

NEW DISCOVERIES



ALL OVER THE EARTH

How Your FACE BETRAYS Your REAL SELF

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THE face is a vibrating encyclopedia where all who run may read deep matters. It is but an amateurish art to find the mind's construction in the face.

How to BE YOUR OWN MANICURE

NOTHING adds more to the beauty of a person's hands than well-kept nails. While it is almost impossible to improve the shape of the hand itself, much can be done with the expenditure of a very little time and trouble to improve the shape of the nails.

Images of a withered life—all are imprinted in the face. Magicians, fortune tellers, palmists, astrologers, mind-readers and other preying creatures who have cunning words to exchange for good coin of the realm, are alertly practised in face reading.

Every little fold in the face is but a muscular mould, a fleshy clay model of your thoughts. All these facial lines and expressions are but the limbs and outward flourishes of your innermost feelings.

How can you model your countenance so that others may read there only the thoughts you wish them

Even the Shape of Your Eyebrows Helps to Indicate What Your Character Is

to read? How can you learn to read the characters of those around you by studying their faces? There is no certain formula for attaining either of these desirable results, but there are many well-established facts which it will be of great assistance to us to know.

As a guide to character the eyebrows are of great importance. Independent, impulsive and vibrating characters are shown by eyebrows, which are situated boldly, prominently and moderately high on the forehead.

Passionate and deeply brooding natures often have heavy, forwardly prominent eyebrows just above the eyes and well down on the forehead.

Eyebrows which meet almost in the middle indicate a type of acuteness and doggedness that runs in one direction. Persons who are inclined to be sharp in their practices may have such eyebrows.

Filmy, light and thin eyebrows go with unemotional, superficial and buoyant characters. Almost semi-circular eyebrows, medium in breadth, and neither very thin nor very thick, are part and parcel of those who have a sense of humor as well as intelligence and thorough-going honesty.

Eyebrows which hang down over eyes which are covered by half-closed lids show a suspicious, untrustworthy, egotistic type of humanity.

Wavy eyebrows, neither very thick nor very thin, are a sign of a happy disposition. The eyes below them are usually "laughing eyes."

The yielding, plaint, easily influenced nature of some men is typified in very much curved lips. The lip that trembles shows instability, timidity, pessimism, cowardice and a tendency to unreasonable likes and dislikes.

Even, straight, unstrained lips point to firm, honest



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and intelligent habits of thought. There is a variety of the straight lip, however, which has been almost bitten into shape, which is repressed and mangled like a Chinese lady's foot, into a sign of rectitude, which its owner does not possess. This signifies artificiality, obstinacy, snobbery and blatant hypocrisy.

A turned, crescent mouth with drooping corners indicates the vanity and silly self-thinking of a complaining, tearful, supersensitive nature.

A lower lip that hangs down bespeaks an irresolute heart and a tendency to dishonesty. It is the sign of expected punishment.

Thick, heavy lips mean an open, frank, over-generous, unsuspecting character. Thin lips spell selfishness, supreme vanity and a lack of sympathy for one's fellow-men.

The combination of a sharp nose, a smirking smile, thin lips, blond hair and complexion goes with arrogance, intolerance and a smug hypocrisy which are often masked by a debonaire, Beau Brummel manner of a lofty pedagogical air.

The eyes, too, mean much if you would read character. Mobile, shifting, restless eyes show a diseased, discontented, dishonest, insincere state of the mind.

Strong, firm, bold, steady eyes go with a character which suits such adjectives.

Full, dark, luxuriant eyes bespeak an artistic or a passionate nature. Dreamy, idealistic eyes are often met with in those who are enthusiastic or hysterical in their aspirations for mankind.

Various blends of the facial expressions described here may change radically, or at least modify the common ground of their meaning, but as a rule there is little confusion. The facts revealed by a person's eyebrows or lips usually find corroboration in every other feature of his face as well as in his thoughts, speech and actions.

Why Merely "SWATTING" FLIES IS NOT ENOUGH

"SWATTING" flies is a practice that should be encouraged, but, as English sanitary experts are pointing out, it is ridiculous to expect that these pests can be exterminated by this method alone.

The female fly in Spring emerges from her hibernating nook and sets out to lay her eggs on some convenient heap of refuse or filth. She lays about 120 eggs at each sitting, of which there are several.

In five more is a fly in search of food. Mouth, legs and body get smeared with its food, so not only does it spread disease by swallowing germs, but furnishes them with a suitable breeding place on its own outside. Of course, on its wanderings on human food, especially milk, it leaves poison thereon to spread disease.

Curious Animals That Are "WALKING FORTRESSES"

IN these warlike times, a survey of the methods of attack and defence adopted by some of the lower orders of creation affords a theme of more than ordinary interest. One meets with some animals which simply invite their neighbors to tread on their coat tails, and those who accept the challenge are generally very sorry for themselves immediately afterward!

The "fretful porcupine," when red-handed violence overtakes him, thrusts his head between his fore legs and turns his back on his enemy, as if unwilling to witness the pain he is about to inflict. For when in this position he presents a most formidable and dangerous armament of spines as sharp as needles and far stronger.

The spines, both of the hedgehog and the porcupine, are nothing more than excessively enlarged hairs, and on the bodies of these animals every gradation between hairs and spines can be found. But in the two animals now to be discussed the armature is of a very different kind.

In the armadillo the body is invested in a coat of mail, formed by a bony back-shield, hinged across the middle, and overlaid with horny plates. The crown of the head and the tail are similarly protected. When threatened

during his walks abroad, all this armoured cruiser has to do is to double himself up, so that his head and tail come together and close the only aperture left by this acrobatic feat. The South American armadillo has a cousin in Africa, the manis. In this animal the body is protected by a cuirass of horny plates, formed of agglutinated hairs. His mode of repelling unwelcome advances is to bend himself double and envelop himself with his tail. Peaceful persuasion must be long-sustained indeed before it will prevail in inducing him to unfold.

But the manis has another method of escaping unwelcome attention. He will grip the bole of a tree with his hind legs, and then, supported by his tail, he will bend his body earthward till it makes a right angle with the tree. Thus poised he will remain motionless for hours, and looks for all the world like the stump of a broken branch!

The device of the armadillo has a parallel in the tortoise. But here the under-surface of the body is also protected by a bony shield. It is not necessary, therefore, to double up the body; the only apertures are closed by the head and fore legs and the tail, whose surfaces are armoured. But in some of the tortoises the back shield is hinged, so that it can be drawn downward to close the fortress against invaders. In other species the hinge is formed across the breast shield, but the effect is the same.

How to Make Your KITCHEN RANGE Heat the WHOLE HOUSE

A DESIRABLE thing in a country house would be a combination of kitchen range and heating apparatus. This is equally desirable in the interests of economy and labor saving. At present a great deal of expensive coal is wasted, especially in Winter, by the maintenance of separate cooking range and heating furnace. The labor of keeping the two going, in addition to the expense, is often so great as to drive people away from housekeeping.

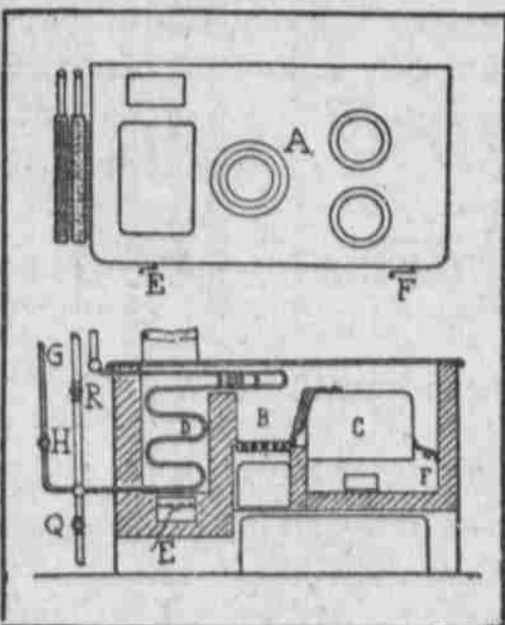


Diagram Showing How the Kitchen Range Can Be Made to Heat the Whole House.

Experiments made with an outfit including 204 square feet of radiators and a heating reservoir of forty gallons of water gave the following results:

- Total water in installation, 125 gallons.
Period of heating, three hours.
Coal burnt, about thirty pounds.
Total calories produced, about 45,000.
Calories liberated by the radiators and pipes, about 15,000.

These figures are said to represent half the coal consumption that would be required by separate heating and cooking appliances.

The diagram below shows the ingenious manner in which the heat is obtained from the fire when needed for heating purposes and shut off when not needed.

In many attempts to solve this problem the apparatus has used up in unnecessary heat in the cooking range in Summer all the coal saved by the combination in Winter. This difficulty is said to be entirely overcome in the present apparatus. The fire can be made as small as desired in Summer.

Figure A represents the upper surface of the cooking range; B, the fire; C, the oven; D, the serpentine generator, with its collectors; E, the register to shut off and regulate the heating of the washing water; F, the register of the hot water for washing to the serpentine generator; G, the return of the hot water for washing to the serpentine generator; H, the valve to stop and regulate the heating of the washing water; Q, the valve to shut off or regulate the hot water for the radiators; R, the valve that admits fresh water to the pipes.

How the Earth EBBS and FLOWS Like the TIDES in the SEA

EVERYBODY knows how the ocean ebbs and flows in what we call tides. But until now it has never been understood that the solid parts of the earth's surface are subject to a similar ebb and flow, although of lesser extent than the ocean.

The fact that there are tides of about a foot in the earth's surfaces of rock and soil has just been scientifically demonstrated at the University of Chicago.

The demonstration was made by a series of remarkable experiments extending over a period of two months.

First a pipe, six inches in diameter and four hundred feet long, was buried in the ground at a depth of six feet in order to insure constancy of temperature. This pipe was then half filled with water.

At intervals of two hours both night and day for two months measurements were made with microscopes of the changes in the level of the water at both ends of this pipe. These measurements showed that the attraction of the sun and moon caused regularly recurring tides in the pipe just as it does in the sea.

The result of the experiment shows the striking fact that the interior of the earth is not a molten, viscous mass, as has been popularly believed, but resists the tidal forces of the moon and sun about as it would if the earth were made of solid steel.

Nevertheless, the earth, in spite of this high rigidity,

EELS the Most MYSTERIOUS of Fish

OF all the forms of fish science has studied the eel is the most remarkable and the least understood. Its life history is mysterious and as slippery as its own skin.

Its breeding grounds are the mid-Atlantic, at what depth nobody knows. During the year the larval eel remains at sea it never eats and grows constantly smaller. It finally starts swimming toward the mouth of some fresh-water stream—often one that is a thousand miles away.

On arrival at its destination the eel promptly changes from the thinness of a visiting card and a transparency that permits only its glistening black eyes to be seen to

behaves as an elastic body, not liquid, of course, but still subject to the same influences (producing tides) as are the oceans which form part of it.

This discovery is of the greatest importance from an astronomical and geological point of view, and other similar experiments are to be undertaken.

The pigmented snake-like fish that is trapped and speared on the coast and in the rivers.

As soon as the eel has brought forth its first spawning of 15,000,000 to 20,000,000 eggs it dies, but just how its existence ends or why it should be cut off so short remains a mystery. One thing is certain, no adults come in from the sea, no adults remain in the streams.

The eel is a vertebrate animal which emerges from an egg less than one-twentieth of an inch in diameter. It grows to a length of three inches in perhaps a year, and during that time is buffered about on the high seas and drifts over a distance of 1,000 miles or more. Yet during all this period the eel takes no food whatever, and is doubtless incapable of doing so, owing to the unprepared condition of its digestive organs.

Your Body a MATCH FACTORY

A CHICAGO chemist, by a recent analysis, found that every human body contains more than two pounds of phosphorus. This would be sufficient, could it be extracted, to make 5,000 packages of friction matches. This phosphorus, it is claimed by scientists, is an essential to health and vigor. Were it not for phosphorus our bones would be more liable to break. It is also believed by some authorities to be

a valuable stimulant for the nerve cells. Besides the phosphorus every body holds a number of ounces of sodium, and nearly three-fourths of an ounce of potassium—enough for the laboratory work of a good many university classes in experimental chemistry. And the few grains of magnesium found in every human body would be sufficient, if it were possible to extract them, to furnish a brilliant display of the kind of fireworks known as "silver rain."