

NEW YORK FASHIONS.

Designs For Costumes That Have Become Popular in the Metropolis.

New York City (Special).—The newest head-dresses add not height but breadth to the wearer. In consequence, they are not so generally becoming, but a change is what fashion is ever after, even if it be a change for the worse. The upstanding sprigs of maidenhair and ivory green velvet, so novel but a few weeks ago, now find themselves displaced by the regulation classic chaplet of ivory, such as bound the head of the victor in the Olympia games or the winner of the prize in a poem-contest. Rose and geranium leaves also appear in this same chaplet fashion, and one merit of the wreaths is that they may be worn with the hair dressed either in freedom or up-to-date Parisian mode. The first figure in the cut shows the effect of this broad head-dress. Upon



SMART HEAD DRESSES.

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TWO WAYS OF WEARING THE OSPEY.

the very tall girls that seem to tower above the rest of us in such numbers nowadays it is especially becoming. A chic, if less novel head-dress has a circle of plaited ribbon in any color to suit the costume, white preferred. The circle is finished with a small bow and ends and a single jeweled ostrich tip in white. This ornament may be worn so that the plume rises directly in the front or at the side. It requires high hair, however.

ing. The first is in cream ponge silk, with insertion and lace, and is worn over a colored silk; the other is in white silk trimmed with lace and ribbon.

Mitten Sleeves.

Mitten sleeves have undergone several interesting variations since last season. For instance, one of the newest mitten sleeves reaches from the thumb to elbows, and is fastened to the shoulder by a lattice work of velvet ribbons. Another sleeve, that only the girls with perfect arms should attempt, reaches midway to the elbow. A second sleeve half covers the hand and forearm. Upper and lower sleeves are connected with a lattice work of velvet ribbon. On a perfect arm this sleeve is beautiful, but unless the elbow is dimpled and the upper and lower arm in perfect proportion, it is very ugly. Another pretty sleeve that is being used on many of the newest dinner gowns is lace on the under side, the edges strapped together with narrow bands of velvet ribbon, pulled through jeweled buckles.

The Newest in Millinery.

Incongruity in millinery has long ceased to cause surprise and nothing that the spring season develops may be expected to excite any special astonishment, no matter what the mixtures, for certainly far and tulle are as extreme as any two mixtures can be. Already there are toques made of chiffon, striped with fancy satin straw braids in different colors, and flowers are fast usurping the place of made up feathers. A large toque of snow white tulle trimmed with eiderweiss blossoms and a large bow and band of black gauze at one side, is one of the novelties. Gardenias are one of the favorite flowers of the moment with the always favored violets. The latest hats, which, however, are not really the spring models, have rather a high small round crown encircled with cords or tuks, and perhaps covered with a net work, hand made. Plaitings of tulle on which chenille is sewn like a cord are one of the popular hat trimmings.

Feather Fans Again.

Large feather fans are once again being worn, though the smaller ones predominate.

For Spring Millinery.

A basic fact of importance in the millinery line is the probability, almost amounting to certainty, that the new hats will be higher in price than ever, owing to the increased cost of



PARTY DRESSES FOR GIRLS.

Many heads appear dressed for evening with no other ornament than a single long osprey in the dominant color of the costume, set at one side and curving over the middle coil of hair most gracefully. The osprey starts from a tiny rosette in bells ribbon the same color as the osprey, or sometimes a jeweled clasp or buckle holds the plume in place. This is one of the most effective because most simple modes of adorning coiffure. To give that breadth to the coiffure that the latest dictates decree, the osprey is set at one side of the coil and extends out instead of up. With the hair parted in front this way of dressing the head is a decided change from the long dominant pompadour and its aigrette that towers straight aloft.

everything employed in their making. That flowers are to prevail in hat trimming seems assured. Some Paris models are made wholly of the smaller blossoms. A Spanish turban, for instance, is all of violets, with the stems drawn over the edges to form a facing. The crown is of violet leaves with a drapery of lace around it. The brim is wide in front and narrow at the back.

Ostrich plumes are to be used in combination with flowers of the larger varieties. A toque of white tulle, with crown of creamy Irish lace, has lace of the same design twined in the brim, which is caught back at the left front by a knot of dahlia purple panne velvet, held by a rhinestone ornament. From under this knot a single white ostrich plume sweeps over the left side of the crown to the back.



SALON FOR SPRING WEAR.

Under the brim, at the right, near the back, is a cluster of crushed velvet roses in dahlia shades. Salon hats will be more the rage than ever.

* AGRICULTURAL *

Reclaiming Abandoned Farms.

A farmer in Paxton, Worcester County, Mass., who settled upon an abandoned farm about two years ago, is reported to have raised on eight acres this year 7500 bushels of potatoes, 25,000 cucumbers—the latter from a single acre—800 barrels of cabbages, 700 bushels of tomatoes, 350 barrels of carrots, 600 bushels of parsnips, 1100 bushels of turnips, 400 bushels of beets and 1100 heads of cauliflower, besides squashes and some other truck and libitum, and all the vegetables used by the family. Of course it is presumed that these products were marketed at a profit, and that being the case, it is easy to see why many of New England's abandoned farms are being reclaimed.—Boston Cultivator.

Growing Turnips.

We have never seen a crop of 1000 bushels of turnips grown on an acre, though we saw one field that came very near it, exceeding 900 bushels, if we remember rightly, but at a farmer's institute in New Brunswick one speaker told how he succeeded in growing 1000 bushels per acre. He took a poor piece of ground in the fall, and after he had plowed it he put on thirty tons of manure to the acre and harrowed it in. He wants no manure plowed in unless it is to be plowed up again in the spring, harrow lightly and furrowed two feet apart about two inches deep. In the furrows he strewn 250 pounds of superphosphate to the acre. He uses two pounds of specially selected turnip seed to the acre. When they are two inches high he thins them to eighteen inches apart. After this he keeps the horse cultivator running two or three times a week between the rows. As he grows them principally as a succulent winter food for his stock, he sows early, that they may have time to grow. When we used to grow them we gave greater distance between the rows and did not sow them until July, and most of them grow as large as dealers cared to have them for table use, while the small and the very large were saved for the stock. When we could sell the best at fifty cents a bushel or more we thought it was more than they were worth for stock feeding.

Feed to a Finish.

Never before in the history of the trade has there been so wide a margin between half-fat and prime, ripe beef as exists at present. The situation offers every inducement for feeders to make their cattle fat, and on the other hand the wide range in value plainly points to the penalty that must be paid by those who disregard the law of supply and demand and persist in crowding half-ripe cattle on a market already over-supplied with that class. Many of the unfinished cattle marketed during the past few weeks would with sixty to ninety days' longer feed have brought seventy-five cents to \$1 more per hundred pounds, which would be almost all clear profit, as the increase in weight would nearly offset the corn and labor. While we do not anticipate any further advance, except for a few fancy holiday cattle, we do look for a good steady demand and satisfactory prices for well-fattened cattle for an indefinite period. Where a man is feeding a considerable number of cattle it is an excellent plan to keep topping out the bunch and sending in a load or two of the fattest as fast as they are ready. This not only divides the risk and gives the cattle left behind a better chance to mature but also avoids the dead loss of holding ripe cattle, as there is no profit in feeding a steer after he is ready for market. It is poor policy to hold a big drove of cattle simply because there is a light end of one or two loads that is not finished. The feeder who carefully watches his drove and ships the fattest steers as fast as ripe and then pushes the others along to the same condition is, other things being equal, the successful one.

Exhausted Soils.

Professor L. H. Bailey, of Cornell University Experiment Station, says that impoverished soils are usually those that have been neglected. Not having been tilled they have become cloddy, hard and foul. They lack in humus, which can be remedied by stable manure or plowing under green crops, or they may lack some one of the three important fertilizing elements. An average of thirty-four analyses of soil shows that an acre of land may contain in eight inches of the surface soil 3217 pounds of nitrogen, 3395 pounds of phosphoric acid and 17,597 pounds of potash, besides what may be in stones and gravel which will not pass through a sieve one-fifth of an inch square. This would be enough to grow about 200 ordinary crops if it was all available. It becomes so by action of what he calls "film water," that is the water adhering to the smaller particles of soil, if this water mingles with the humus to develop humic acid. But this water must be drained down through the surface soil to the water bed below, that the air may penetrate the soil. If it does not, it absorbs heat, evaporates and leaves the land cold. When the water drains off and the surface is well tilled it becomes warm, and the water is drawn up by capillary attraction, thus preventing loss by drought as well as brings back the dissolved fertilizing elements to the surface or near it, where the plant roots can find them. On many soils these two items of drainage and tillage are more needed than fertilizers, though most effectual when the soil is made light or porous and warm by the addition of humus or vegetable matter.

Excessive Fat Prevents Egg Formation.

In some way excessive fat destroys the breeding power of animals, as is well known by the men that put them in what is called show condition. Fat in the hen seems to destroy not only the power of elaborating eggs, but also the power of the organs to even produce the embryo of the eggs. Kill a hen that is not fat and, though she may not be laying eggs at the time, large numbers of embryonic eggs will be found. Sometimes these embryonic eggs remain undeveloped for a very long time, showing that the organs that produce them are busy a long

time before the organs that develop the eggs have begun work. Evidently the latter require periods of rest between every clutch of eggs.

But a very fat hen when killed shows not the slightest trace of these embryonic eggs. The function to even produce the germs seems to have departed. The writer has killed hens that he did not think too fat to lay and has found them in this condition, and that, too, at a season when other hens were laying vigorously. At just what stage of fatness the hen is rendered impotent to produce eggs science has not yet determined, or whether this stage varies in the hens of different ages. It is without doubt true that many hens are kept for years at a total loss as to cost of keeping, for certainly many do not lay an egg from one year's end to another.

There may be other elements entering into the question that we do not yet understand, and it may be that other things beside excessive fat prevent egg formation and development. But with the limited light we now have on the subject it is probable that the best way to keep a flock culled down to the actual layers is to keep the fat hens killed off. This leads to the remark that some hens get fat under any system of feeding.

The writer has been surprised when feeding a ration balanced against fat to find here and there a hen laying on fat and ceasing to lay eggs. Evidently fowls show the same characteristics as breeds of larger live stock—the ability with some to develop size and fat at the expense of every other function.

Pigs For the Dairy Farmer.

The best and most profitable way of disposing of skim milk and buttermilk is to feed them to pigs. Where butter is made extensively, or even on a small scale, there is opportunity for keeping pigs at a very slight cost. If the required number are not raised upon the farm, they may be purchased at six weeks old, or at weaning time. For a few weeks at least after weaning they will thrive best on sweet skim milk. Buttermilk is also good, but should not be fed undiluted, or scours may result. With plenty of warmed milk combined with bran, shorts or other ground feed—of which corn should form but a small portion, if any—pasture if convenient, and pure water at all times, pigs which have received good care through the mother previous to weaning them will grow to thrifty maturity.

The Practice of Keeping over pigs or

shotes until a year old or more is almost if not quite out of date. Quick returns make the profit in raising hogs for market. It must be an exceptional case which would warrant keeping them longer than six to eight months. As fast as the pigs of one lot are fattened and sold, others should be ready to take the places of those disposed of. It is far better, in the writer's estimation, which is based upon considerable experience, to feed milk to pigs rather than to calves, except in the case of heifers or an exceptionally fine male, which it might be desirable to raise. A pig at six months will bring nearly as much as a steer at three times that age. At present prices of fat cattle, no farmer can afford to raise them for beef, while in six months the pig will be in prime condition for sale and return a good profit.

The hog is one of the most profitable animals the farmer has. Consuming as it does the refuse of which no other disposal could well be made upon the farm, looked upon as the lowest of domestic animals, doomed too often to exist in filthy quarters and receive only the slightest attention as to material comforts, yet the pig repays his owner tenfold profit for his keeping. While pigs undoubtedly thrive better when given a liberal supply of sweet skim milk for a time after weaning, they will do fairly well without it, if fed upon bran and middlings made into a slop with water. Why from cheese factories while sweet is better than water for this purpose, but is not available in many localities.

Farm and Garden Notes.

Skim milk and Indian meal are the very best food for pigs.

Flat stones where abundant are the cheapest and best material for flooring pigpens.

Probably the best lice exterminator for poultry is a good dust box filled with common road dust.

Potash is the chief fertilizer to be applied to fruit trees, particularly after they come into bearing.

A pound of meat scraps to twenty-five hens is about the right proportion. Feed every other day.

Often when pullets are not laying, a ration of meat twice a week at this time of year will start them at work.

In most cases, it is crowding that makes hens get into the feed trough. Make the trough long and give them plenty of room.

Roots and straw are very deficient in albuminous material, consequently where a little oil cake or pea meal is added to a diet of this kind excellent results are reported.

In arranging a pigpen, give special attention to the construction, so that it can be easily cleaned and supplied with fresh bedding. A pigpen should be cleaned out every day.

There is every reason to believe that in order to have good layers it is necessary to have good laying stock. This is the rule applied to cows, horses, sheep and hogs, so why should it not apply to the poultry as well.

Draft horses should rarely be driven faster than a walk in taking exercise. They require much less than roadsters or running horses. No draft horses should have less than five or six miles a day and roadsters can easily go to six to ten miles.

The moulting period is one that all poultry have to go through, and at this time they should receive a little more attention than is generally given. Keep them out of draughts and feed oily food, such as sunflower seeds and linseed oilmeal, and you will find it a great help to the birds.

Roosters in the majority of cases are of no use to the farmer, and should be have any around that are of no value as breeders, the best thing he can do is to turn them into money. The hens will lay just as well, if not better, without them, though the eggs are useless for hatching purposes.

SUBSTITUTE FOR RUBBER

THE GUM SUPPLY GETTING SHORT, ITS USES INCREASING.

Paper Found to Be a Good Substitute For Some Electric Insulating Purposes.—Another New Material Made of Lined or Castor Oil Successful.

The increasing uses for India rubber and gutta percha and the fact that the supplies of these gums do not increase in like proportion and even threaten to become smaller in a few years unless extraordinary means are taken to keep them up, have led to many attempts on the part of inventors to produce some substitute which would fill their place at least for some important commercial uses. The recent rapid extension of electric installation with the attendant call for insulation of miles and miles of conductors has emphasized the demand for rubber and gutta percha substitutes for insulating purposes, and the proposition now being actively agitated to extend the great sea cable telegraph service of the world by laying a submarine cable from the United States to the Philippines makes the question of immediate interest.

The consumption of rubber is estimated at 60,000 tons a year. The finest quality as well as the largest quantity sent from any one region, comes from the Para district in Brazil and the recent high prices and great demand for the extra-elastic sorts for bicycle, wagon and automobile tires have so stimulated the work of the Brazilian rubber gatherers that in 1898 the exports from Para reached about 25,000 tons, as against 22,000 the year before. Reports from that district indicate a serious danger of exhausting the rubber trees unless a systematic method is adopted of replanting, and considerable interest has been evinced in other parts of the world regarding the possibility of growing rubber trees successfully. Experiments in this direction have recently attracted attention in Mexico. No substitute which has yet appeared seems to offer success for those purposes which put the strength, durability and elasticity of Para rubber to their most severe tests, but considerable progress has been made in providing substitutes of like qualities for a number of other uses, and notably for that of electrical insulating. The Singapore rubber is the variety best fitted for work of this sort and the shipments of this do not increase, and in 1898 amounted to only about 2600 tons. The last Atlantic cable took 500 tons of Singapore rubber to insulate it and a Pacific cable would take a much larger amount.

In land purposes, such as the many miles of cables which are being laid for telephone, telegraph and power purposes and which are inclosed in lead, paper has become the favorite insulator. For telephone purposes it is superior to all others because of its low self-induction, which makes talking over a line of paper insulated wire as easy as whispering into an adjacent ear, while rubber and gutta percha both have a deadening effect upon the sounds. Power cables, such as those which the Third Avenue road is now laying for its under-trolley lines, are insulated with paper, but in this case it is laid over the bundle of wires that form the conductor in a compact form, while for the telephone and telegraph wires the paper is twisted lightly about them with air spaces left among the wires running the whole length of the cables. With paper insulation it is imperative that water shall be excluded and all the cables in which it is used are leadencased and this waterproof covering is carried along unbroken to the cable heads and here, in turn, the covering is connected by soldering to watertight connections with the office wires. For submarine purposes paper could not be used.

The inventor who wished to find a substitute for rubber and gutta percha naturally turned toward other vegetable products for a base and considerable success seems to have been attained by a number of clever men in this direction. Some time ago, there was described in the Sun a process by which lined oil was turned into a fair substitute for rubber, made capable of vulcanization and of taking the place of rubber for many uses. The lined oil in this process was prepared by oxidizing, changing its character just as it changes when it is applied to surfaces as paint. The principal point in this invention was the method of oxidizing the oil thoroughly. This was accomplished by dipping bunches of tow into the oil and then exposing the oil thus subdivided on the filaments of tow to the action of warm air. A large factory was built in England to manufacture articles under the patents which cover this process.

A later process, which has been described recently, uses lined oil as a basis also, but treats it instead with nitric acid. The product is called velvirl. It is composed of a mixture of nitrated oil and nitro-cellulose. Either lined oil or castor oil may be used. The nitrated oil is prepared first and the nitro-cellulose is added to this. A homogeneous mass is obtained whose final qualities of hardness and elasticity may be altered by varying the proportions of the mixture. The proportions which yield a product most closely resembling Para rubber are two parts of nitrated oil and one part nitro-cellulose. Castor oil is said to be superior to lined oil for this purpose. Advocates of velvirl declare that this mixture has an elasticity of twenty-five per cent, and that its durability exposed to the weather is superior to that of rubber. Samples in England have been exposed for three years, it is said, and still show but slight signs of disintegration.

Velvirl, it is said, can be worked and moulded under heat and pressure or it can be turned into a varnish by dissolving it in a suitable volatile solvent. In using it for cable protection, it may be applied in the form of a thick paste, each coating being allowed to dry before the application of the next, or it may be applied directly by the aid of heat and a pressure of fifteen tons to the square inch. It may also be used as rubber is, upon tape windings. It is asserted that velvirl is superior to vulcanized rubber when used on copper, because it contains no sulphur, and hence has no action on the copper. The use of velvirl is not, however, confined to elec-

THE SABBATH

INTERNATIONAL LESSON FOR MARCH

Subject: Jesus Healing the Blind.—John 9:1-41.

CONSIDERING LESSON.—The Sabbath is a day of rest and refreshment. It is a day when we should be able to see the things of God more clearly than on any other day. It is a day when we should be able to see the things of God more clearly than on any other day. It is a day when we should be able to see the things of God more clearly than on any other day.

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