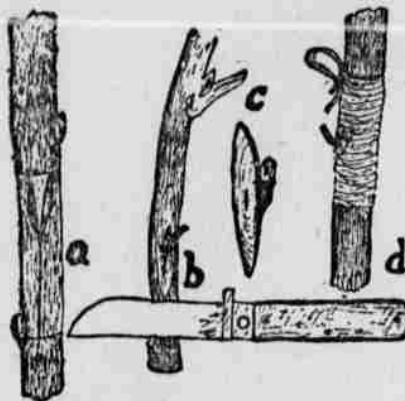




Budding Fruit Trees.

It is sometimes desirable to bud orchard trees at a time when cleft grafting can not be done. The work can be done in late August, September and early October. The purpose of budding trees is very much the same as that of grafting. The apple, plum and rose-bush particularly, may be operated upon to advantage and with good results.

The work of budding can be done by a sharp, round-pointed knife and a piece of yarn. Usually the best results follow by selecting a place where the branch is from $\frac{3}{8}$ to $\frac{1}{2}$ inch in diameter, and where the bark is smooth and healthy. With the rounded part of the knife cut lengthwise of the branch, just through the bark, a slit about $1\frac{1}{2}$ inches long, and at the top of this slit cut across about $\frac{1}{4}$ inch, as shown at a. Next remove from a branch of the same season's growth of the desired variety one of the strong, healthy



THE STEPS IN BUDDING.

limbs by cutting from below the bud up and under it. Start about 1 inch below the bud and come out again 1 inch above the bud, as at b. Cut deep enough into the wood so as not to injure the bud, and cut it so as not to leave too much wood under the bud. Then place the bud, c, on the end of the knife and push down into the slit, as above described. Push securely in place, so that the bud is about 1 inch below the upper cut. Then wrap carefully with yarn, as at d. In two or three weeks examine and see if the bud has grown fast and so that the yarn is not injuring it. Should the yarn be loose, retie. The bud should start to grow the following spring.

Success largely depends upon whether the stock is growing vigorously or whether the bud is healthy. The bud serves the same purpose as the scion in grafting. From it springs a limb which will produce the kind of fruit borne by the tree from which the bud was taken.—W. H. Underwood, in Farm and Home.

Protect the Birds.

The farmer is liable to forget his bird friends. I wish to tell some of my farmer friends what I have done this spring, in regard to our quails. When our assessor came around I gave in some quails, as well as domestic fowls for taxation, as I knew about how many we had on our farm when winter was over. Some will say that you could not tell how many birds you have, because they will be on your farm one day, and on your neighbor's the next. While that is true, do not our domestic fowls go over on our neighbor's place, also, if you give them opportunity to do so? Which most people do that I know of. But do they not come back home every evening to roost? It is the same with the quail, and he will roost on the farm where he was bred and hatched, providing he is unmolested by hunters, hawks, etc. If you were to chase your domestic fowls with dog and gun one-tenth as much as you do the poor little quail, in the fall of the year, do you think that there would be many chickens on the roost in your chicken house at night?

The writer has known coveys that after being chased and shot at all day, would be whistling the call just at dusk, and after getting back together would fly to roost.

I think that anything that is as valuable as the quail and stays with you through such circumstances, should be protected better than most of our farmers are doing.—J. H. T., in the Indiana Farmer.

The Black Raspberry.

The black raspberry has its peculiarities, and among them is that of the annual travel to new soil by means of the tips. Stocks from the hill are comparatively worthless for new plantations; and growers of valuable varieties must obtain their plants from the tips of the present year's growth. The first part of July, if it has not been attended to sooner, when the growing canes have reached the height of 4 feet, nip

out the point with thumb and finger, and soon branches will come out along the cane, increasing the number to take root, and adding to the productiveness of the plant the next season. Leave the bearing cane in its place until fall. Later, when it is time for the tips to attach themselves to the soil, the rooting can be facilitated by a slight covering of dirt. In preparing for the crop in spring head in the branches to two or three feet, according to their strength.

Getting a Start with Sheep.

When the farmers in the corn and grass states reach the point where they have their fields all fenced hog tight, they should not delay for any considerable length of time getting a start in sheep, says Wallace's Farmer. It is not necessary to have a large flock. It is a good deal better not to have it for two or three reasons: One is that sheep do not do well with hogs and cattle. This is the reason why so few sheep are kept in the hog and cattle country. Another reason is that those who have had no experience in sheep would do well to advance slowly, and, if need be, retreat rapidly. Twenty-five ewes and a good buck are as many as the inexperienced farmer should start with. The expense of these is comparatively small, the possible loss therefore not great in case the man should prove not to be a fit man to handle sheep. There are some men of this kind. The chances of loss, however, are very small where the farmer has any kind of sheep gumption about him.

Testing the Health of an Animal.

The pulse of a horse when at rest beats forty times per minute; of an ox from fifty to fifty-five; of a sheep and a pig about seventy to eighty.

The pulse may be felt wherever a big artery crosses a bone. It is generally examined in the horse on the cord which passes over the bone of the lower jaw in front of its curved position, or in the bony ridge above the eye; and in cattle over the middle of the first rib; in sheep by placing the hand on the left side, where the beating of the heart may be felt.

Any material variations of the pulse from the figures given above may be considered as a sign of disease. If rapid, hard and full it is an indication of high fever or inflammation; if rapid, small and weak, low fever, loss of blood or weakness. If slow the possibilities point to brain disease, and if irregular to heart troubles.

Curtain Front Poultry House.

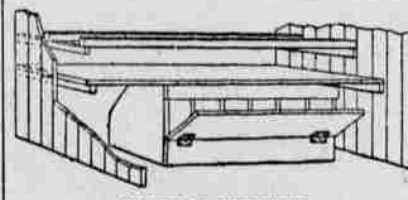
The style of curtain front house shown is of the shanty roof type, 8 feet 6 inches high at the front and 4 feet 6 inches at the rear. The width of this



CURTAIN FRONT POULTRY HOUSE.

or any of the houses may be varied to suit the builder. The front of this house consists of a curtain on a frame hinged in such a way that it may be swung to the roof to allow the sunshine to enter. The plans of the curtain front houses lend themselves to the construction of an enclosed house by using lumber instead of cotton.

The roosts, nest boxes, drop boards and in fact all interior fixtures, should be constructed and put up in such a



INTERIOR FIXTURES.

way that they may be easily removed for cleaning and disinfection. The diagram illustrates how they may be arranged with advantage in any house. The roosts should rest in sockets, and the drop boards should not be nailed in place, but simply rest on the cleats at the ends.

Value of Humus.

That soils need humus is shown by the recent test at the West Virginia station. The ash of stable manure, even when applied with sodium nitrate, did not show as large returns as when stable manure alone was applied. In a number of cases it is decaying humus and not latent plant food elements that the farmer's soil needs. See that the soil is rich in organic matter first, then if it fails to produce, apply the plant food elements in the prepared forms.

Pasture Grass.

Minnesota farmers have found 6 pounds of timothy, 5 pounds of white clover, 3 pounds of Kentucky blue grass and 1 pound of red-top seed per acre to be an excellent mixture for pastures. If the ground is inclined to be wet, the red-top will take the place of the timothy.

GERMANY'S TOYS.

Their Manufacture One of the Country's Big Industries.

Some interesting particulars of the toy industry of Germany have been published by the British consul at Hamburg. Toys constitute one of the most important branches of German manufacture. In the year 1903 the total volume of toys exported from all parts of the German Empire was 34,717 tons, valued at \$13,931,370. Though there is hardly any country in the world to which German toys are not exported, the most important customer of Germany is Great Britain, which in the year under review received 12,218 tons. The second most important market for German toys is this country, the exports to which amounted in 1903 to 11,955 tons, valued at \$4,093,135.

The most important centers for the manufacture of toys in Germany are Nuremberg and Fuerth in Bavaria, Sonneberg and some other parts of Thuringia and the Saxon "Erzgebirge." Nuremberg, above all, has long been known throughout the world for its trade and industry, and German toys, wherever made, still go in many countries by the name of Nuremberg toys.

time, and to reduce the expenses of production, and in consequence also the sale prices of the articles manufactured by them.—Scientific American.

Shower of Fish in Australia.

In a communication to the Royal Society of Queensland, Douglas Ogilby records the occurrence of a shower of fishes which fell in Brisbane during a severe hailstorm on Oct. 7 last.

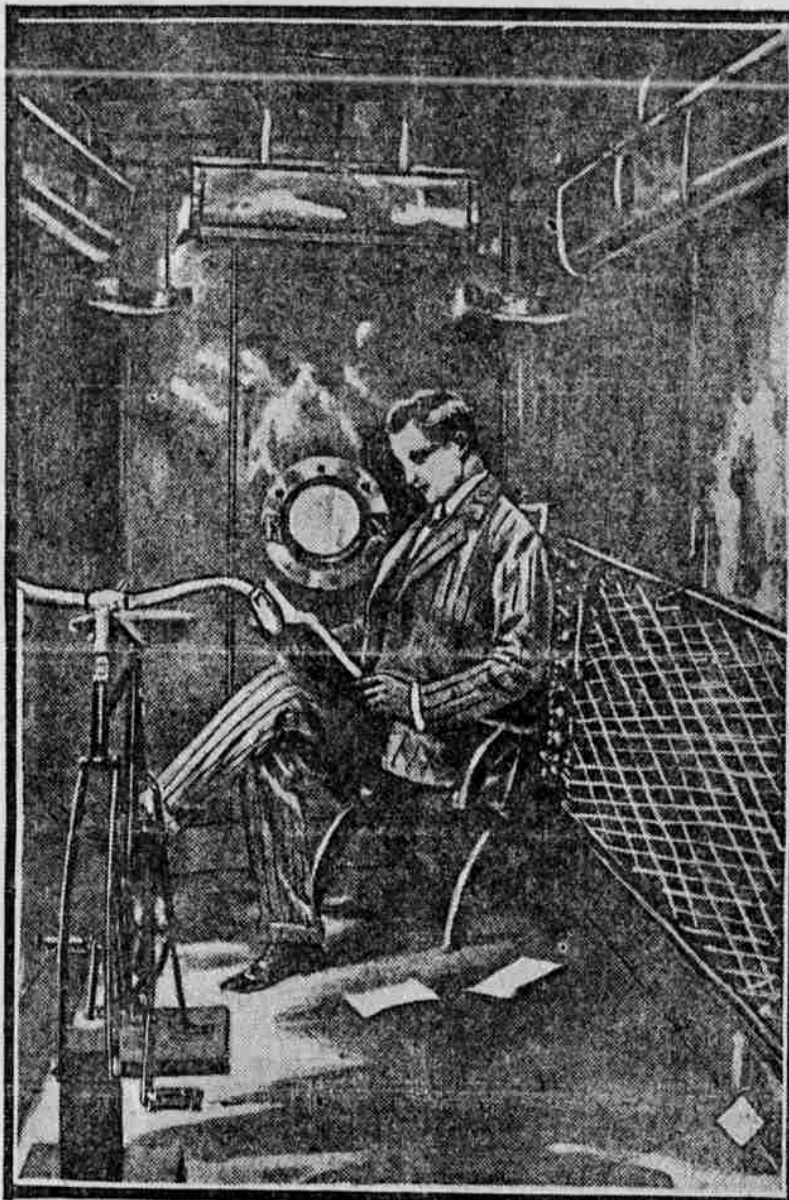
They were identified as the species known as the trout gudgeon (*Krefftia adspersus*). Such showers of small fish are not unknown in other parts of the world. Sometimes after a heavy rain they are found swimming about in the pools formed on the surface of the fields.

The explanation is that the waters of a pond or lake have been drawn up into the clouds by a whirlwind, carrying some of the smaller fry with them. The latter, of course, promptly descend again in the rain.—London Globe.

"Nobuddy" Answered.

The average small boy's opinion of himself is none too high, but the reply of a small stable boy in Chicago may scarcely be taken as the average. A woman whose husband kept the driving

STUDYING MAN AS A MACHINE.



THE CALORIMETER CHAMBER.

Some time ago Dr. Andrew Wilson discussed the calorimetric experiments at an American university. Sheffield University has now installed a similar chamber, in which a man is shut up in order that the heat generated by his body may be observed. By a system of registering instruments the heat generated by the body in action and in repose is minutely recorded. The prisoner has to live for several days in a calorimeter, and his food is passed to him through a porthole so contrived that the heat of the chamber cannot be affected by the opening of communication with the outside world. For exercise he rides a stationary bicycle, and during the time he is on the machine a record is taken of the change in the temperature of the body.—Illustrated London News.

At Fuerth, which is close to Nuremberg, a flourishing trade and industry has likewise sprung up since about the end of the eighteenth century. Next to Nuremberg and Fuerth the town and district of Sonneberg has for many years enjoyed the best reputation for its toy industry and trade, while in the Saxon "Erzgebirge," a district comparatively poor in natural products, the manufacture of toys has likewise for some time furnished a source of livelihood to thousands of its inhabitants.

The toys made at Nuremberg and Fuerth are chiefly of the metal variety, made either of tin, tinned sheet iron or of tin and lead alloys. Of the more than 200 toy factories established in both of these towns, about 150 are devoted exclusively to metal toys, the only part of them worked by hand being the final painting, while all the rest is manufactured by machinery. In this respect this toy industry of the two Bavarian towns occupies a rather different position from that of all the other parts of Germany, where it is almost exclusively carried on by manual labor; that is to say, by workmen and women in their own homes. The success of the Nuremberg and Fuerth metal toy manufactures is mainly attributable to the skillful manner in which the materials have been employed, and in which the machinery and tools used for the work have been adapted and gradually improved by the toy manufacturers themselves, thus enabling them to produce large quantities of articles within a comparatively short

horse in 'one of the many "boarding stables" in the city telephoned the other day to have the horse and carriage brought to the house. A strange voice answered the telephone.

"Is this So & So's stable?" queried the woman.

"Yes," came the answer.

"Well, who is this?"

"Aw, 'tain't nobuddy. Wait a minute and I'll call somebody," came the answer.

A Judicious Start.

"I suppose you are ready to contend that your family dates back to before the deluge?"

"No, I'm not. That gang was so bad it had to be drowned out. Our people were satisfied to start in after things settled down and civilization began to take root."—Cleveland Plain Dealer.

Too Sympathetic.

"There is such a thing as being too considerate and tender-hearted."

"What's the trouble now?"

"My daughter refuses to boil the drinking water for fear of hurting the germs."—Washington Star.

The Shortest.

"What's the shortest day in the year?"

"I don't know what it is by the calendar, but it's Christmas by my financial account."—Cleveland Plain Dealer.

You people who quarrel easily, remember that no quarrel was ever really made up.



"So you were successful in your first case, doctor?" "Er—yes, yes; the—er—widow paid the bill."—The Tatler.

Church—Did you ever work for a railroad company? Gotham—Well, yes; I've tried to open the car windows.—Yonkers Statesman.

Little Wife—Granddad, what makes a man always give a woman a diamond engagement ring? Grandfather—The woman.—Philadelphia Enquirer.

Wife—I've invited one of my old beaux to dinner. Do you mind? Husband—Mind! Heavens, no! I always love to associate with lucky people.—Life.

Family Doctor—And how old are you now, Robbie? Robbie—I'm not old at all, doctor. No man is old until his teeth are all gone, and here I'm getting a new set.

Auntie—Poor Rob! Does your tooth ache yet? If 'twere mine, dear, I'd have it out at once and be done with it. Robbie—If 'twere yours! Well, auntie, so would I.

"What would you do, dear, if I were to die?" asked Mrs. Darley, fondly. "I don't know," replied Darley thoughtfully. "Which is your choice—burial or cremation?"—Tit-Bits.

"Pop! What is a pantomime?" "A pantomime is a piece in which no one speaks." "I shouldn't think a piece with no women in it would be interesting!"—Yonkers Statesman.

"Do you want employment?" "Lady," answered Plodding Pete, "you means well, but you can't make work sound any more invitin' by usin' words of three syllables."—Washington Star.

First Deacon—Our new pastor must be a vegetarian. Second Deacon—Why do you think so? First Deacon—There doesn't seem to be any meat in his sermons.—Philadelphia Public Ledger.

Elsa—The paper says that the bride was unattended. Stella—That notice was written up in advance of the wedding, but it was a good guess; the bridegroom failed to show up.—Puck.

Mrs. Hix—I don't take any stock in these faith cures brought about by the laying on of hands. Mrs. Dix—Well, I do; I cured my little boy of the cigarette habit that way.—New York Globe.

"You call this a summer resort, I believe," said the sarcastic visitor. "I am unaware of any place to which summer resorts more regularly," returned the Philadelphiaan stiffly.—Philadelphia Gulletin.

"But," protested the wayward son, "you should make allowance for the follies of youth." "Hub!" growled the old man. "If it wasn't for the allowance you get there would be less folly."—Chicago Daily News.

Hiram—Who is that little runt that kem up in a buggy wagon to see Miss Flip, the new boarder? Silas—He's what them city folks calls her "fiasco." Hiram—Her fiasco—oh, you mean her fiancée.—Boston Transcript.

"Louder! Louder!" shrieked the delegates. "Gentlemen," protested the presiding officer, "I can assure you that the disappointment of those who can't hear isn't a marker to the disappointment of those who can."—Philadelphia Public Ledger.

Mamma—Robbie, have you earache, dear? Robbie—No, mamma. Mamma—Then why do you put cotton in it? Robbie—'Cause you told me that I learn so little, 'cause what goes in one ear goes out the other, and so I've plugged the other up.

"Did you write to papa, George?" "Asking for your hand?" "Of course." "Yes, I wrote." "That's strange. I supposed papa would be terribly angry. You know he doesn't like you." "Yes, I know. But I fixed it all right. I—I didn't sign the letter."—Cleveland Plain Dealer.

Publican—And how do you like being married, John? John—Don't like it at all. Publican—Why, what's the matter w' she, John? John—Well, first thing in the morning it's money, when I gooes 'ome to my dinner it's money again, and at supper it's the same thing. Nothing but money, money, money! Publican—Well, I never! What do she do w' all that money? John—I dunno. I ain't given her any yet.

Had Never Met Before.

They had just been introduced. "Really," she said, timidly. "Your face seems so familiar to me I think we must have met before."

"Impossible," he sighed. "If we had ever met before I should either be engaged to you, married to you or dead of a broken heart ere this."

No wonder she asked him if he wouldn't like to wear her college pin for a while!

The women should always admire women more than the men.