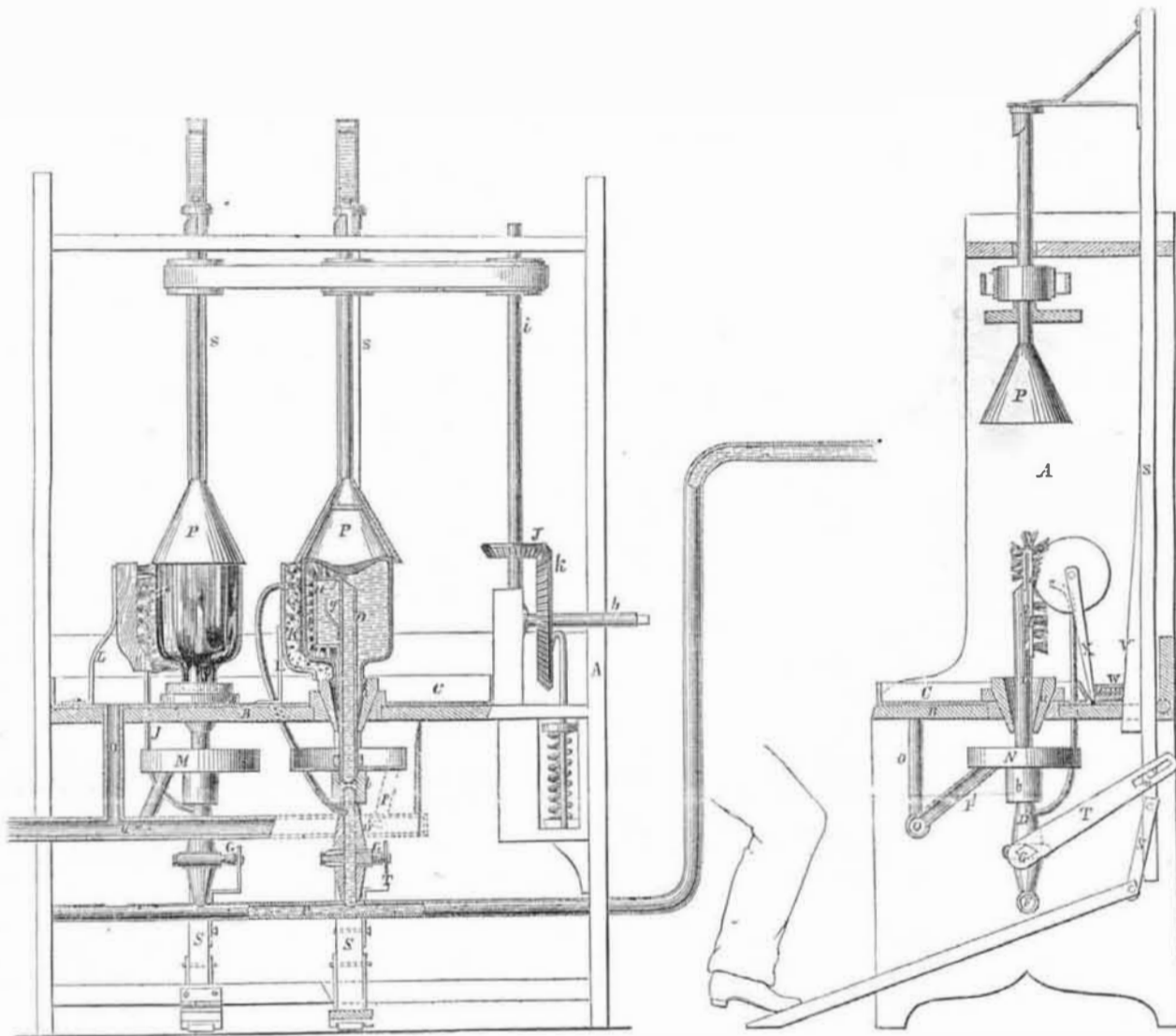
### Gutta Percha Water Pipes.

Gutta percha pipes have been tried in Quebec by the Water Company with signal success. They bore a pressure of 105 lbs., to the square inch, and could apparently have sustained double that pressure. The brass coupling twice gave way, but not the pipes.

## MACHINE FOR WASHING BOTTLES.

Figure 1.

Figure 2.



The annexed engravings are views of an improved machine for cleaning bottles—inside and out—invented by A. H. Rauch, of Bethlehem, North Hampton, Co., Pa., who has taken measures to secure a patent.

Figure 1 is a front view partly in section, and figure 2 is a side view showing how the bottle holder is released. The same letters refer to like parts.

A is a stout frame made to admit as many or few stands for several bottles as may be desired; B is the table on which are placed the sockets, *a*, to receive the heads of the bottles; C is the rim of the table; D is a tube, which also answers for a fixed spindle, and to it is attached an expanding brush, H. This brush is made like a narrow rectangular frame, having flexible jointed sides, *f* *e*, which allow it to be folded close together as in figure 2, but when the neck of a bottle is put over the brush as shown in figure 1, the spring, *g*, expands the brush to act on the inside of the bottle as shown in the section of said figure. Each bottle is held in its place by a hollow cone, P, which is raised and lowered by the stirrup lever, S, with a fulcrum at G, as shown in figure 2. When the cones, P, clasp the bottoms of the bottles, they (the bottles) are made to rotate on their necks in sockets, *a*, by a band from the spindle, *c*, passing around pulleys on the upper ends of the spindles of the cones, P. The spindle, *i*, derives its motion from the main shaft, *h*, by the gearing, *k* J. The rotary motion given to the bottles makes the expanding brushes, H, act on the whole interior of the bottles. A pipe, F, is shown in figure 1, conveying water from a greater height than the top of the bottles: the water from the said

pipe passes up the tube spindles, D D, into the bottles, throwing a jet on the bottom, (now the roof) of each bottle, and over the sides which, along with the brush, soon cleanses the interior, however dirty each bottle may be. The dirty water passes down through the neck of each bottle into a basin, N, through a pipe, P, and is discharged at the one side of the frame by pipe, Q. This is the way the interior of the bottle is cleansed.

The outside of each bottle is also washed at the same time; K is a brush or piece of sponge secured on a spring arm, L, to press against the sides of the bottle; J is a tube which carries a small jet of water from the tube, D, and plays on brush, K, so that when the bottles are revolved, the inside and outside is washed at one and the same time.—The unclean water from the outside is carried off from the table, B, by a pipe, O, which conveys it through pipe, Q, to the side of the frame. Thus we have described how the bottles are cleansed. To take out the washed bottles, and put in others to be cleansed, the holding and rotating cones, P, are raised up as shown in figure 2, when the clean bottles are pulled off their brushes and tube fixed spindles, and other bottles put on. The tube spindles, D D, are made with lower sections, D' D', so that the sections, D, can be elevated or lowered, to raise or lower the expanding brushes, H H, to adapt them to bottles of different heights. The link, nut, *b*, adjusts the said sections of tubes. G, is a cock in the short section pipe, D', for letting on and shutting off the supply of water from the main pipe, F.

In figure 1 the machine is shown at work washing bottles, the jet of water passing into the interior of each bottle, and the driving

spindle of each cone, P, whirling round and carrying the bottle with it at a great velocity.

To fold the expanding brush, H, to have it ready to pass into a bottle neck at once, and simultaneously with raising cone, P, the rod, S, is of a tapering shape, as seen in figure 2, so that the treddle makes the wedge part, V, press against the coiled spring, W, and act upon the pendulous folder, X, causing its weighted end to fall against the expanding frame of the brush, H, and fold it as shown in figure 2. The brush is retained in this position, and the neck of the bottle is introduced over the upper end of said brush. The cock, G, to let in the water into the bottle and shut it off, is operated by the treddle simultaneously with elevating and lowering the cone, P, as shown by the minor lever, T, attached to the nut, G, at one end, and having a slot at the other end working on pin, *n*, of rod, S. There is also an arrangement at the side of the frame for pulling broken pieces of cork out of bottles previous to their being put in their sockets.

These arrangements and devices are adapted for cleansing bottles of different sizes in height and diameter of necks. The brush, H, may be made of other materials besides bristles, but we like them best.

This plan of washing the bottles with their necks downwards, which allows of the unclean water flowing away at once, is the correct principle for cleaning bottles by machinery or hand either.

The devices and the manner in which they are arranged in this machine exhibits much ingenuity and practical acquaintance with the business. More information may be obtained by letter addressed to the inventor.