

Killing Eggs of the Gypsy Moth on a Large Elm Tree



The attempt on the part of the State of Massachusetts to eradicate the gypsy moth has been generally considered as one of the most important attempts of modern economic entomology. The conditions involve the extermination of a highly prolific species, well established over an area of more than 200 square miles. The introduction of the gypsy moth was made by Professor L. Tronvelot, the French savant, who was interested in the matter of raising silk from native silk worms. The manner of their subsequent escape is not clearly known, but the result was most unfortunate. Twelve years from the time of its introduction, the moth became a serious nuisance in the neighborhood where it had escaped. The State of Massachusetts has expended in the annual appropriations for the gypsy moth work the sum of \$1,155,000.

Lack of Potash May Cause a World's Famine

Edward Atkinson's Dire Prediction.

EVERY now and again some scientific investigator, delving deep into the secrets of natural forces, has unearthed a menace which has seemed to threaten world-

all the arable land. Mr. Atkinson's suggestion, which is unique at least, is that the world famine is likely to come in the form of a potash famine—through the using up of the potash in the soil, and the consequent failure of the land to produce food crops. It is safe to say that most persons never have taken potash into consideration as one of the food essentials of the planet. It is a fact, however, that it possesses real importance in the production of almost every food crop that grows. Potash is present

whatsoever. That is the principle of the indestructibility of matter. At a dinner of scientists held in Washington at which the predictions of Sir William Crookes and Mr. Atkinson formed the leading topic of discussion, this principle was advanced as the chief argument against their conclusions. The scientists were confident in the belief that the potash taken in a thousand forms from the earth would in some form return to the earth, and that in some way the conversion of potash from varied sources into shape by which it could feed the soil, would come about when necessity demanded it.



requiring artificial stimulus is relatively very small. Potash is not now expensive, even with the necessity of bringing it across the Atlantic. The real danger, as Mr. Atkinson sees it, is in the exhaustion of the source of supply when the demand grows, as it is practically certain to do in ever increasing ratio.

Not even Mr. Atkinson contends that a food famine from the exhaustion of the potash supply is imminent, but the possibilities of such a famine are interesting to contemplate. It would come about gradually, of course, the dwindling of the supply being accompanied by a steady increase in price. The first result, therefore, would be to place this once humble product among the precious metals. As time went on it would rank, as Mr. Atkinson suggests, even above silver and gold.

There is no doubt, however, that the discovery of an addition to the world's supply of potash is a matter of real importance, and it is likely that the sensation caused by the statements of Mr. Atkinson will lead to a vigorous search for deposits in this country. If such deposits of any considerable extent are in existence in any part of the country they undoubtedly will be uncovered before the German field is worked out.

CARING FOR THE FLAG.

Some Valuable Suggestions From a Lieutenant in the Navy.

Flags, in a certain way, are a country's clothes, which it puts on in the morning and lays aside at night. This we see in symbolic pictures, where Uncle Sam, representing United States, is dressed in the Stars and Stripes, and John Bull, representing Great Britain, wears the Union Jack for a waistcoat. A flag should, therefore, be laid aside as neatly as a valued garment, and when used it should be handled so as not to be soiled or torn.

A flag, properly made, has a light canvas binding along its hoisting edge, through which runs a piece of small rope. At the top of the binding the rope has a toggle, while about a fathom hangs out at the bottom and is called the "bending line." The name and size of the flag are stenciled on one side of the binding near the toggle.

To make up the flag, fold it lengthwise, with the name outside, two or more times, until it is in a strip about a foot wide. Lay the strip name-side downward; take up the end farthest from the binding and fold the strip down back and forth two or three times, each fold on top of the preceding, the last fold being thus toward the binding.

Then roll the flag up to the binding; take one tight turn around the bundle with the bending line (or two turns if



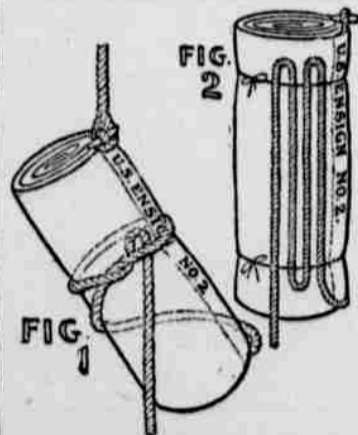
the flag is large and the line long enough) and push a bight of the line between the turn and the flag as shown in Fig. 1.

In this condition the flag is said to be "made up," and is ready for laying away, or for bending on to the hal-yards. If laid away when thus made up, its name and number will be in plain sight, so that it need not be unrolled to be identified, and when it is unfurled it will be as if newly ironed. When made up it can be carried about without trailing in the dirt, and will remain in a compact bundle so long as no strain is brought upon the bending line. This being bent to the lower part of the hal-yards, however, a sharp pull on the latter will slip the bight and "break the flag."

If the flag is a large one, a turn around its middle is not enough to keep it in a compact bundle, so it should then be secured by tying around it near each end a piece of cotton string. In this case the bending line is first laid along the side of the bundle in three bights, so that the upper string passes through all three, and the lower one through the first two, as shown in Fig. 2. A sharp pull on the lower part of the hal-yards will break the strings and unfurl the flag as before.

It is not customary to hoist the flag all the way to the masthead made up, but only high enough to get it clear of dirty ground, or of obstructions such as rigging, trees, or the eaves of houses; then it is "broken," and hoisted unfurled.

Flags are only mastheaded made up



when it is necessary that they should unfurl instantly, as at the firing of a salute, or at some climax in a public ceremony.

Above all things, flags should be kept dry; and if they are wet when hauled down, they should be spread out under cover until there is an opportunity to dry them in the sun, so that the white portions will keep bleached.—John M. Elliott, lieutenant United States Navy, in *Youth's Companion*.

Easily Accomplished.

When reproved on one occasion for not attending a committee called to consider the paving of St. Paul's Churchyard with wood, Charles Macklin, the noted Irish actor, said: "Oh, lay your heads together, and it will soon be done."—The Argonaut.

THE REALM OF FASHION.

New York City.—Gray and white foulard is attractively combined with white Liberty satin and a girdele of violet panne, in the accompanying cut, reproduced from Modes.



GARDEN PARTY COSTUME.

fitted lining which closes in the center front the seams and darts being featherboned.

The front yoke is included on the right shoulder seam and fastens invisibly on the left side. The deep girdele closes at the left side and combines the full front which is arranged in a moderate blouse.

The correct two-piece sleeves have just enough fulness at the shoulders to give a stylishly rounded effect, and are shaped in a bell flare over the hand.

The smart Empire jacket is arranged in single box pleats back and front, and applied to outline the lower edge of the yoke. It reaches just below the girdele, and gives a stylish fulness over the bust. The pleats are pressed flatly and stitched about one-third of the distance from the yoke.

The skirt is made with a narrow

in pale blue and white crepe meteor elaborately trimmed with white crepe de chine.

The bodice is mounted on a glove-fitted lining, which closes in the center back. It is faced to a round yoke depth with white thread lace and the crepe applied at the lower edge of the yoke. A soft Marie Antoinette fichu of crepe de chine is draped to outline the yoke and fastens in front under a rosette. It is edged with a ruffle of the same fabric which extends out over the close fitting two-piece elbow sleeve.

The skirt is shaped with four pieces, a front gore which is comparatively narrow, and wide side gores which fit smooth over the hips, almost to the center back, where they meet the wateau.

To make the waist for a miss fourteen years will require one yard of figured material thirty-six inches wide, with five-eighths yards of all-over embroidery twenty inches wide, for yoke and collar, and one and one-quarter yards of white null thirty-six inches wide for fichu, bertha, ruffles for sleeves, rosettes and girdele. To make the skirt for a miss of fourteen years will require two and one-quarter yards of forty-four-inch material.

Useful Toilet Accessory.

A little book filled with leaves of tissue paper covered with face powder is one of the useful toilet accessories imported for summer use. The powder remains fast until the paper is applied to the skin, and the fragrance and tonic effects are highly recommended.

Pretty Gown For Bridesmaid.

Handsome embroidered ecru batiste made up over pink silk constitutes one of the prettiest bridesmaid's gowns seen this season. Insettings of lace may be added for greater elegance.

A Fancy Waist.

China blue and white foulard is here combined with cream Liberty satin and a bertha of heavy white lace over satin.

The waist is mounted on a glove-fitted lining, which closes in the center



GIRL'S DRESS WITH SCALLOPED YOKE.

WAIST WITH FICHU—FOUR-PIECE SKIRT

front gore and wide circular sides. It closes in the center back, having a single box pleat on either side. The lower edge is trimmed with three narrow ruffles which give a stylish flare at the floor.

To make the waist in the medium size will require three and one-half yards of twenty-two-inch material for jacket, three-quarters yard of velvet for girdele, and one-half yard of twenty-two-inch material for yoke and collar. To make the skirt in the medium size will require five yards of fifty-inch material.

Two Attractive Toilets.

Light green figured percale was chosen for the attractive frock, with trimmings of plain green pique, which is shown to the left of the large illustration, from Modes.

The waist is mounted on a fitted lining which closes in the center back. The full front and backs are applied on the lining body, at a yoke depth, the fulness being gathered at the lower edge and drawn down close in the back, forming a slight blouse in front over the narrow pique belt. The neck is completed by a comparatively high straight collar.

Over the shoulders is a pretty drop yoke of pique, which is adjusted with shoulder seams and closes in the center back. The lower edge is shaped in scalloped outline, extending over the sleeves to form a cap.

The little four-piece skirt is shaped with narrow front gore and wide sides, which extend almost to the center back, where they meet the double box pleat.

A band of pique is applied around the skirt in scalloped outline to match the yoke. It is finished with a narrow cotton bra.

To make the dress for a girl eight years will require three and one-quarter yards of thirty-six-inch material. The attractive toilette, on the right of the large drawing, is fashioned

ter front, the seams and darts being featherboned.

The satin is gathered at the neck gather with a jeweled clasp, the fulness being adjusted in a slight blouse.

The bertha outlines the yoke back and front, extending out over the sleeves in a becoming manner. The bertha and fronts are finished with a narrow pleating of satin.

The correct two-piece sleeves have slight fulness at the shoulders, and flare in bell shape over the hand.

To make the waist in the medium in front and extends in plastron effect to the belt, closing invisibly in the center. The loose fronts are held to-



LADIES' FANCY WAIST.

size will require one and one-half yards of forty-four-inch material, with one yard of mousseline for full yoke and one-half yard of twenty-inch material for bertha.



PROSPECTING FOR POTASH IN ARIZONA.

wide disaster and destruction to the human race, says the New York Herald. It would be hard to tell how many scores of times the people of the earth have been called upon to face the prospect, remote or immediate, of their own annihilation. They have been asked to consider the results which, in some future cycle, will come from the steady cooling of the earth's surface, to prepare for mundane annihilation through collision with some wandering comet and to give attention to the various other hypotheses equally alarming.

The multiplicity of these theories would seem that the possibilities had been exhausted, but every now and then a new deduction is brought forward to startle the world. It has remained for Mr. Edward Atkinson, the scientist, essayist and political agitator, to develop the newest and most startling theory as to the nature of the embarrassments which will force themselves upon the world's inhabitants as the centuries roll around. Mr. Atkinson believes with Sir William

in every part of the earth's crust, at least in every part presenting an arable surface. Soluble potassium salts are found in quantities in all fertile soils. These salts are sucked up by the roots of plants and trees, which eagerly seek them out as necessities of life. It is a significant fact that even where soda predominates in the soil the plants take up the potash salts in preference.

After taking part in the processes of nutrition and being transformed into organic salts the potash salts may resume their original form through combustion. There is a loss in quantity, however, and in the case of plants which are used for food or in the various human arts there is, of course, a nearly complete loss. The cause for concern in regard to the question of the world's future food supply lies in the fact that potash is not renewed in the manner of some other elements of vegetable life. It is a mineral deposit arising through the natural decomposition of certain rocks. On tilled land there is no opportunity for re-

Before this point was reached, however, the rise in the value of the mineral would cause it to be sought after eagerly in every part of the world, would lead to the conserving of the present sources of supply and to an attempt to find new ones. Men would prospect for potash with greater zeal than they now put into the search after gold. The terrors of the alkali deserts would be braved and men would bore for the precious deposits all over the burning plains of the Southwest.

At the same time, efforts would be made to gather the product from the scattered sources of supply now in existence in some financially profitable manner. According to Professor Dittmar, the very greatest of all these sources is the ocean, and no doubt the brains of inventors and scientists would be racked to devise a means of separating this potash from the waves. In all primitive countries where the supply of wood is large potash is obtained by the lixiviation of wood ashes.

This source also would be brought into use, and gradually the forest trees and such plants as nettles, wormwood, tobacco and kelp, all of which are capable of supplying potash in considerable quantities, would be burned to rejuvenate the impoverished soil. Men would live more and more largely upon the food plants, requiring only a small amount of potash for their growth, and a complete change in the accepted systems of diet would result.

To pursue the unpleasant transformation to its final result it is necessary to picture a world growing gradually more and more completely devoid of life, farms barren of vegetation, houses and cities deserted and a race of beings growing steadily weaker and weaker, and even in the intermediate stages of the change, entirely different from those who now inhabit the earth.

It is reassuring to note that the consensus of opinion among scientists is that this extreme condition never will be realized. There is one great principle generally accepted as holding good for all the operations of nature, which scientists bring up in opposition to those who predict a final cataclysm of the world in any form



AN AMERICAN FARM IF WHAT MR. ATKINSON SAYS COMES TRUE.

Crookes and some other eminent scientific speculators that the great difficulty, when it arises, will come in the form of hunger—the exhaustion of the world's food supply. But he does not believe this will be reached through over-population or the taking up of

new in the ordinary course of rotation. It must be supplied, if at all, from large mineral deposits.

This would be a simple matter if these deposits were large and numerous. Inasmuch as potash is found in almost every part of the world it