Science and Art.

The Violet.

"The forward violet thus did I chide:
Sweet thief, whence didst thou steal thy sweet that smells,
If not from my love's breath?"

The perfume exhaled by the *Viola odorata* is so universally admired that to speak in its favor would be more than superfluous. The demand for the essence of violets is far greater than the manufacturing perfumers are at present able to supply, and, as a consequence, it is difficult to procure the genuine article through the ordinary sources of trade.

Real violet is, however, sold by many of the retail perfumers of the West End of London, but at a price that prohibits its use except by the affluent or extravagant votaries of fashion. The true smelling principle or essential oil of violets has never yet been isolated; a very concentrated solution in alcohol impresses the olfactory nerve with the idea of the presence of hydrocyanic acid, which is, probably, a true impression. Burnett says that the plant *Viola tricolor* (heart's ease) when bruised, smells like peach kernels, and doubtless, therefore, contains prussic acid.

The flowers of the heart's ease are scentless, but the plant evidently contains a principle which, in other species of the viola is eliminated as the "sweet that smells" so beautifully alluded to by Shakspeare.

For commercial purposes, the odor of violet is procured in combination with spirit, oil, or suet, by maceration, or by *enfleurage*, the former method being principally adopted, followed by, when "essence" is required, digesting the pomade in rectified alcohol.

Good essence of violets, thus made, is of a beautiful green color, and, though of a rich deep tint, has no power to stain a white fabric, and its odor is perfectly natural.

The essence of violet, as prepared for retail sale, is thus made, according to the quality and strength of the pomade: Take from six to eight pounds of the violet pomade, chop it fine, and place it into one gallon of perfectly clean (free from fusel oil) rectified spirit, allow it to digest for three weeks or a month, then strain off the essence, and to every pint thereof add three ounces of esprit de rose; it is then fit for sale.

We have often seen displayed for sale in druggists' shops plain tincture of orris root, done up in nice bottles, with labels upon them inferring the contents to be "extract of violet;" customers once "taken in" thus, are not likely to be so a second time.

A good imitation essence of violets is best prepared thus:—

Spirituous extract of cassie pomade	1 pint.
Esprit de rose, from pomade .	1-2 pint.
Tincture of orris	1-2 pint.
Spirituous extract of tuberose pomade	1-2 pint.
Otto of almonds . . .	5 drops.

SEPTIMUS PIESSE.

A Curiosity of a Book.

The Washington *Star* states that The Smithsonian Institute has succeeded in obtaining for its library a rare and valuable book, printed in Low Dutch, and published in 1772. It contains specimens of paper from almost every species of fibrous material, and even animal substances, and has accounts of the experiments made in their manufacture. The following materials were employed, and specimens are given in the book:—Wasps' nests, saw dust, shavings, moss, sea weed, hop and grapevines, hemp, mulberries, aloe leaves, nettles, seeds, ground moss, straw, cabbage stems, turf of peat, silk plant, fir wood, Indian corn, sugar cane, leaves of horse chestnuts, tulips, linden, &c.

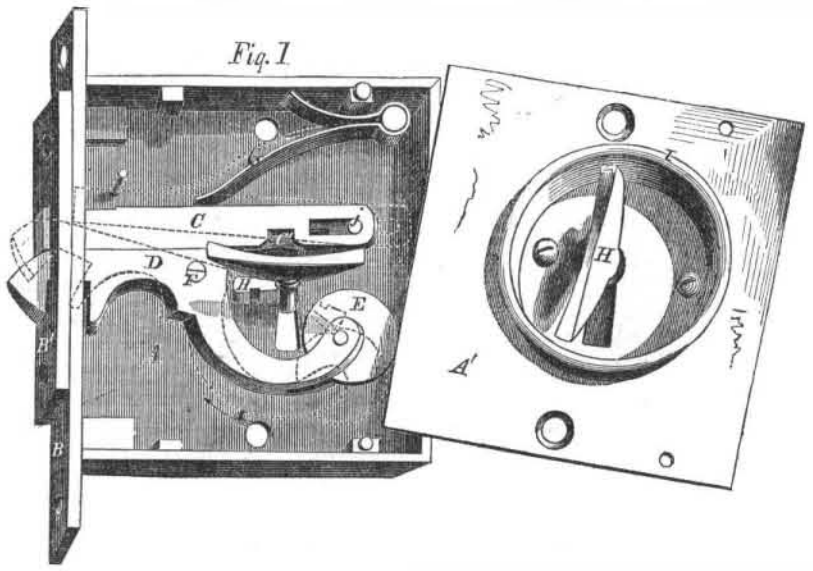
The author of the book was Jacob Christian Schaffer, an ancestor of Professor Schaffer, one of the chief examiners of the U. S. Patent Office.

Almost the Discoverer of Neptune.

During a lecture upon Astronomy delivered by Prof. Mitchell, of Cincinnati, before the Smithsonian Institute, he stated that a year or two before the discovery of the planet Neptune, he was giving his friends an opportunity to view the heavenly bodies through the telescope at the Observatory at Cincinnati. Suddenly a new object was brought within his range of observation, of a brilliant nebulous character, which he had never seen. Desirous of finding whether it was recorded in the catalogue of similar bodies, he left the instrument for a few moments, and desired his assistant to keep the telescope bearing upon it till he returned. He, however, lost the object. Prof. M. groped around for hours to discover it again, but to no purpose. After Leverier demonstrated by his profound calculations the existence of another planet, and designated the exact spot in the heavens where it could be found, Prof. M. turned his instrument to the spot, and there was his old friend, beaming and brilliant as when first he accidentally brought it within his telescopic vision. Thus narrowly did the Professor escape the fame of being the discoverer of a part of our planetary system.

IMPROVEMENT IN LATCHING LOCKS.

Fig. 1



The acompanying engravings are illustrative of the improved Latching Lock patented in this country by Mr. Edmund Field, of Greenwich, Ct., July 3rd, 1855, and in Europe April, 1855.

In common door locks, the latch and locking bolt act independently, the latch serving for convenience by day, the bolt and key for security by night.

The principal feature of novelty in the present invention consists in an ingenious method of combining the latch and lock together, so that by the act of turning the key, the latch is made to unite its strength with the bolt, and thus increase the security of the lock; when the key is turned in the reverse direction, the latch assumes its ordinary uses. These, and other important advantages shortly to be named, are obtained without any increase over the price of ordinary locks, and without complication of parts.

Fig. 2

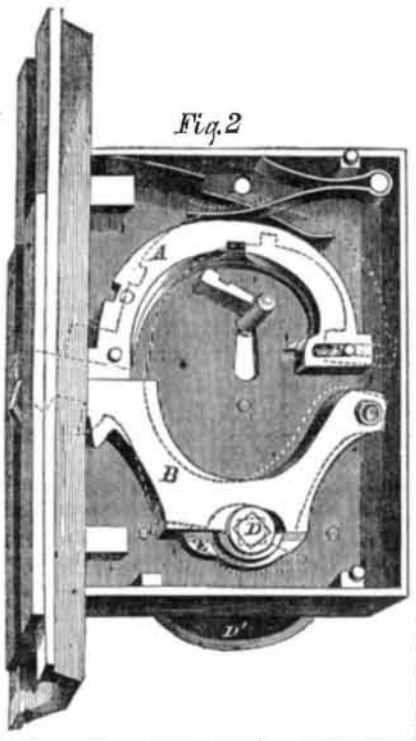


Fig. 1 shows a mortise lock, intended for use on the sliding doors of freight cars, ship doors churches, banks, arsenals, windows, and wherever a strong, safe, and convenient fastening is wanted. A is the shell of the lock, which is made in the usual manner; A' is portion of the shell removed so as to exhibit the interior parts; B face plate by which the lock is fastened into the mortise; B' catch plate to be fastened to the jamb; C locking bolt which slides in and out in the usual manner; C' tumbler behind the locking bolt; D, latch pivoted at F, and furnished at its inner end with a friction wheel, E. When the bolt, C, is locked, as shown in fig. 1, the latch, D, is fastened down, and holds firmly in catch-piece, B'. Turn key H in direction of the arrow, and bolt C withdraws, and frees the latch. The latch is operated by the key, which presses upon friction wheel, E, and lifts the latch, as shown by the dotted lines, F, the bolt, C, also lifts with the catch, the stop pin, J, serving for its pivot. There is but one spring, G, in this lock; it serves the double purpose of pressing down the bolt, latch, and the tumbler. I is a cup attached to the exterior of the lock, and intended as a shield for the key. After the lock has been placed in its mortise, a hole is bored for the cup, which is let in so as to be flush with the side of the door. The key, H, it will be observed is quite small, and does not project beyond the edge of the cup, so that the door, with the key remaining in the lock, may be shoved clear up into its recesses. One of the features of the improvement consists in operating the latch by means of the key, thus dispensing with a knob; for this purpose the lock is so arranged that the key cannot drop or be taken out except when the locking bolt is thrust forward, and the latch fastened down; in other words the lock must be locked before the key can be removed.

Large heavy doors should always be made either to slide or roll, for they last longer, remain in good order, and afford better security than hinged doors; the latter will sag, sooner or later, and become inconvenient. For sliding and rolling doors of every kind, the lock we have described seems admirably adapted. The outer end of the latch is made with double shoulders, which affords additional strength.

Fig. 2 shows another form of lock, in which the same general principles are involved as those contained in the preceding device. The chief difference is that the bolt, A, and latch, B, are operated independently, although both combine, in the act of locking, to increase the security. The latch turns on the pivot, C, and is operated by the knob, D', the shaft of which D, and lifting piece, E, are arranged in the common manner. When the bolt is thrown back, the latch becomes freed, and may be lifted by turning the knob, its position when thus raised being indicated by the dotted lines; it will be seen that the lock bolt also lifts with the catch, the pin, F, serving as its pivot. Two springs are used in this lock, one of which presses on the tumbler behind the bolt, the other acting on the bolt, and the bolt pressing down the forward end of the latch. Locks of this description are intended for parlor doors.

We have described the above locks as being specially adapted to the securing of sliding doors, but they may be also applied with equal facility to hinged doors of every description. The invention appears to be one of a very excellent character, calculated to supply a very general want. For further information address the inventor, Portchester Post Office, N. Y.

Coloring of Stone.

Building stone may be tinted in different shades by impregnating it with metallic salts, and then adding a precipitating re-agent. By means of salts of lead and copper, with sulphuretted hydrogen, grays, browns, and blacks may be produced. Copper and ferrocyanide of potassium give a red tint. If porous limestones are boiled in solutions of metallic sulphates, carbonic acid is evolved, and the metallic oxyd, combined with sulphate of lime, is deeply fixed in stone. In this manner, sulphate of iron gives rusty tints, sulphate of copper a fine green, sulphate of manganese a brown, and, mixed sulphates of iron and copper, a chocolate. The double sulphates thus formed increase the hardness of stone.—[London Artizan.

Camphor Ointment for Chapped Hands.

Scrape into an earthern vessel 1 1-2 ounces of spermaceti and half an ounce of white wax; and six drachms of powdered camphor, and four table spoonsful of the best olive oil. Let it stand near the fire until it dissolves, stirring it well when liquid. Before retiring to sleep, put the ointment on the hands; also after washing them.

This is stated to be a very soothing ointment. Palm oil is equally as good, however.

Sugar from Cotton Wood Trees.

In the Utah territory there exudes from the cotton-wood trees a sweet white syrup, which coagulates into thin cakes on their trunks and branches. These are taken and washed in cold water, to free them from dirt, and are then boiled down in kettles, like cane or maple juice, and make very excellent sugar.

The Rays of the Sun and Caloric.

MESSRS. EDITORS—If the rays of the sun lose none of their caloric in passing through free space, any planet, however distant from the sun, possessing an atmosphere of equal density with ours, would be equally as warm.

WM. PARTRIDGE.