

ligenous acid is always formed in the burning of wood, as the pungency of wood-smoke, sufficiently shows. When wood is burned in open fire-places, the acid evolved has no noticeable effect on the mortar of the chimneys. Why not? Simply because it is largely diluted and rendered harmless by mixture with air. But where wood is burned in a stove with a checked draught, and the smoke-pipe enters a chimney with no other opening than at the top, the acid vapor collects and hangs in the chimney till it is condensed on the walls and destroys the mortar. The remedy is simply to make an opening into the chimney-flue somewhere below the entrance of the smoke-pipe—the lower the better, even if in a lower room. The air drawn through this opening will serve the double purpose of ventilating the room and of diluting and carrying off the acid vapor from the stove. If the chimney-draught is weak, it is well to have the opening into the flue controlled, so that it can be closed when there is need of draught to start the fire; but it should be opened again as soon as the fire will bear to be checked. Many years ago our good mason assured us that he had never known a flue injured where there was such an opening for the passage of air; and our experience since tends to confirm the fact.—*Waltham, (Mass.) Free Press.*

FARMERS' CLUB.

The Farmers' Club held its regular weekly meeting at its Room at the Cooper Institute, on Tuesday afternoon, March 7th, the President, N. C. Ely, Esq., in the chair.

EFFECT OF FREEZING FRUITS AND ROOTS.

Mr. Bergen remarked that turnips might be frozen and thawed without injury, but if the operation were repeated a number of times the root would be destroyed. The same is the case with the onion. But the potato is destroyed by a single freezing.

Mr. Carpenter disputed the statement in regard to the potato. If it is thawed gradually in the ground the freezing will not injure its germinating power.

Mr. Bergen said that the same statement was made in the Club a few years ago, and after that he found two fields of potatoes belonging to lazy farmers who did not finish their harvest before frost set in, and in both cases the tubers were utterly destroyed.

Mr. Carpenter still continued to contend for the correctness of his view of the matter. He said that he knew that it apples were frozen and then thawed suddenly in the air, they were ruined, but they might be frozen as solid as pebbles in tight barrels, and if they were left undisturbed to thaw in the barrels, no man could detect the least sign of their ever having been frozen.

SHORT LIFE OF THE PEACH.

Mr. Forest said that persons of the largest experience in the cultivation of the peach, had come to the conclusion that the best style of pruning, when the tree is transplanted, is to trim off all the side branches leaving the central trunk in the form of a whip-stock.

Mr. Carpenter remarked that the peach tree should always be transplanted at the age of one year from the bud. He also explained that the fruit of the peach grows on the wood of the previous year's growth, and hence the advantage of shortening-in, by cutting off one third or one-half of the new wood every year.

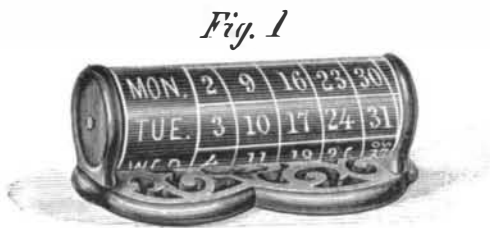
Mr. Quinn, of Newark, N. J., said that for the last six years he had set from 100 to 600 peach trees every year. He always sets the trees of one year's growth from the bud, and trims off all the side branches at the time of transplanting. The ground is well cultivated, the branches are shortened back every year one-third to one-half of the year's growth, and the trees are carefully examined every spring for worms; notwithstanding this care the trees invariably die at the age of four years.

Mr. Carpenter observed that this mortality is due to the borer, the worm which destroys ninety-nine of every hundred peach trees that are set out in this country. Were it not for this destructive pest we should have peaches in such abundance that we should feed them to the hogs, as was done forty years ago.

Several other subjects were discussed but we select the above for our columns.

HOLLY'S PEN RACK AND CALENDAR.

These engravings represent a neat and ornamental pen rack and inkstand combined with a perpetual calendar. The inventor says, concerning this affair, that the calendar consists of two independent cylinders of equal diameters, hung on a common axis. The circumference of one cylinder has upon it the days of the week; the other the dates of the month. The dates are arranged spirally, in such manner that when Fig. 1 is placed opposite to the day of the week on which any given month begins, the date of any day of that month will be found in the division opposite to that day. The spiral arrangement aids the eye in



following the dates in regular succession, and relieves the calendar of the intricacy common to the several calendars hitherto in the market. The calendars can be readily used in combination with various articles. A few of the varieties are shown in the accompanying illustrations. Fig. 1 is a calendar in combination with a paper weight. The base of the paper-weight is perforated, and may be hung on the desk or wall if preferred. Fig. 2 is a calendar, pen rack and inkstand. Other sizes of pen racks are manufactured, and a sponge cup is also introduced in some of the varieties, with a pen rack. The calendars are



furnished in plain japan or in bronze, and are decorated with gold leaf. The artistic skill displayed in the several designs will render them ornaments to any desk or table, while their merits will doubtless make them standard articles. We are using these calendar pen racks in our office and find them admirably adapted to the purposes for which they are designed. The invention was patented January 3, 1865, through the Scientific American Patent Agency. For further information address the assignee of the patent, John T. Fanning, of Norwich, Conn.

New Bituminous Substance from Brazil.

At a recent meeting of the Royal Society of Scotland, Professor Archer read a communication on a new bituminous substance, imported at Liverpool from Brazil, under the name of coal. The Professor stated that the substance—a few specimens of which were presented to the meeting—had been submitted to chemical analysis, and had been found to yield a much larger percentage of oil than any of the bituminous coal which had been examined in Great Britain, not even excepting the Torbanehill mineral. It had little of the appearance of ordinary coal, but seemed to be indurated clay, and yielded a similar series of products to those afforded by other bituminous coal. It was very light, extremely buoyant in water, and was exceedingly inflammable, burning at a very low temperature.

PHOTOGRAPHIC ITEMS.

The Steaming of Albumen Paper prior to sensitizing is said to result in marked advantages. The albumen paper, prepared in the ordinary manner, is placed in a perforated box, within a chest, into which a jet of steam at 30 lbs. pressure is admitted, for 100 seconds. Albumen paper thus steamed will keep much longer, and is said not to discolor the sensitizing bath, the albumen being rendered partially insoluble. Another advantage is that the steamed paper, when sensitized, will keep in good condition twice or three times longer than the ordinary sensitive paper.

The Wothlytype.—This new process has met with but little favor thus far, having been voted "worthless" in the discussions of some of our photographic societies. Those who are so ready to condemn have probably had little practical acquaintance with the subject. Before long they will doubtless be glad to practice an improvement which just now they do not hesitate to reject. We have lately seen some most beautiful specimens of Wothly or uranium pictures. They compare with the best silver prints, and would do honor to any photographer. In London the Wothly collodion, also sensitized paper, which will keep in good condition for months, is now on sale; and at some of the photographic galleries negatives are taken, printed on paper by the Wothlytype process, and delivered to the sitter the same day.

New Intensifying Salt.—In Seely's *Journal of Photography* we find the following article by M. Carey Lea:—

"The extreme opacity of a strong red color to the actinic rays of light, renders it peculiarly adapted for negatives. Images of this color may be obtained in the following easy manner:—After fixing and washing the negative in the usual way it is first to be iodized to a bright yellow color. This may be effected in any convenient manner. It may be simply placed in a bath of iodine dissolved in water, or in a solution of iodine in alkaline iodide; or tincture of iodine may be poured over it. Or the negative may first be treated with bichloride of mercury, and subsequently with iodine solution, or both may be applied together in the form of a solution of corrosive sublimate in iodide of potassium. The conversion of the yellow picture to scarlet is effected by Schlippe's salt, the sulphantimoniate of sodium. A tolerably strong solution of this substance is poured over the plate, and moved backwards and forwards till its action is uniform. The color produced varies slightly in shade; when the operation has been properly performed, a brilliant scarlet color is obtained. The red coloring matter which gives the scarlet tint to the picture is probably the sulphantimoniate of silver, a substance of sufficient permanency to justify its employment, especially as it is to be further protected by varnish. The scarlet image thus obtained may be again modified by new treatment. An ammoniacal solution of nitrate of silver brings it from a scarlet to a purple color. This I mention merely as a matter of curiosity, the advantage being manifestly in favor of the first color.

"As Schlippe's salt is not everywhere to be had, and as many photographers may desire to prepare it for themselves, I give the following directions. Place in a closed vessel the following mixture, viz.:—

Gray sulphide of antimony.....	22 parts.
Crystallized carbonate of soda.....	44 "
Well-burnt lime.....	17 "
Water.....	48 "
Flowers of sulphur.....	4 "

"The lime is slaked with the water, and the whol is then mixed in the vessel, 140 more parts of water added; a large bottle is best, corked, and well shaken from time to time. At the end of twenty-four hours it is filtered, water poured on the filter to carry the soluble parts through, and the filtrate is evaporated to the crystallizing point. An abundant crop of large lemon-yellow crystals of beautiful forms (regular tetrahedral) is obtained. These should be dried and secured in a well-closed bottle. They are less permanent in solution, a ten per cent solution will however keep for some days; in proportion as the solution is weaker it becomes less stable.

"In preparing Schlippe's salt, the process may be very much expedited by heat. The materials may be placed in a large flask and boiled together for two or three hours. The test of the completion of the oper