HINTS ON THE CARE OF THE EYES.

There are, perhaps, more individuals who ascribe their weakness of sight to a use of their eyes under an insufficient artificial illumination than to any one other cause. In a great many instances this may not be strictly true, but there can be no doubt that faulty artificial light is one of the most productive causes of a certain class of injuries to which the eye can be exposed. The two sources of trouble with the ordinary artificial lights are—first, they are not pure white, and secondly, they are unsteady. The first defect is found in all artificial lights except the lime, electric and magnesium lights; the second especially in candles and gas. The yellowness is, in a measure, counteracted by using, in the case of lamps and gas, chimneys of a violet or blue tint, and the flickering of the gas may be obviated largely by employing an Argand burner. All things considered, a German student-lamp furnishes the most satisfactory light. The next best is gas with an Argand burner. The chimneys of both may, as above suggested, be advantageously of a light-blue tint.

The position of the light in relation to the body is of great importance. If a shade is used on the lamp or burner (it should, by preference, be of ground or "milk" glass, never of colored glass), the light may stand directly in front of the body and the work be allowed to lie in the light under the shade, which will protect the eyes from the glare of the flame. If no shade is used the back should be turned to the source of light, which ought to fall over the left shoulder. The same rule applies in the management of daylight. In this case the light should come from behind and slightly above, and fall directly on the work, whence it is reflected to the eye. It should never fall directly in the face.

The light in the room during sleep is also not without its influence. As a rule, the room during sleeping hours should be dark; and, in particular, care should be taken to avoid sleeping opposite a window where, on opening the eyes in the morning, a flood of strong light will fall on them. Even the strongest eyes are, after the repose of the night, more or less sensitive to the impression of intense light. The eyes must have time to accustom themselves to the stimulus.

Attention should be called to the injurious effects that follow reading on railroad cars. On account of the unsteadiness of the page, reading, under these circumstances, is exceedingly trying to the eyes, and should never be persisted in for any considerable length of time. During convalescence from severe illness the eyes are generally the last to regain their lost power.—*Dr. S. M. Burnett, in Scribner.*

MOONS FOR MARS.

An astronomical discovery, which is ranked among the greatest of this century, has been made at the observatory at Washington, by means of the new instrument which is called the "great telescope." Accounts which came to hand enable us to compile the following interesting narrative: About 11 o'clock, on Thursday night, August 16th, Professor Hall noticed a very small star following Mars a few seconds, and made an estimate of its distance from the planet. Two hours later he looked again, and was surprised to find that the star seemed to be following the planet. As the distance had not increased, while the planet was moving away at the rate of 15 seconds an hour, he therefore made a careful series of measures, which showed that the satellite was 80 seconds from the planet. An hour later it was still there, but Mr. Hall made no further observation, hardly crediting the great discovery he had made.

On Friday morning he showed his observations to Professor Newcomb, who was so confident that the object must be a satellite, that he calculated roughly the time of its revolution, which he fixed at one day, eight hours, or a little less. This showed that the object would pass behind the planet some time during the following night, and that if not seen in early evening, it would reappear before daylight in the morning. In the evening it was invisible, but reappeared, true to the prediction, about one o'clock in the morning with a companion satellite. Professor Hall had now so little doubt of the reality of the object, that he made the discovery known to Admiral Rogers, the superintendent. It was still thought best to wait for another look before formally announcing the discovery, especially as Professor Newcomb's calculation showed that it would be on the opposite side of the planet on Saturday evening. Hardly was the telescope turned on Mars, when the satellite was seen, and its position determined by several of the astronomers.

Scientific authorities in Washington regard this as ranking among the greatest telescopic discoveries of the century; the only two which exceed it being that of the asteroid group in 1801, and of the planet Neptune in 1846. Professor Hall, the fortunate discoverer of the satellite, has been attached to the observatory since 1862. When Professor Newcomb resigned the charge of the great telescope, in 1875, he succeeded to it. He is an able and learned mathematician, and an unostentatious and conscientious observer.

The distance of the first satellite from the planet is between 14,000 and 15,000 miles, which is less than that of any other known satellite from its primary, and only about one-sixteenth the distance of the moon from the earth. The inner one, as to the existence of which the astronomers are not yet absolutely certain, is still closer.

Elderberry Wine.—The following is a recipe for elderberry wine, in answer to a recent inquiry: To eight quarts of berries pour (over the berries) four quarts of boiling water; let stand 12 hours, stirring now and then; strain thoroughly, pressing out all the juice; add three pounds of sugar to four quarts of juice, one ounce powdered cinnamon and one-half ounce powdered cloves; boil five minutes, and set away to ferment in a stone jar, with a cloth thrown lightly over it; when fermentation has ceased, rack it off carefully, so as not to disturb the lees. Bottle and cork down well.

BABES IN COURT.

The Cincinnati *Times* says: There was a very peculiar case in Judge Wilson's Court this morning, both in the character of the offenders and the oddness of their misdemeanor. Along about the hour of 11 o'clock Prosecutor Murphy called out: "Thomas Piquet, James Alfont, Ira Cobbin, Theo. Liefert," and four infantile prisoners stood up before the bar of justice, and eight little fists went up into eight little eyes and nearly rubbed them out, while salty tears, as large as fall peas rolled down into four little mouths.

"Officer Benmeaste, take the stand!" said the Prosecutor, and then turning to the four boys, asked, "Are you guilty or not guilty?"

"Please, sir, we dunno," sobbed the juvenile quartet.

Then the vigilant officer went on to state how he had caught the boys dropping boulders into farmer Bragenbush's well, out on the Colerain pike, and that the farmer was complaining about his well being filled up; and having caught the miscreants in the very act he had brought them right into the court. The officer was then told to sit down and the Judge took the case in hand.

"Now, my llittle men," queried his honor, and there was a sunny smile illuminating his handsome face, "tell me why you threw those stones in that man's well?"

The four little boys turned their tear-bedewed eyes upon each other, and then, as if by common consent of the other three, little Ira Cobbin, the eldest of the young culprits, answered in a quavering voice:

"Please, sir, we was only doing it in fun. Jimmie and me carried the stones, and them other boys dropped 'em down the well. We got tired sliding down a soaped board, and we only dropped the stones down 'cause we liked to hear 'em go kerchuck into the water." And eight little eyes again shed tears of sorrow. In his kindness of heart, his honor let them go with a warning.

The Perils of the Foundry.—Few appreciate the dangers which the brave mechanics face, or give them proper credit for bravery. We read of an accident in Pittsburg, Pa., which was as follows: A number of men were casting a chilled roll. Nearly two tons of iron were required to make the casting, and the services of 20 men were required to handle it. While they were pouring the moulten metal into the mold there was a sudden and terrific report, which was closely followed by a shower of liquid iron. The red-hot metal flew in every direction and dropped upon and about the workmen. They ran to escape the shower, in their terror dropping the ladle which yet contained most of the metal. The ladle was overturned and immediately great streams shot out in quick pursuit of the flying laborers. Two of the workmen, closely followed by streams of the red-hot iron, fell into adjoining pits and the metal ran in upon them, burning their flesh to a crisp in many places. One man's face was burned to a crisp and his eyes burnt out of his head, and in their places the sockets were filled with chunks of chilled metal. That man was George L. Ebbert, of Allegheny. Walter Moran's eyes, too, were burnt from the sockets, and his face, breast, arms and hands were burnt to a crisp at different places. Here and there the red-hot metal had actually eaten its way to his bones. Mr. Totten was interrogated as to the cause of the explosion, and he attributed it to a "damp cave." In other words, the sand with which the mold had been packed was not properly dried, and perhaps, too, not properly grooved, so that the steam generated could not escape.

A Train on the Down Grade.—George Francis Train talks at the rate of 259 words a minute, and occasionally pauses for breath. These pauses seem to annoy him, and it is his habit to fill them by putting the question before the house, and calling for the yeas and nays. His auditors like to make a noise, and an affirmative response follows as a matter of course; and then the lecturer, having regained his breath, proceeds with his remarks. An audience at Rochester on June 6th was betrayed by these tactics into a very unfortunate expression of opinion. He had been complaining that Christianity consigned to perdition such persons as Shakespeare, Byron, Franklin and Washington, who were not within the pale of church-membership. "If I ever know a hereafter," he exclaimed, "I want to be where I can feel the wonderous influence of these great men, and I want to be able to grasp their extended hands, even if I have to go to hell to do it." "And, by the way," he added, gasping for breath, and apprehending the approach of a pause, "all those in favor of going to hell with me say 'aye.'" From all quarters of the house came mechanically the thundering response, "aye!" Then they staighened themselves in their chairs, and reflected calmly on the pleasure-trip to which they had prematurely committed themselves.—*New York Tribune.*

Firm Butter Without Ice.—From W. P. Hazard's treatise on butter-making we extract the following: In families, or where the dairy is small, a good plan to have butter cool and firm without ice is by the process of evaporation, as practiced in India and other warm countries. A cheap plan is to get a very large-sized, porous, earthen flower-pot, with an extra large saucer; half fill the saucer with water; set it in a trivet or light stand—such as is used for holding hot irons will do; upon this set your butter; over the whole invert the flower-pot, letting the top rim of it rest in and be covered by the water; then close the whole in the bottom of the flower-pot with a cork; then dash water over the flower-pot, and repeat the process several times a day, or whenever it looks dry. If set in a cool place, or where the wind can blow on it, it will rapidly evaporate the water from the pot, and the butter will be as firm and cool as if from an ice house.

Woodworth's cottage, near which the "old oaken bucket" swung, is carefully preserved by a descendant of the poet. The bucket was sold long ago, but the clear, cold well remains.

PICKLES COLORED BUT NOT POISONED.

Picklemakers have for a long time had to fight their consciences by "greening" their product by heating in copper vessels, or by introducing copper salts. The French chemists claim to have done away with the use of copper by substituting a preparation of chlorophyll, which is the substance forming the natural green in plants. The matter was brought before the Academy of Sciences in Paris, recently, and a paper read, the purpose of which was to establish the fact that the salts of copper can be advantageously replaced in all particulars by the exclusive employment of chlorophyll obtained from edible vegetables—a conclusion which is based upon the following observations, which we obtain through the *Polytechnic Review*:

1. The chlorophyll of the vegetables disappears during ebullition.

2. The vegetable fiber and the starchy matter which is contained, when brought in contact with chlorophyll during ebullition, almost completely saturate themselves.

3. The vegetables when but half saturated with chlorophyll during the operation of bleaching retain this beautiful coloring matter.

These facts are of great importance, and indicate the mode of procedure which is to be adopted. If some spinach, or, still better, the foliage of leguminous plants be treated with caustic soda, a liquor is obtained which gives, with alum, a lac of chlorophyll. This lac should be carefully washed to free it from sulphate of soda. This lac is easily dissolved by means of an alkaline phosphate or alkaline earth, and is composed of chlorophyll, alumina and phosphate of soda. This dissolved lac is added to the bleaching water, and on ebullition yields up its chlorophyll to the vegetables. Several flasks of peas prepared by this process were presented to the Academy; of these, those that were completely saturated with chlorophyll possessed a shade of color impossible to be obtained by the use of copper; besides, they were devoid of the astringent taste, as well as the poisonous effect, which characterizes those preserved by means of the salts of that metal.

Although the application of the French discovery, as described above, can be made only by one skilled in the handling of chemicals, there can be no doubt that ere long so important a matter will be put forth in more popular form.

Wings Against Steam.—A short time ago there was a race from Dover to London between the Continental mail express train and a carrier pigeon, conveying a document of urgent nature from the French police. The pigeon, which was bred by Messrs. Hartley & Sons, of Woolwich, and "homed" when a few weeks old to a building in Cannon street, City, was of the best breed of homing pigeons known as "Belgian voyageurs." The bird was tossed through the railway carriage window by a French official as the train moved from the Admiralty pier, the wind being west and the atmosphere hazy, but with the sun shining. For upwards of a minute the carrier pigeon circled round to an altitude of about half a mile, and then sailed away towards London. By this time the train which carried the European mails, and was timed not to stop between Dover and Cannon street, had got up to full speed and was proceeding at the rate of 60 miles an hour toward London. The odds at starting seemed against the bird, and the railway officials predicted that the little messenger would be beaten in the race. The pigeon, however, as soon as it ascertained its bearings took the nearest homeward route, in a direction midway between Maidstone and Sittingbourne, the distance "as the crow flies" between Dover and London being 70 miles, and by rail 76¼ miles. When the Continental mail express came into Cannon-street station, the bird had been home 20 minutes, having beaten her Majesty's Royal mail by a time allowance representing 18 miles.

Preservation of Eggs.—The *Journal of the Medical Academy of Turin*, in a recent number, says: The sure and simple method of keeping eggs sound by smearing the shells with linseed oil has long been practiced. The oil forms a sort of film over the shell, thereby preventing the two immediate causes of decomposition—evaporation from and penetration of air into the egg. A recent experiment in point deserves notice. A dozen new-laid eggs were rubbed over with linseed oil applied with the tip of the finger; another dozen were coated in like manner with poppy oil; two more eggs were left in their natural state. The whole 26 were then laid close together, in three rows, on dry sand upon a shelf, where they were left undisturbed. At the end of three months they were weighed, and again at the end of six months, when they were opened. The two eggs left in their natural state at the end of three months had lost 11⅛ of their weight, and at the end of six months 18⅞, and were found to be half empty and the contents rotten. The eggs coated with poppy oil in three months lost 3⅛, and in six months 4½ of their weight. The eggs were still full and devoid of unpleasant smell. The eggs rubbed over with linseed oil in three months lost 2½, and in six months 3⅛ only of their weight, and when opened were found to be full, with the smell of fresh eggs.

Japanese Method of Cooking Rice.—A letter from Japan says: "They know how to cook rice here. Only just enough cold water is poured on to prevent the rice from burning to the bottom of the pot, which has a close-fitting cover and is set on a moderate fire. The rice is steamed rather than boiled, until it is nearly done; then the cover of the pot is taken off, the surplus steam and moisture are allowed to escape, and the rice turns out a mass of snow-white kernels, each separate from the other, and as much superior to the soggy mass we usually get in the United States as a fine mealy potato is to the water-soaked article."

The honorable gentleman is seeking a re-election, and runs to meet his constituent from afar, hat in hand. "Good day, my honorable sir. I trust your health is good?" "It is." "And your honorable wife is well, too, I hope?" "She is." "I was just thinking of you. I know I should meet you, for just round the corner I had the pleasure of meeting your honorable dog."

STRAW AS HORSE FEED.

More than the usual amount of straw escaped the match in this State this year, and more will be turned to account to keep up animal life during the months of field-famine which will prevail in some counties in our State. Hints for the use of this straw may, perhaps, be drawn from the following experience which we find in the Boston *Cultivator*: I have wondered a great many times why farmers do not pay more attention to feeding straw than they do. Now, though 61 years old, I have been on the farm about 11 years, yet I find in my own experience that my horses do better on straw, with a little corn, than they do on the best of hay without corn. Two years ago I came short of hay, and had no straw, though I have had five head of horses. I bought a stack of wheat straw (as straw is very cheap in this county), and I commenced feeding in November. I gave my horses a little at a time, just what they would eat clean, and no more. In the morning I would give them four or five ears of corn; two and three-year-old colts I gave two ears apiece. At noon I fed them straw alone, and at night the same as in the morning.

I continued in that manner all through the winter, and my horses came out better in the spring than when I fed on hay. They did so much better that I concluded to try it again this last winter. It so happened that my hay crop was a failure, and I bought four or five tons of wheat straw of my neighbor, paying $7 for the lot; it was not the best of straw either, but I put it in my barn, and fed as usual just what the horses would eat clean. The result was my horses came out in the spring in good working order, and a great deal more lively on the road than when I fed hay. So I wintered my five head of horses on seven dollars' worth of straw, with what little corn I fed morning and night.

The fact is, farmers in this country do not appreciate the value of straw. It is now considered by many as only fit for use in bedding stock. In the first place, our farmers let a grain get dead ripe before they cut it, and then let it remain in the shock till almost spoiled, when no animal will eat it up clean; and of course it is left for cattle to eat what they will, and run upon the rest, amounting to nothing except to scatter over the ground as fertilizing matter.

Grain of all kinds should be cut when it is a little green; there is always nourishing matter enough in the straw to ripen it out then, and the straw itself is far better for feeding purposes. If I had my barn full of the best of hay, I would feed my straw to my horses in preference, reserving the hay for my milch cows.

Farmers are slow in getting out of the old track; they seem to be dilatory in trying experiments, thinking the old-fashioned way of feeding is the only method. If farmers would take more pains in saving the straw, and feeding it judiciously, they would be able to feed double the stock they do now, and show better condition and results in the spring.

Another common mistake is to think that the racks must be kept full of hay at all times for horses. Now, my experience is that horses will not do so well stuffed with hay as they will to have a certain amount fed to them three times a day. It is not the great amount you want fed, but the regularity of feeding. Feed your horses as regularly as the human family is fed, and they will always be ready for business. Every farmer should have a straw-cutter, so they can cut the straw and make it available, in place of feeding corn in the ear. From a favorable experience in the past I shall pursue this plan hereafter, having my mangers so made that I can feed the horses half a bushel of cut straw, mixed with a little bran and shorts, or oats and corn, ground together, feeding three times a day.

Horses like such feed better than in any other form, but one must be careful not to make it too rich in the first start, or the animal will get cloyed on it. One quart of meal to begin with, and feeling regularly on this system will give an astonishing improvement, and in a very short time. It costs a good deal to keep up a pair of horses through the year the way they are usually kept, and every farmer should use all the economy possible, as by so doing they can make a great saving in keeping stock.

Statistics of Horses.—The number of horses in the various countries of the European continent and in the United States has been estimated as follows: In Russia, 16,160,000; North America, 9,504,200; Germany, 3,352,231; Great Britain, 2,790,851; France, 2,742,738; Austro-Hungary, 3,569,434 (of which 2,179,811 belong to Hungary); Italy, 657,544; Norway and Sweden, 655,456; Spain, 382,000; Denmark, 216,570; Belgium, 272,163; Holland, 260,058; Switzerland, 100,934; Greece, 98,938; Portugal, 79,616; making a total in the countries mentioned of 40,854,840. The proportion of horses to each thousand of the population is 227.05 in Russia; 244.16 in America; 177.55 in Denmark; 146.99 in Hungary; 114.88 in Sweden; 86.10 in Great Britain; 81.54 in Germany, and 18.25 only in Portugal.—*Veterinary Surgeon.*

To Cook Egg Plant.—Every summer there are inquiries about cooking this vegetable, which appears to be new to many. Slice the fruit crosswise, about a half inch thick; peel and stack up with a sprinkling of salt between the slices; put a plate with a weight (a flat-iron will answer) on top, or lay the slices in strong salt and water. The object in either case is to remove a slight bitterness. At the end of two hours, dry the slices on a cloth and dip in a thin batter of eggs and flour, and fry to a light brown. Instead of the batter, dip first in beaten eggs and then in cracker powder. Serve hot.

Preservation of Lime Juice.—Lime or lemon juice may be preserved as follows: Heat the juice, to coagulate albuminous matters, and then sweeten with pure glycerine. The glycerine will not only retard turgid growths, but prevent the juice from freezing even during the coldest winters.