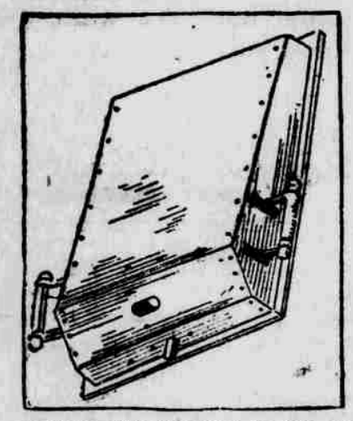
Science and Invention

Wood Photographing Itself.

A curious property of wood, whereby it is able to photograph itself in the dark, is described by Dr. William J. Russell in a paper recently read before the London Royal society. This property he showed by experiments to belong probably to all woods, some woods, however, being much more active than others. To obtain a picture the wood must be in contact with or at a little distance above the photographic plate, and must remain there for times varying from half an hour to eighteen hours, and be at a temperature not higher than 131 degrees Fahrenheit. The wood of the conifers is very active, and gives pictures which are very definite. It was thought that this action was due to the resinous bodies in the wood, but it has been remarked that there is no action from the dark autumn wood. Resin exists in the dark rings, but apparently under such conditions that its action cannot escape. And again, with the spruces, the action on the plate is not so definite. With regard to woods other than conifers, oak and beech are both active and give very good pictures, as do also acacia (Robinia), Spanish chestnut and sycamore. On the other hand, ash, elm, horse chestnut and plane are, in comparison, but slightly active. Knots in a wood generally, but not always give a good picture.

Removes Old Wall Paper.

Anyone who has undergone the tribulations incident to the removal of old wall paper in a dwelling will have sympathy with the Iowan inventor who, no doubt spurred on by trials in his own household, has devised a mechanism for accomplishing this usually very dirty operation with as little disturbance relatively as is produced in sweeping by the new universal



American carpet-sweeper, in fact, his appliance in general appearance very much resembles a sweeper.

The preliminary dampening is accompanied by means of live steam applied by flexible hose attachment in a closed receptacle. This has an open face surrounded by a flexible flange or rim. The actual removal of the paper is accomplished by means of scraping blades actuated by handles projecting through the receptacle. The debris is retained within the device, and emptied at intervals without taking any appreciable dirt.

To Test Sanitary Piping.

There are several methods of testing sanitary piping in a house, of which the use of oil of peppermint and smoke are the most common. The smoke test shows the location of a leak by escaping smoke. The latest apparatus consists of a smoke generating chamber and bellows. The smoke generating chamber is sealed by water, which not only provides a seal against the escape of smoke from the apparatus, but keeps the smoke chamber cool. In this chamber oily waste, tar paper or other material adapted for producing a dense smoke outlet and carried to one of the inlets or outlets of a plumbing system. Sometimes the hose taking the smoke from the machine is carried to the fresh air inlet, and the smoke is driven up through the building until every pipe connected with the drainage system is filled with dense smoke.

Gas Versus Electricity.

The incandescent mantle has saved the gas industry, and not only saved it but placed it in such a position that gas lighting by modern methods of high pressure incandescence, inverted burners, and so forth, threatens to outstrip electricity for general lighting purposes. This is no exaggeration when it is remembered that invariably the finest streets in the great cities of Europe are now lighted with incandescent gas burners, and if the high-pressure incandescent lamps be compared with the electric arc lights at some of the busy street crossings in London there can be no question of the great superiority of the incandescent gas system. In fact, in several places the electric arc lights may as well not be in use in the face of the brilliant, penetrating light of the incandescent mantle. Nor is it on the large scale alone that gas is seriously rivaling electricity. The inverted incandescent gas burner is hardly distinguishable in appearance from the incandescent electric light in the artistic lighting of domestic rooms.

Ether Waves.

One of the characteristics of ether waves, such as those of light and heat, is that they produce a distinct pressure in the direction they travel. In the case of the earth this outward pressure from the sun is said to be 70,000 tons, but this is a mere trifle compared with the vast gravitational attraction toward the sun.

IDEAL HOUSE FOR POULTRY.

Structure in Use at Prominent Agricultural College.

The poultry house represented in the accompanying illustrations is that in use at the Nova Scotia Agricultural College at Truro. It has a double roof. The light is admitted through a large window in the front of each individual pen; it is hinged at the top

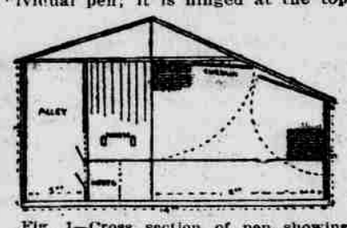


Fig. 1—Cross section of pen showing arrangement of alley, roosts, scratching floor, curtain, window, etc.

and swings up to open as shown in Fig. 1. The window reaches within about fifteen inches of the floor, in order that the sun may shine on all parts of the floor. It is desirable to have the dustbath stationed immediately below the window. The distinguishing feature of this house is the alleyway, which runs the entire length along the back wall. From this passage the drop boards are cleaned and the eggs collected. The north side of the building is sided with three-ply boards and two of building paper, the rest with two plies of boards and one of paper.

This style of house may be extended any desired length. The roosting pens are separated by boards, and the scratching part by wire netting above a board 15 inches high. The fowls of

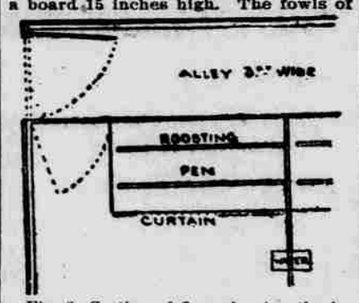


Fig. 2—Section of floor showing the interior arrangement.

two pens are watered from one vessel which extends through the partition as shown in Fig. 2.—Montreal Herald

Contents of Silos.

A silo is undoubtedly one of the most valuable and profitable structures on a stock or dairy farm provided it is properly managed. Its use enables one to keep more stock and feed them better than if no silage is used. It provides green food in winter, which is of great importance in keeping stock in good thriving condition.

It would be much better to put up one silo 30 feet high than two 14 feet and 16 feet respectively, for the reason that the silage keeps much better in a deep silo. No one having experience thinks of building a silo less than 20 feet high, and they are frequently built from 30 to 40 feet in height. The best form for a silo is circular. If built square the corners should be cut off, which greatly facilitates the settling of the silage and the exclusion of air at the angles. A round silo 13 feet on diameter and 30 feet high would hold about 75 tons of corn silage. In addition to good hay and a small grain ration a cow should have about 35 pounds of silage per day for a period of 180 days. At this rate of feeding 75 tons would feed 23 cows during the winter months.

Manure Pit Beneath Stable Floor.

F. R.—1. If manure from a herd of cows were stored in a pit beneath the floor of the stable during the winter season, would it pollute the atmosphere of the stable? 2. Could a concrete floor be built on planks several feet above ground?

1. If the floor of the stable were tight, the trap-door close fitting, and the sides of the pit were open so that the wind may blow through, the atmosphere of the stable should not be polluted by the gasses from the manure.

2. A floor of cement could be built on a plank floor, but it would require very firm foundation timbers in order to prevent cracking. A cheaper and more suitable floor for an elevated stable would consist of sawed cedar blocks, laid in hot coal tar, with sand and tar filled in between the blocks. A floor carefully laid in this way would be water tight, durable and quite inexpensive.

Lumber Required for Two Rooms.

A. H.—How much lumber would be required to build a room 12x20 feet, also a kitchen 8x10 feet long, weatherboards, lining, rafters and shingles?

Your house would require 800 feet of 2x4-inch scantling for rafters, plates and studding; 600 feet of sheeting for roof; 1,600 feet for weather boards and inside lining; six squares of shingles, 650 feet for flooring and ceiling, and 180 feet for joists. The plan of roof you give extends over the front of veranda. The above estimate is based on this plan.

Cost of Windmill.

A. H. M.—What would it cost to put up a windmill to pump from a well in which the water is 25 feet from the top; the water to be forced 25 feet to the house and 450 feet to the barn over level ground?

An eight-foot windmill on a 30-foot tower would cost approximately $75. If galvanized pipe were used it would cost about ten cents per foot, covering the distance in which the water is carried. An efficient pump to work in connection with the windmill would cost anywhere from $10 to $15.

Completed Job Too Well

Some time since a business man in a town near this city was going to leave his office for the day, and thought it was a good time to have the place renovated. Calling in a painter, he told him to putty up the cracks, paint the door, and otherwise make the place more presentable. Then he left.

The door of the office was an old-fashioned affair, and in view of the fact that every new tenant had removed the lock and put on a new one, the surface looked as if it had been used as a target for rapid-fire practice. The keyhole that was doing duty at the time was about the size of a buckwheat cake.

The painter looked at the job in dismay for a moment, but, seizing his wad of putty, he soon had the castoff keyholes plugged up as tight as a star session. After covering the door with a dose of paint, he gazed on the job with pardonable pride, and then, shutting the door, which fastened with a spring lock, he wandered home.

It was some time after the moon had gone down that the business man returned and went to the office. Pulling out his key, he tried to insert it, but for some reason the usual result was not forthcoming. Once he sought the abundant aperature where the key was wont to enter, but there was nothing doing. Next he struck a match to take a look, and then he talked too fast for publication.

The painter had not only plugged up the old keyholes, but also puttied up the new one, and the tenant was shut out in the cold zero world.—Philadelphia Telegraph.

When Age Succeeds Youth

The change in this matter of growing old, since the time when the lady of 38 felt herself too ancient to wear a flower in her cap, is interesting. It is especially interesting at that dreadful moment when we first realize that we are ourselves no longer young. It is an extraordinary moment; pain, denial, rebellion, hopelessness. It arrives in many different ways. It used to come with spectacles—but nowadays the babe wears spectacles; sometimes it creeps upon us with a little stiffening of the joints; one does not run upstairs quite as lightly as one did. It may even reveal itself in the impatience that is felt because people do not speak quite as distinctly as they should—an impatience to which the younger generation rudely refers as deafness. These are gradual intimations that we are not as young as we were. There are abrupt ones—especially there is the glance into the mirror some morning, after a sleepless night. Probably every woman over 45 has known the start of astonishment and dismay that comes with that glance—a creased and tired complexion, dull eyes, wrinkled throat; well! these symptoms need not be catalogued, they are too unpleasant. The woman who has had this slight shock before breakfast glances with a growing comfort, for as the day passes things change; her face is more alert, her eyes brighten, her double chin is, somehow, firmer. No; it was only fatigue from a bad night; not age, oh, no!—Margaret Deland in Harper's Bazar.

Patience of Married Man

At the close of the morning service those members of the congregation who lingered to exchange friendly greetings were treated to a nice exhibition of masculine patience, says the New York Press. They saw a man tie a woman's veil. It took him just eight minutes by the church clock to do it. The woman had wrestled with the refractory ends of the dotted gauze for five minutes before he undertook the job.

"I can't do anything with the thing," she finally said in disgust. "I always get it drawn too tight across the face. It flattens my nose. See what you can do with it."

"All right," said the man, and set to work.

The loitering worshipers stopped gossiping and watched the proceedings. It was a sight worth waiting for. The woman was tall and the man was short, and while she bent and ducked he balanced himself on his tiptoes and tilted backward and forward and sideways in his effort to adjust the veil becomingly. At last, after much arduous toil, he succeeded in draping it to his own and the woman's satisfaction. Then he asked for the pins to fasten it in place.

"Merciful goodness!" ejaculated the woman.

"What's the matter?" asked the man.

"What shall I do?" she wailed. "They are in my mouth. I can't get at them. You'll have to take the veil off."

Being in church, the man did not say much. He took the veil off, but it was noted by the interested observers that he did not put it on again.

Matches a Jail Luxury

"Gimme a match." A prisoner in the hold-over in the city jail pressed his face against the grating and called to a man passing by. The call for a match comes from out of the holdover fifty times every day. About 95 per cent of the men and women who find their way into the city jail are smokers. They have tobacco, or usually a few cents with which they can buy it. They seldom buy matches, though, because spending money for matches by a man who has but a few cents is considered extravagance.

"You can't imagine how many ways the prisoners contrive to save and get matches," said Jailer Emmons. "I have seen forty prisoners light cigarettes from a single match. On a day when matches are scarce a prisoner will never think of wasting a whole match. He will split it up into four pieces. This can be done easily with a pin. Then he announces to the crowd that he is about to light a cigarette and a crowd gathers about him with papers and tobacco. The man strikes the match with great deliberation and those who can't 'light up' from the match do so from the lighted cigarettes of the others. Everybody gets a smoke off of one match. Those on the outside of the cells are accommodating to those on the inside.

"The women, too, often want matches. The women are in a separate apartment, but there is a small hole through the door between the two rooms, and it is nothing uncommon to see a man hold a lighted cigarette up to the hole in the door so a woman on the other side can get her light."—Kansas City Journal.

Port Resembles a Jungle

This stretch of the Thames from London bridge to the Albert docks is to other watersides of river ports what a virgin forest would be to a garden, says a writer in the Metropolitan. It is a thing grown up, not made. It recalls a jungle by the confused and impenetrable aspect of the buildings that line the shore, not according to a planned purpose, but as if by accident, from scattered seeds.

Like the matted growth of bushes and creepers veiling the silent depth of an unexplored wilderness they hide the depths of London's infinitely varied, vigorous, seething life. In other river ports it is not so. They lie open to their stream with quays of broad clearings, with streets like avenues cut through thick timber for the convenience of trade.

I am thinking now of river ports I have seen; of Antwerp, for instance, of Nantes, or Bordeaux, or even old Rouen, where the night watchmen of ships, elbows on rail, gaze at shop windows and brilliant cafes and see the audience go in and come out of the opera house. But London, the oldest and greatest of river ports, does not possess as much as 100 yards of quays upon its river front. Dark and impenetrable at night, like the face of a forest, is the London waterside.

It is the waterside of watersides, where only one aspect of the world's life can be seen and only one kind of men toils on the edge of the stream. The lightless walls seem to stand on the very mud upon which the stranded barges lie and the narrow lanes coming down to the fine shores resemble the paths of smashed bushes and crumbled earth where big game comes to drink on the bank of tropical streams.

Praise of the Automobile

Oh, others may talk of the joys of the dance
When the music is dreamy and low,
Or the thrill of delight when the sail is unfurled
And the wake is a smother of snow;
Or the pleasure a canter on horseback affords,
Or a day with the rod and the reel;
But give me the reach of a long, level road,
And a seat in an automobile!

How the miles rush away from the tireless machine!
How houses and fences fly past!
The town is a blur, and the orchards and woods
In ribbons of green follow fast.
It's adieu to the carriage we meet as we go,
And farewell to the swift-moving wheel,
And good-bye to the trolley car we soon overtake
When out in an automobile.

If perchance it is springtime, we lunch as we rest
On a bed of blue violets sweet,
With a thrush or a robin to thrill overhead
A silvery song while we eat.
We linger a while under blossomy boughs,
An armful of fragrance to steal
From apple trees freighted with dewy pink buds,
Then away in the automobile.

Should somebody dear on the seat nestle near,
Then slackens the speed of the car,
Gliding slowly along in the amethyst dusk
By the light of the bright evening star.
There's no question to ask, and an answer to hear,
And a promise with kisses to seal,
And later the bliss of a honeymoon tour
For the pair in the automobile.
—Minna Irving, in Leslie's Weekly.