are not sunken and small, but large, bright, and intelligent: the back is broad and level, but the barrel is not so round; as in the Essex or the Suffolk the sides are deep, and the rump drooping, with the tail often set lower down than the line of the hips; the legs are short and strong, and the feet white; the hair varies, according to the kind of management, from a thick coat, soft, silky, and free from harshness and bristles with those that have plenty of out-door exercise, to a thinner, finer, but not weak coat in those that are closely penned; the flesh has a good mixture of fat and lean. When properly fed, the pigs reach a weight of from 300 to 500 pounds, at a year old, if the animal is well kept from birth. The history of the Berkshire as a favorite with feeders and breeders, dates back only for 15 years, and it can justly be said that it is only now that it is finding its proper position amongst farmers, in spite of the prejudice against its color and wholly through its undeniable merits.

The Farm Agriculturist.

Beware of Dust.

The injuries done by dust are among the most serious to which mechanics and operatives are subjected. Wherever filings and fine particles of any kind are produced, it is very important to prevent their introduction into the lungs; even an occasional exposure may do harm, and one continued for months and years will certainly produce fatal results.

Dr. B. W. Richardson, of London, after several experiments with inhaling air through cotton, layers of crape, etc., informs us that he finds the best arrangement to be a number of feathers arranged around the outside of a perforated breathing tube of convenient size, so as closely to cover all the perforations; by breathing through the tube the feathers are drawn down to the perforations by inspiration, and by expiration they are lifted from the openings, and all the intercepted dust is blown off. The latter makes the arrangements with cotton or crape objectionable, as their pores are soon filled with the dust as well as the moisture exhaled by the breath. The tube is attached to an arrangement which allows it to be put on and taken off as easily as a pair of spectacles.

A natural protection against breathing dust is also afforded to most males of the Caucasian race in the beard and hairs around the mouth. These should not be removed by any persons exposed to a dusty atmosphere, who therefore do a very unwise thing if they indulge in the vice of shaving, which is nothing less than an attempt to improve upon nature's protective provisions. Three evils result from this practice: 1st. Stimulating the continual growth of the hair, (which will become slow, and finally cease if not interferred with,) while this stimulated growth is a steady unnecessary drain on the powers of the vital system. 2d. The removal of a natural protection against cold from a place where this protection is more needed than is generally supposed. 3d. The removal of a dust-protector, above referred to. Men inclined to pulmonary consumption should especially guard against shaving, and let their beards grow as nature intended, only curtailing a little when it becomes inconveniently long.

Another natural protection against dust may be secured by accustoming oneself to breathing exclusively through the nose, and only through the mouth when speaking. The benefits of this habit are threefold: 1st. The olfactory sense secures it against the entrance of impure air. 2d. The moisture of the nasal passages gives a certain degree of aqueous saturation to the inspired air, the contact of which is thus rendered less irritating to the mucous membrane of the throat and larynx. 3d. The inequalities of the organ retain solid particles suspended in the air, which is proved by the quantity of dust sometimes found accumulated in the nostrils. These functions are all lost by breathing through the mouth. Further, the contact of dry air soon produces circulatory troubles in the pharyngeal region, and even an habitual catarrh, susceptible of easy transmission by continuity to the eustacian tube and cavity of the tympanum. Granular anenoid pharyngitis often has this origin. Niemeyer believed that attacks of pseudo-croup in children have their origin in dryness of the glottis produced by oral respiration. To enable the patient to breathe through the nose, we must restore the nose to its proper condition. Many cases of catarrhal deafness have been cured in this way alone.

The habit of keeping the mouth shut and breathing through the nose alone, if persisted in for a long time, has a tendency to widen the nostrils and improve the shape of the nose, while the habit of breathing through the continually opened mouth tends, on the contrary, to make the nostrils useless, renders them smaller, and also influences the shape of the nose, interferring with its proper growth. According to the theory of evolution, the habit of not using the nose for breathing, must, after several generations, end in producing a race with small, miserable, turn-up noses.

Preventive Against Lead Poisoning.—"An efficient preventive against lead poisoning would, no doubt, be welcomed by pottery glaziers and workers in the poisonous preparations of lead: but the preventive must be something that can be taken or applied with the minimum of trouble. It is stated that washing the hands thoroughly with petroleum three times a day has been found to prevent all symptoms of lead poisoning among some workers who have given it a fair trial, and who are so satisfied that they recommend it for trial by those liable to injury from salts of copper, lead, mercury, etc."—*Exchange.*

Coffee-Drinking.

How strong should coffee be taken is an inquiry of much practical importance. How much should be taken at a meal is scarcely of less moment. Coffee, like any other beverage, may wholly ruin the health; the very use of it tends to this, as certainly does the use of wine, cider, beer, or any other artificial, stimulating drink. There is only one safe plan of using coffee, and that is never, under any circumstances, except of an extraordinary character, exceed in quantity, frequency, or strength—take only one cup at the regular meal, and of a given, unvarying strength. In this way it may be used every day for a lifetime, not only without injury, but with greater advantage than an equal amount of cold water, and for the simple reason that nothing cold should be drank at a regular meal, except by persons in vigorous health.

We have personally known of the case of a lady who was for a long time in poor health, to the mystification of several physicians whom she consulted, when at last we discovered that she made a most extravagant use of strong coffee many times a day—in fact, she had a pot of coffee always at hand. Following the advice to abstain from coffee, resulted in an immediate end of all her trouble.

In regard to the strength, it is maintained by some that one pound of the bean should make 60 cups of the very best coffee. If a man takes coffee for breakfast only, one pound should last him two months, or 6 pounds a year. One pound of coffee should be made to last a family of ten persons, young and old, one week. Put about two ounces of ground coffee in a quart of water, or rather divide the pound into seven portions, one for each breakfast in the week, and make a quart of coffee out of it, which will be 64 tablespoonfuls. Give the youngest two tablespoonfuls and the oldest a dozen, the remainder of the one cup being filled up with boiled milk. This will give a cup of coffee sufficiently strong for all healthful purposes, for the respective ages; and for various reasons, pecuniary as well as physical, some such systematic plan as this should be adopted in every family in the land.

How to make the cup of coffee good is a third question. It is perhaps as good and as easy a plan as any to buy the coffee unground, pick out those grains that are imperfect, wash it, parch as much as will last a day or two, with your eye upon it all the time, until it is of a rich brown, with no approach of black about it. Grind only enough for the day's use; grind it fine, for the greater the surface exposed to the hot water the more of the essence you will have; pour the boiling water on the coffee, and close it up. Some boil it a little; others prefer not to boil it at all, but let it stand to clear ten minutes, then use.

Constructive Carpentry.

If a brace has to be supported at its lower end by a vertical beam, it is well to cut the face of a part of the plane of support at such angles that no displacement can take place, but that the direction of the pressure tends to keep the brace in place. Thus in Fig. 102, the lower end is cut like a double wedge, fitting in a corresponding recess in the vertical beam, and as long as the pressure takes place no displacement is possible. When, however, there is danger that the brace may come out from want of pressure, it is well to provide it with an iron strap going around the beam, and fitting in a notch cut out of the brace, as indicated by the dotted line.

Fig. 103 represents another way of cutting the end of the brace, which is preferable in case the vertical beam is not heavy and we do not want to make a deep cut in the same.

Sometimes it is necessary to support such braces from a hanging beam; but then it is necessary to apply them at both sides, so as to equalize the sideward pressure. Fig. 104 represents such a case where the horizontal beams support the braces. This method of construction is very strong, and is applicable in cases where we wish to avoid the use of vertical props on the floor, which is objectionable in many cases.

If an oblique brace is to be supported by a wall, it is best to leave or cut a square opening in the wall of the size of the thickness of the brace, and a little deeper than this thickness: place a short piece of the beam in, after cutting its face obliquely and nearly perpendicular to the direction of the strain—that is, at right angles to the sides of the brace. This case is represented in Fig. 105.

Fig. 106 represents the manner in which a vertical beam, and brace supported by it, are both kept in place by a piece of cut stone inserted in the wall while it was being built. It is a very reliable method, and far superior to that represented in Fig. 107, where the end of the brace is inserted in a hollow left in the wall. One of the objections to this method, is that if the wall is, or becomes damp, the lower end of the brace is very apt to rot, while, being hidden, it cannot readily be perceived.

Fig. 108 represents a method not subject to this objection, and is very strong; it is applied when a wall is diminished in its thickness, and the level at which this is done is a very appropriate place for the support of beams and braces.

The Brains of Criminals.—Says the *British Medical Journal*: "We lately published a very interesting letter from our Vienna correspondent, in which a brief summary was given of Prof. Benedict's researches on the brains and skulls of criminals. The subject is an important one, both from a physiological and a psychological point of view, and it is to be hoped that more extended and more precise inquiry will be made upon it, for the results which Prof Benedict has obtained, though very important, are not sufficiently numerous to warrant any large induction. Up to the present time Prof. Benedict has examined the brains of sixteen criminals, all of which, on comparison with the healthy brain, he finds to be abnormal. Not only has he found that these brains deviate from the normal type, and approach those of lower animals, but he has been able to classify them, and with them the skulls in which they were contained, in three categories. These consist in: 1st. Absence of symmetry between the two halves of the brain. 2d. An obliquity of the interior part of the brain or skull—in fact, a continuation upward of what is termed a sloping forehead. 3d. A distinct lessening of the posterior cerebral lobes, so that, as in the lower animals, they are not large enough to hide the cerebellum. In all these particulars the criminal's brain and skull are distinctly of a lower type than those of normal men, and the interesting question arises: How far are evil tendencies of the criminal to be attributed to this retrograde development?

Oxygen and Hydrogen explode by the electric spark when mixed with five times their bulk of steam. A mixture of air and carbureted hydrogen requires a third of steam to prevent its inflammation.