

STEARINE.—In all cases, strong, pure alcohol.

3. **STEARINE.**—In an ester, $\text{C}_{18}\text{H}_{37}\text{O}_2$, and in a glyceride, $\text{C}_{54}\text{H}_{109}\text{O}_6$, making

MATTER ADHERING MECHANICALLY.—Beating, brushing, currents of water either on the upper or under side.

LIME AND ALKALIES.—White goods, simple washing. Colored cottons, woolens, and silks are moistened, and very dilute citric acid is applied with the finger end.

ALIZARINE INKS.—White goods, tartaric acid, the more concentrated the older are the spots. On colored cottons and woolsens, and on silks. dilute tartaric acid is applied, cautiously.

OIL COLORS, VARNISH, AND RESINS.—On white or colored linens, cottons, or woollens, use rectified oil of turpentine, alcohol lye, and their soap. On silk, use benzine, ether, and mild soap, very cautiously.

VEGETABLE COLORS, FRUIT, RED WINE, AND RED INK.—
On white goods, sulphur fumes or chlorine water. Colored cot-
tons and woolens, wash with lukewarm soap lye or ammonia.
Silk the same, but more cautiously.

IRON SPOTS AND BLACK INK.—White goods, hot oxalic acid, dilute muriatic acid, with little fragments of tin. On fast dyed cottons and woolens, citric acid is cautiously and repeatedly applied. Silks, impossible.

BLOOD AND ALBUMINOID MATIERS.—Steeping in lukewarm water. If pepsine, or the juice of *Carica papaya*, can be procured, the spots are first softened with lukewarm water, and then either of these substances is applied.

GREASE.—White goods, wash with soap or alkaline lyes. Colored cottons, wash with lukewarm soap lyes. Colored woollens the same, or ammonia. Silks, absorb with French chalk or fuller's earth, and dissolve away with benzine or ether.

SCORCHING.—White goods, rub well with linen rags dipped in chlorine water. Colored cottons, re-dye if possible, or in woollens raise a fresh surface. Silks, no remedy.—*Muster Zeitung für Faerberer, Druckerei, etc.*—*Chemical Review.*

TANNING FROM CHESTNUTS, GREEN WALNUTS, ETC., OR LEATHER.—White goods, hot chlorine water, and concentrated tartaric acid. Colored cottons, woollens, and silks, apply dilute chlorine water cautiously to the spot, washing it away and reapplying it several times.

TAR, CART WHEEL GREASE, MIXTURES OF FAT, RESIN, CARBON, AND ACETIC ACID.—On white goods, soap and oil of turpentine, alternating with streams of water. Coloured cottons and woollens, rub in with lard, let lie, soap, let lie again, and treat alternately with oil of turpentine and water. Silks the same, more carefully, using benzine instead of oil of turpentine.

ACIDS, VINEGAR, SOUR WINE, MUST, SOUR FRUITS.—White goods, simple washing, followed up by chlorine water if a fruit color accompanies the acid. Colored cottons, woolens, and silks are very carefully moistened with dilute ammonia, with the finger end. [In case of delicate colors, it will be found preferable to make some prepared chalk into a thin paste, with water, and apply it to the spots.]

CURING DISEASE BY FASTING.—It appears that Dr. Tanner is not the first person who has practiced upon the idea of curing disease by fasting. The North Adams, Mass., *Transcript* gives the following: "Apropos to the experiment of Dr. Tanner who, in New York, attempted to live 40 days without food of any kind, the experience of Mr. John F. Arnold, of this town, may be interesting. Mr. Arnold, as is generally known, is a radical upon the subject of health and medicine, and advocates theories which, to the majority of the people, appear dangerous and unwise. His story is in substance as follows: In 1839 he was very ill, and his physicians gave him little hope of permanent recovery. This fact led him to study medicine and the care of himself. About that time Dr. Graham, the well-known founder of the Grahamite system, came here to lecture, and Mr. Arnold attended the lectures and became a thorough convert. He afterwards studied books supporting Dr. Graham's views, and from that day to this he has been a consistent believer in the doctor's theory. In 1847, Mr. Arnold studied the books of Dr. Jennings, of Oberlin College, and embraced his theory that nature was not an enemy of the human system, but was simply nature's method of repair, and was right under the circum-

stances. "The first opportunity to put his theory to practical test was in 1865, when, after a season of hard work, and being thoroughly exhausted, he was prostrated with bilious fever. Dr. Hawkes was summoned, and said that escape from the usual 21 days' sickness was impossible. The doctor called regularly and left his medicines, but Mr. Arnold did not take a drop of them, and allowed no nourishment to pass his lips, except pure water, for 24 days. For over three weeks he existed without a particle of food, and then he began to eat and regain his strength rapidly, increasing 15 lbs. in 18 days. Not until he was entirely cured did he reveal his course to the doctor. "Again, in 1872, after the fright and exhaustion caused by the burning of the Fifth Avenue hotel in New York, where he was stopping at the time, Mr. Arnold was again prostrated with bilious fever. This time he called Dr. Lawrence, and told him that he intended to fast again during the three weeks of the illness, and the doctor consented to watch the progress of the case. The result was the same as before, Mr. Arnold coming out of the fever stronger than ever, having taken nothing into his system for 24 days except water. Mr. Arnold's theory is that nature, if left to herself, if the system be not broken down by previous excesses, will 'repair the machine' better than if hindered by drugs and medicines and other unnatural things." It may be remarked in this connection that, while Dr. Tanner commenced his experiment in perfect health, Mr. Arnold was, in both instances, exhausted to begin with; but, in his case, the time of fasting was only about one-half that which Dr. Tanner endured.

THE WILLOW AS A PREVENTIVE OF MALARIA.—Mr. Von Lennepe, the Swedish Consul, writes from "Mahazik, near Smyrna," to the London *Times*, as follows: "Before the eucalyptus was ever heard of in Asia Minor, I had seen the bark of the willow used as a febrifuge. I had remarked the easy and inexpensive reproduction of this tree, its quick growth in damp places, its excellent qualities for fuel and for agricultural implements, and its great advantages for strengthening the banks of capricious streams, and had thence taken every opportunity after the winter floods to stick willow cuttings along the banks of streams and in other damp places in my property; also to scatter plane-tree seeds in marshy spots. The result has been that, whereas 20 years ago the full-grown trees in this neighborhood might have been counted, a luxurious growth of willows and plane-trees marks my place, fuel is abundant, fever is steadily decreasing, the meandering propensities of the streams are checked, my neighbors have come to me for agricultural implements, and I have not had to go for timber for rough purposes." It may be interesting to observe in this connection that the comparatively new but well-known antiseptic preparation known as solicene is derived from the bark of a certain species of the willow. It is of a pure, bitter taste and highly febrifuge in quality. It is largely used in various solutions, in surgical operations, and is the most effectual preventive of putrefaction in the system known.

ARTIFICIAL BLACK WALNUT.—Our correspondent may find the following recipe to answer his purpose. It is said to be much used in Europe for that purpose. By this procedure, it is claimed, ordinary white woods have imparted to them the appearance of the most beautiful specimens of walnut, and are adapted to the finest cabinet-work. With this last statement we are disposed to disagree, since we hold that no imitation can ever perfectly substitute the real thing, and should not therefore be used for the finest class of work. The procedure is as follows : The wood, first thoroughly dried and warmed, is coated once or twice with a strong aqueous solution of extract of walnut peel. When half dried, the wood thus treated is brushed with a solution compound of $\frac{1}{2}$ part (by weight) of bichromate of potassa in 5 parts of boiling water ; and after drying thoroughly, is rubbed and polished. By this treatment, the color is said to be fixed in the wood to the depth of one 12th to one-6th of an inch, and in the majority of cases the walnut appearance is declared to be very perfectly imitated.

CEMENT FOR JOINTS.—When rubber plates and rings are used for making connections between steam and other pipes leakage of joints may be prevented by using a cement prepared by dissolving shellac in ammonia. The pulverized gum-shellac is soaked in ten times its weight of strong ammonia, when a slimy mass is obtained, which in three or four weeks will become liquid without the use of hot water. This fastens well both to rubber and to metal or wood, and becomes, by volatilization of the ammonia, hard and impermeable to either gases or fluids.