

FOR FARM AND GARDEN.

TO KEEP HARNESS IN GOOD CONDITION.
 Harness needs frequent greasing or oiling, but before this is done it should be blacked. Common shoe blacking will do for this purpose. Without it the leather will get rusty. After the blacking and polishing the oil is applied, and there is nothing better than vasoline for this use. The harness should be all taken apart, and if it is dry and cracked it will be improved by washing with warm water and soap before the blacking and grease are applied. The leather should be saturated with the oil, and then rubbed with a cloth to remove the excess that will not soak into the leather. Harness should be kept from dust, and in a not too dry place. Mold is destructive, as it feeds on the leather, and soon weakens it.—New York Times.

GAPES IN CHICKENS.

What is called "gapes" in chickens, and even grown fowls, is due to the presence of a minute worm in the windpipe or trachea of the fowls obstructing the air passage, causing the peculiar gapping or gasping of the chickens for breath, hence the name. It can scarcely be called a disease in the general acceptance of the word, although it is now pretty well known that all diseases of both animals and plants are the results of an attack of either vegetable or animal parasites. The gape worm or parasite, lives and breeds in water and moist places generally, and is picked up by the chickens and becomes lodged in the trachea. If a large number get into this organ they prevent breathing and cause the death of the chick, otherwise they only produce a temporary injury. The gape worm has been very destructive to the peasants in large game preserves in France, consequently we may conclude that wild hens are not exempt from this malady. In Europe feeding onions, garlic, and similar strong-scented vegetables are considered good preventives, and in addition medicines are used in the drinking water. The French poultrymen recommend putting fifteen grains of salicylate of soda into every quart of water given the chickens for drink. One of the best preventives where only a few fowls are kept is to change the yard to new grounds annually, returning to the old one after two or three years.—New York Sun.

BWARE OF FAT COWS.

Beware of fat cows! This alarm is sounded strictly for the benefit of good progressive dairymen. Any one can succeed in keeping cows poor in flesh simply by starving them while only a generous feeder can make them too fat. While generous feeding is a necessity with good and profitable dairying, yet the condition precedent for profit is that the cow should apply her excess of feed to milk and not to fat making. The first thing, of course, in getting up a good herd is to have large milkers, and they should be persistent long milkers, and also rich milkers, but such cows will not be profitable milkers if they get too fat. Such cows waste lots of their food in making fat and should be turned over to the butcher where they belong. As a rule fat cows will not give rich milk, because the fat of the food goes to the body instead of the pail. The proof of this, however, must not be taken from the looks of things alone, but some kind of test like the Babcock must be used. For instance there is no more common mistake than to suppose that cows giving very yellow milk are extra good butter makers. There is no more common delusion than to think that a yellow color goes with richness in milk. Now, the fact is that yellow milk contains no more, if as much, butter fat as white milk. Appearances are often deceptive in this line. Cows with yellow skins are no better for butter making than those with white skins; common belief to the contrary notwithstanding. I was once a principal performer in some interesting experiments in this line. We classified the Jerseys in a herd, picked out the yellow skinned milkers. The whites made more cream. Yellow skin, and yellow milk generally go together. Guernseys have more yellow skins than Jerseys, but do not give more cream or make so much butter. Richness is a rare or individual characteristic.—Home and Farm.

FOR FARMERS WITH BOYS.

Whether or not a boy can be contented to remain with his father on the farm, depends greatly upon the character of the boy, writes Ellis Rockwood in the American Agriculturist. Many boys are fond of excitement, and the amusements which a city life affords are more attractive to them than

what they are pleased to term the humdrum and drudgery of the farm. It is this mistaken idea of what constitutes a "humdrum" life that takes so many boys to the city. To some minds it would seem a far more free and attractive occupation to plow and sow, ride the binder and even do the "chores," than to work behind a counter day after day. It is nearly always to the farmer's advantage to keep his boys on the farm. They naturally take more interest and will do better work than hired help. But very few boys are content to work at home without a visible compensation of some kind. While, as said before, much depends upon the kind of boy, much also depends upon the kind of father. Boys will be boys, and the father who realizes this is the one whose sons are content to stay on the farm. Many fathers expect too much of their sons, both as to their work and their judgment. Their failures too often call down quick and sharp reproach. No bright, high-spirited boy will bear being constantly found fault with. If fathers would more often make companions of their boys it would be better. It is neither wise nor expedient for the father who would keep his boys at home to keep himself apart from them. I know of one instance in particular where fathers and sons are almost inseparable. In rides to town or on business, side by side in the field, or with guns and dogs, off for a day's hunt, they are always together. The fathers whom I have known to be most successful in keeping their sons on the farm have early given them something to particularly interest them in the farm, a share of the income in some way, either of stock, or of money, was their own to do with as they chose. They were trusted with the best team, and learned to take pride in their work, to the mutual advantage of both. Our most successful farmers financially today are the ones whose sons work at home. It is not to be much wondered at that some boys depart as soon as possible from their father's roof. Boys will have recreations and amusements, and if these are not provided at home they will seek them elsewhere. Some boys are not to be kept at home by any means, and it is better that these should go. They may be more successful in some other vocation and should be given a chance to try. The majority, however, may become contented and well-to-do farmers with proper encouragement and financial aid.

FARM AND GARDEN NOTES.

Many trees are injured by injudicious pruning.
 There is no fear of over-production of eggs at the rate this country is now importing them.
 Good wool and profitable wool cannot readily be grown on anything but a healthy flock of sheep.
 In nearly all cases breeding stock in the full prime of life and health always gives the best and most satisfactory returns.
 When the hens are laying regularly more food should be supplied and with more food comes the necessity of more exercise.
 No matter how good an animal may be at the start it will need good food and constant care in order to enable it to reach its inherited possibilities.
 It will lessen the expense in the grain ration if you plant and cultivate the ensilage corn so that it will make ears. Cut it about the time the ear is glazing.
 It is claimed that corn stalks, but in lengths of about one to one and a half inches, will serve as a sufficient mulch for strawberry plants. A single layer will be sufficient to protect the plants if the weather is not too severe.
 If there are poor spots on the farm improve them. Do not let them lay idle. Sow to grass and plow under. The farm on which the writer was born had ten acres of poor soil. Nothing was done with it until a few years since, when it was improved by sowing orchard grass and turning it under. It was then sown to wheat and another crop of orchard grass turned under. In this way and by a free application of barnyard manure it was made a good field. The soil was sandy.

After potato tops have died down no time should be lost in getting the crop out of the ground. There is no more growth then, and if the vines are at all diseased, the longer they are left over the potatoes the greater will be the danger that the tubers will also be affected. Besides, the cost is less to get out the potatoes early while the soil is dry, than after the fall rains have made it muddy and greatly increased the difficulties of securing the potatoes in good condition.

SCIENTIFIC SCRAPS.

The oak furnishes food for 309 species of insects.
 With the present optical instrument in use 50,000,000 stars are rendered visible.
 Labrador has 900 species of flowering plants, fifty-nine ferns, and over 250 species of mosses and lichens.
 Professor Milne, the earthquake expert, says that earthquakes have no connection with magnetic influences.
 Public aquariums are not generally kept open at night, strong artificial light being injurious to the fishes' eyes.
 Flammarion, the French astronomer, says that the earth is cooling very rapidly. Europe has lost five degrees this century.

Plants are affected by various substances, just as animals are: electricity will stimulate them, narcotics will stupefy and kill them.
 Oil extracted from the maize is one of the best known illuminants but is not generally manufactured on account of the expense of making it.
 The amount of fatty matter or oil in maize is far greater than in wheat. In the latter oil composes about 1 per cent in the former from 6 to 8.

A bread and butter tree from the French settlement on the Gaboon was recently sent to a professor at Nancy to analyze. The tree yields a fatty substance cray-cray, resembling butter, and a grain containing 80 per cent of fatty matter from which very nourishing bread is made. The tree is an Irvingia.

A test has been recently made of a new locomotive constructed to use crude petroleum as a fuel. The report says that the engine steamed very rapidly, and emitted little or no smoke. The locomotive was built at the Baldwin Works, in Philadelphia, under the direction of Superintendent Vanclain, who has had charge of the construction of the many "flyers" that have been turned out there. The test run was made between Baltimore and Philadelphia.

It is proposed to construct a pipe line 350 miles long from one of the bituminous coal fields to the seaboard, through which is to be pumped a mixture consisting of seventy-five per cent of finely pulverized coal and twenty-five per cent water. The coal dust will be dried and purified on arrival here, and can then be used for fuel. The steaming properties of coal dust, if it is properly burned, are known to be great, and it is claimed that this method of transportation will be not only possible but economical.

Japanese Politeness Not Genuine.
 In the daily social intercourse of the people—and especially, of necessity, among the better classes—the effects of the characteristic sentimental temperament are constantly apparent. Of these effects, some are such as to give an appearance of great delicacy and beauty to the details of life; but others impress the more robust and practical Westerner with a sense of insincerity and weakness. The politeness of the Japanese is marked by all travellers; it has passed into a proverb. To those who are willing to take the purely sentimental point of view, many of the national habits are most delightful. But none are more severe in the feeling of repulsion which is produced by much that is characteristics of polite Japan, than some of the natives themselves, on return from a life of several years in foreign lands. "A rough manner with a kind heart" wrote one of these natives—"is far better than a petty artificial politeness with no heart-meaning.—Scribner.

Eighth Wonder of the World.
 One of the most remarkable cases of extraordinary musical talent in a child is that of Betty Jones, the baby accordionist at Assateague Island. Betty is not yet four years old and executes on the accordion all of her favorite songs with skill and delicacy. She discovered her marvelous aptitude for music herself when but two and one-fourth years old. Fondling her father's accordion one day she recognized the different notes of "Jesus, lover of my soul," and in a very short time learned to play it with ease and accuracy. She has delighted numerous visitors to her home by her wonderful skill, and is never so happy as when given her instrument and asked to play. According to the writer of the above, if he is any judge, the young lady in question must be the eighth wonder of the world.—Peninsula, Md., Press.

England is said to have warned the Porte that its investigation of the outrages in Armenia must be thorough and satisfactory to the Powers.

HAIRDRESSING.

THE NEWEST ARRANGEMENTS IN WOMAN'S HAIR.

Collures Are Parted and Full Colls Are Worn Low On the Neck—Certain Styles Suit Certain Faces.

THE hats have revolutionized hairdressing. It is a bit comforting to think, however, that there will not be a total revolution in style, for French hats rarely suit English faces, and English bonnets are seldom chosen by Americans. The poke bonnet which has such ugly or beautifying possibilities originated in France and it is but natural to infer it will appear in New York. Indeed, it has made its advent already, says the New York Telegram.

The thing that most concerns the woman of to-day in the fashionable line is the new arrangement of the hair. The bewitchment in jetty locks and golden curls is really not merely an agreeable romance of poets. Every woman can practically prove the transfiguring charm of a becoming coiffure and discover for herself the magical effect of increasing or decreasing her apparent age by different ways of dressing her hair.

No. 1, in the double column illustration, shows the coiffure much praised by man. It seems to be ideally feminine to wear one's tresses arranged with a parting. It is much in vogue now, but the only woman who can afford to dress her hair in this Madonna-like mode is one who has the face of a St. Cecilia or one with regularly modelled features,



VARIOUS STYLES IN HAIRDRESSING.

whose lines have all the exquisite softness and tenderness characteristic of happy youthfulness. Unhappily, this style of hair dressing is the most trying of all ways. It apparently adds years to the actual age. If the face is long, it makes its length more conspicuous. If the brow is low, it gives heaviness and seems to detract from the spirituality and intellectual-ity of the countenance.
 No. 2 gives a profile view of a pretty modification of the parted coiffure. The hair is waved from the front, and a few light curls grace the forehead. The full, low coil is especially adapted for day wear and the present style of millinery. It should be avoided, if not absolutely shunned, by the woman whose nose is inclined to be small and "tip-tilted, like a flower," as some sweetly humane poet puts it.
 No. 3 is among the latest styles for evening wear. It is neither high nor low, and gracefully fulfils the requirements of fashion. This arrangement of the hair is especially felicitous for an angular face, which needs the waves and curls and coils to give it softness and subdue hard lines.
 Although the prevailing tendency for hair dressing is herewith set forth, it behooves every woman to consider her individual needs in arranging her "crown of glory" and to individualize the fashion to suit the shape of her head and the modelling of her face.
 No. 4 is a modification of No. 3. It gives a greater height, retaining a suggestion of the style of last season, and yet not losing the indefinable air of being quite up to date.

The tendency of the hour is to wear false hair and flamboyant arrangements in the shape of puffs and skeleton coils to give the impression of luxuriant tresses. Of course, to be in harmony with the flaring, flaunting sleeves, skirts and frills that are the vogue, it was an artistic necessity to add width, breadth, depth and all dimensions to the head or it would look exceedingly small and out of proportion.

WIDE BELTS.
 Wide belts are among the novelties to allure feminines who delight in decorative fallals. Some of these girdles are almost as wide and deep as a bodice. The "Butterfly" belt is among the prettiest of these adornments. It is made in a variety of materials. The most elegant combination is in satin ribbon of any color. The "Butterfly," which does duty as a buckle, is entirely composed of a pearl and crystal or jet butterfly.

PINK-LINED VEILS.
 Simplicity in veils is decidedly passe. Most of the new ones are trimmed with either lace, ribbon or jet—some in plain net have a ruffle of lace about an inch and a half wide, headed with rows of narrow ribbon, not unlike those used in our mothers' flirtation days.
 Again, coarse net veils are lined with pink chiffon, thereby lending the tints of youth to an otherwise ordinary complexion.

as is preferred. The curve of the wings is especially adaptable and becoming to the blouse fronts in chiffon. The belt is finished with a rosette in



BUTTERFLY BELT OF CRYSTALS AND PEARLS.

the back. Everything in nature has been plagiarized—not even the cabbage has escaped, for the little ornamental "cabbage" bows are modeled after this humble vegetable. Fashion seeks inspiration everywhere, and the wonder is what next in nature will be counterfeited in the modes of the hour.

EMBROIDERED CHIFFON FOR TRIMMING.

The popularity of diaphanous trimming fabrics continues, and embroidered chiffon is one of the favorites of the moment. Black chiffon embroidered in gold, blue, pink, pale-green, indeed all shades of color, is much liked for trimming black dresses. A

black satin waist is almost covered with chiffon about a quarter of a yard wide. The ground of this is black, the edge is embroidered in pink, and tiny rosebuds in pink with green leaves are scattered over it. Some of these trappings are close fitting, others are ruffled and set on with just enough fullness to make them graceful. Crimped and plaited chiffon comes by the yard and is very easy to use, besides furnishing ingenious women with the opportunity to adjust and arrange in novel and becoming fashions these exquisite garnitures.

FRENCH TAILOR-MADE JACKET.

The illustration shows a close-fitting jacket bodice in fawn-colored faced cloth, trimmed with pointed lapels and wristlets in chestnut brown moire silk. Binding and gauntlets are in plain bengaline. Wavy brown braid tipped with trefloils accentuates the gores and the seams at the back, which



A TAILOR-MADE JACKET.

extend as flutings below the waist, the remaining part of the waist being moulded to the figure. Large tortoiseshell buttons are used. Cravat tie and upstanding collar in brown silk. Black velvet toque and quills.

AT KENESAW MOUNTAIN.

FOUR COMBATS

General Howard's Account of the Great Engagement.

The Kenesaw mountains—sometimes called the Kenesaw, as I suppose on account of an apparent cross-break in the range giving apparently two mountains—is the highest elevation in Georgia west of the Chattahoochee. From its top Sherman at a later date communicated with Gen. Corse, 16 miles northward at a crossing of the Etowah. The same mountain, shaped and attractive, is pointed out to visitors from high buildings in Atlanta. It is the natural watershed, and was in 1864 upon its sides mostly covered with trees. From its crest Johnston and his officers could see our movements, which we believed to be hidden, and have recorded accounts concerning them in wonderful detail. The handsome village of Marietta, known by Sherman in his youth, lying eastward between the mountain and the river could be plainly seen. If not too extensive to defend, Johnston could not easily have found a stronger military position for his great army.

Before entering seriously upon the battle, or rather the actual fighting of Kenesaw, let us endeavor to get before our readers the relative positions of the two great opposing hosts, Union and Confederate. Prior to the battle of Culp's (or Kolb's) Farm, which was fought by Hooker and Schofield against Gen. Hood, the entire Confederate army had taken substantially its new line; that is to say, the Confederate right, which abutted against Brush Mountain on the north, took in Kenesaw, and passing down the southern slope, continued on to the neighborhood of Olley's Creek. It was virtually a north and south alignment, probably not continuous. The bent line was convex toward us. Its right was protected somewhat by the rough Brush Mountain and Nooney Creek. Its center had Noose's Creek in front of it, but the strength of this almost impregnable part was in the natural fortress which that portion of the Kenesaw gave.

The intrenchments, barriers or breast works everywhere, whatever you call those Confederate protecting contrivances, were excellent. They had along the fronting slopes abundant "sashings"; that is, trees felled toward us with limbs embracing each other, trimmed or untrimmed, according to whichever condition would be worse for the Yankee approach. Batteries were so placed as to give against us both direct and cross-fires.

To my eye Kenesaw there at the middle bend of Johnston's long line was more difficult than any portion of Gettysburg's Cemetery Ridge, or Little Round Top, and quite as impossible to take; especially where the works were thoroughly manned and strongly held, as were the Marys Heights of Frederickburg. From extreme to extreme point, that is, from the Confederate infantry right to the actual left in a straight line, must have been six miles.

The reports show that Johnston had just before the battle of Kenesaw received reinforcements from the Georgia militia under G. W. Smith. His numbers at this terrific battle are not now easily discovered or estimated but standing so much as Johnston did on the defensive behind the prepared works, his losses were hardly to be considered as great as that I think at Kenesaw he had, after G. W. Smith's arrival, as many men as at Resaca. My judgment is confirmed by the surprisingly long defensive line which he occupied.

Hook at first had the right, covering all the wagon approaches and trails from Ankersmith and the north and the wagon and railroads that ran between Brush Mountains and the Kenesaw.

Loring, the Confederate commander who now replaced Polk for his custody and defense had all the Kenesaw front, including the southern sloping crest and the ground beyond the Marietta and Canton wagon-roads.
 Hardee's Corps began there, crossed the north highway (the Marietta and Canton mountain road), and gradually drew back till his left was somewhere between Kolb's Farm and Zion's church, that part of his force looking into the valley of Olley's Creek. I presume as I have already intimated, that the Confederates did not have continuous intrenchments all along the front. There was no necessity for such abundance; but they did have "more than the usual number of lunettes and advanced works on spurs and commanding hills"; so writes Gen. Cox.

A good report was given by a Confederate soldier of a canon on a convenient knoll, associated with another on a neighboring height of like description, will usually enable a general to defend much territory against attack.

Both Sherman and Johnston understood this, and were never willing to thrust a column between the knolls into the jaws of such a trap. Confederate Jackson, a distinguished cavalry Colonel, using artillery and cavalry, watched and extended the left of the Kenesaw into the valley of Olley's Creek, while the swift-moving Wheeler in a similar manner took care of the right and the open country eastward, embracing all that threatened region north of Marietta.

Without just now in actual detail, bringing forward our armies into the battle before, the Confederate's Kenesaw line, I will say generally: Blair, with his Seventeenth Corps had come up from the west. He brought enough men to compensate for Sherman's previous losses; so that, like Johnston, Sherman had about the same numbers as at Resaca. The army of the Tennessee, with our Blair on the left, faced Hood. A short distance beyond, eastward, was Garrard's cavalry, trying to keep back the Confederate cavalry of Wheeler.

Thomas, with his three Union corps, touched the middle bend opposite Loring and part of Hardee. Hooker's Corps made Thomas's right; then came, on the extreme right the Twenty-third Corps and Stoveman's cavalry, under Schofield. The Union right, already by the 20th of June, reached as far south as Olley's creek. The whole infantry stretch of Sherman's front was at that time fully eight miles.
 There are four distinct combats which ought to come into the battle of Kenesaw; for both hosts were there vis-a-vis, for the struggle:
 1st, the combat with Wheeler's cavalry near Brush Mountain;
 2d, the cavalry combat against Jackson;
 3d, the battle of Kolb's farm the 23d of June;
 4th, the determined attacks and repulses at different points all along the Kenesaw line during the 27th of June.

A Queer Plant.

The only known variety, species, or genus of plants known to botanical investigators in which the flower grows from the leaf has just been described in the Paris Journal de Botanique. This queer plant is a native of tropical Africa, and in it the flowers are borne along the midrib of the back of the leaf. The description referred to above is by Prof. Hua, and is a real treat to all lovers of the odd and curious in nature.

Prison.

A suggestion for improvement in prison construction provides for cells built of iron or steel pipes which intercommunicate, so that water may be kept under pressure in them. If any attempt be made to break into or out of such a cell, the smallest puncture in a pipe will cause a leak and give instant notice, through the reduction of pressures which actuate a system of electric alarms.