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SILK CULTURE.

A PLEA FOR THIS NEW INDUSTRY IN CALIFORNIA.

A Deeply Interesting Article—Origin of Silk Culture—Women's Silk Culture Association—Full Details.

[By Mrs. T. H. Hittell.]

The word "silk" is probably derived from "Seres," the old Latin name of the Chinese, to whom the world is indebted for the discovery of this most beautiful and richest of materials for human adornment. Concerning its early discovery, culture and manufacture we have no certain knowledge. It is related, however, of the Empress Si-Ching-Chi that, observing the glossy filament of the silk-worm, she was so greatly delighted and excited that she determined to investigate the matter. She carried some of the worms into the palace, where she domesticated and bestowed upon them her imperial care, until she was rewarded with the honor of discovering the mystery concerning the production of the material for this lustrous fabric. The knowledge of the secret was carefully guarded. During many centuries the Chinese enjoyed a monopoly of silk culture and manufacture; and they made it an offense punishable with death for any one to reveal the knowledge to others outside of their own country. Its very existence seems scarcely to have been known in Europe until about 2,000 years ago. We first hear of it among the Romans in connection with some of those magnificent triumphs of Cæsar by which he astonished the people. He made a lavish display of silks as a portion of the richest spoils of his victorious legions returned from the East. To the people of Rome these silks were described as belonging to the wonders of the world. For many years after this, their first introduction into Europe, their cost was equal to their weight in gold. Wealthy Roman matrons held these silks from the Orient in highest esteem. Sometimes even men indulged in their use, until, in the reign of Tiberius, a crabbed law was passed that no man should disgrace himself by wearing a silk garment. The use of silk was thus restricted to women, for whose adornment it is so well adapted. The first man to break the law, and so disgrace himself, was his Imperial Majesty Heliogabalus, whose profligate extravagance led him to wear a garment made wholly of silk. The royal example was quickly followed by others, until the use of silk garments by the wealthy of both sexes was common at Rome and in the provinces. This caused large importations from China. Wealthy merchants competed for a share in the profits of the trade; prices were reduced, and eventually some of the poorer classes were able to wear silk.

SILK CULTURE IN EUROPE.

Such an industry as this could not forever be confined to the Chinese. About the year 550, A. D., the long-coveted secret became known in Europe. At the peril of their lives two Persian monks, after a long residence in China, having acquired a knowledge of the secret, brought a quantity of eggs to Constantinople, concealed in a hollow staff. It is not the only instance of a hollow staff from China being used for contraband purposes. These monks had the patronage and encouragement of the Emperor Justinian. Under imperial protection they watched over the hatching, feeding, spinning and propagation of the worms, and instructed the people in all the branches of this new industry. Mulberry trees were planted; the culture thrived; manufacturing followed; and the Chinese themselves, soon after, acknowledged that the silk of the Romans was not inferior to their own.

The industry soon extended to Greece. Thebes, Corinth, and Athens became celebrated for their silk fabrics. In the twelfth century the culture was introduced into Palermo, by Roger, King of Sicily. Thence it reached to Italy; and, during the middle ages Florence, Lucca, Milan and Venice were celebrated for their splendid silks. In the sixteenth century the new industry reached France and Great Britain. Henry IV. encouraged the most successful silk workers by granting to them patents of nobility. Queen Elizabeth fostered the enterprise among her people; she was its wise and helpful patron. The climate of England was found to be too cold for cultivating the worm; but manufacturing took on immense proportions, raw silk being imported for the purpose. In 1666 there were 40,000 persons at work in British silk factories; the number was subsequently greatly increased; and had it not been for unwise legislation English looms might have kept pace with the looms of France. Other European countries—Germany, the Netherlands, Austria, Switzerland, Spain, Hungary and Poland—all added silk culture and manufacture to their other industries. Their people have, for many generations, been reaping rich rewards from the enterprise.

SILK CULTURE IN AMERICA.

In South America, Brazil has made good progress in both the culture and manufacture of silk. In North America, when Virginia was a British colony, the planting of ten mulberry trees for every 100 acres was required by law. English societies offered liberal rewards for the successful culture of silk in the colonies, and a considerable business sprang up all along the Atlantic coast, from Massachusetts to Florida. In 1770 a silk factory was established in Philadelphia. After the war of the Revolution the industry was revived, and silk culture became a favorite pursuit. It offered such great inducements that quite a speculative fever swept over the country. Immense fields of the mulberry were planted; men went into the business, wild with excitement, and reckless; and, for a while, a great impetus was given to it. But the speculative excitement was unhealthy; the results were disappointing. Speculation in silk culture, like that in mining or railroad enterprises, is an evil. When the excitement passed, leaving many of the wild adventurers bankrupt, the business suffered for a time; gradually it returned to its normal condition; healthy progress was made; and, during the last twenty years, the advance has been very rapid. There are now nearly 100,000 persons engaged in silk culture and manufacture in the United States. In New Jersey, Pennsylvania, Massachusetts and Connecticut there are several large silk factories doing a prosperous business. In the manufacture of spun, or "waste silk," as it is called, America now leads the world. This is due to the ingenuity and patient industry of the Cheney Brothers, at South Manchester, Conn., where others had failed. Their establishment is the largest on the continent; their productions are known all over the world. They began in an humble way, making sewing silk from the raw material, imported mostly from Italy. They encountered and overcame many difficulties, persevering until they finally discovered methods for doing with machinery what, for ages, the old world had done by hand. This was the beginning of their great success. Business increased, new buildings were needed, more operatives were employed, until now the old farm at South Manchester is dotted all over with happy homes, blessed with an affluence of domestic comforts, and usually favored in all things needful for intellectual, social and religious progress. It is one of the most attractive and prosperous manufacturing towns in the country.

WOMEN'S SILK CULTURE ASSOCIATIONS.

An industry like that of silk culture, discovered by woman, and peculiarly fitted for her employment, most naturally enlists her sympathies. The women of Philadelphia have set a noble example for the women of America. Recognizing the importance of this industry in its relation to home, domestic comfort, and remuneration to women and children for work that can be done around their own firesides, they have organized an Association for encouraging and promoting the establishment of this delightful occupation, as far as practicable, in all American homes. More than twenty years ago the women of Prussia had organized similar societies; the King became greatly interested in their purposes, and encouraged them with the offer of liberal prizes for marked success in silk culture in German homes. In Australia there is now a prosperous Woman's Silk Culture Association, which is already able to supply much of the demand from Italy for silk-worm eggs. Two days before the organization of the society in Philadelphia, the subject of "Home Silk Culture" was presented before the Horticultural Society of San Francisco by Mrs. T. H. Hittell. The information contained in her paper on that subject created great interest, which soon culminated in the organization of the Woman's Silk Culture Association of California. Its success has been great. It has opened a wide correspondence with silk-growers and manufacturers in different countries; it has awakened general inquiry, and enlisted co-operation from many persons in different parts of California; it has collected a vast amount of information for the use of the masses. Its purpose is to encourage silk culture among the farmers until it shall become one of the chief industries of California. In the beginning of their benevolent work these women confidently make their appeal to wealthy and patriotic men for such pecuniary aid as may be needed, for the sake of the increased commercial power it will confer upon the State, the increase of individual wealth, and the manifold blessings the industry will carry to the homes of the people.

THE FIRST STEP IN SILK CULTURE; GROWING MULBERRY TREES.

The first step in silk culture is the planting and growing of mulberry trees, whose leaves are the proper food of the silk-worm. On one acre 435 trees can be grown, placed ten feet apart. The trees can be grown from cuttings or seed. They should be planted where land is plentiful, as shade trees around the homes of our farmers, or the road side. In twelve months, in a proper soil, the tree will grow to a hight of twelve or fifteen feet, with a body of corresponding thickness. When the first trees are grown slips can be cut and planted from them. Sunny slopes are desirable for vigorous trees. The mulberry can be grown as well from cuttings as from roots or seed. This, indeed, is the most common way of propagating the tree in California. It grows readily and vigorously in this State from shoots set out in winter, and will yield a considerable quantity of leaves suitable for feeding the young worms in the following summer. For those who wish to begin a few trees will be enough, as cuttings from one tree will soon suffice for the propagation of a hundred others. The leaves from the trees of one acre, suitably planted, will furnish food enough for the worms to produce several hundred pounds of silk.

SECOND STEP IN SILK CULTURE; GROWING THE SILK-WORM.

The second step in the silk industry is hatching and feeding the worms. The best season for this, in California, is after the rains are well over. The eggs are now brought out from the cool places where they have been kept, and are placed in a warm room, a garret, or a cocoonery. This room must be so arranged as to keep bees or other insects away from eggs and worms. The temperature should be even, at from 70° to 90°. The eggs will hatch in from three to four days, depending upon the temperature. Those first hatched should be kept by themselves. All the worms hatched on the same day should be kept and fed apart from those hatched on another day. When first hatched the worms are of a blackish color, and are about one-twelfth of an inch long.

FEEDING THE SILK-WORM.

The time required for the full development of the silk-worm, after it is hatched, is about thirty-three to forty days. The young worms as fast as they are hatched we placed on shelves in the feeding-room, and fed with leaves of mulberry. The leaves must be fresh and free from excessive moisture. During the feeding season great care must be taken. The heat of the feeding-room should be from 70° to 80°, as cold retards growth. The time required for the full growth of the worm is several days shorter in California than in Europe. On the fifth or sixth day after hatching, the worms have grown considerably; they cease to eat and begin a process of molting—casting off their pist skin. For this purpose they fasten their hind legs, as the Chinese say, to a branch or leaf, with the aid of a sort of gum or silky matter. During this process they pass through what is called a molting sleep, and must not be disturbed. A sudden, loud noise, as thunder, the noise of a gun, or the violent slamming of a door, would be injurious, if not fatal. They have four molting sleeps; after each of which they eat with increasing greediness. In a large cocoonery, during the last stages of growth, the noise caused by the large, verticle, saw-like jaws of the worms, sounds like rain falling on the roof. Great care must be taken not to feed them with the *red* and tender leaves of the young shoots. These would sicken and injure them. The second molting occurs on the eighth or ninth day; the third on the thirteenth or fourteenth; the fourth and last molting occurs about the twenty-second day, after which they continue eating about ten days, say to the thirty-third day after they were first hatched. They are now full grown; three and one-half inches long; of a pearly color; they are translucent, and they cease to eat.

SPINNING THE COCOONS.

The worms are now ready to spin their cocoons. They seek some convenient branch or other secure spot, and then begin their work, toiling incessantly, night and day until the cocoons are done. The cocoon is from an inch to an inch and a half long, and half as thick, oval in shape and of a yellow or white color. It has a wooly covering of floss silk, which is first spun by the worm as a sort of loose bed or support. Within is the silken cocoon proper. It is made of one continuous thread, about 1,200 feet long, spun by the worm around itself. The substance of the thread is a gummy, transparent liquid, of a white or yellow color, contained in two separate vessels about ten inches long, and disposed in spiral folds, one on each side of the worm's stomach. These vessels open by two small ducts, approaching near each other at the head of the worm. The silken thread of the cocoon is composed of the two filaments, one from each duct. As these filaments are ejected the vibratory motions of the head of the worm cause them to unite, and they immediately harden into one inseparable thread. This thread is disposed in concentric circles, occasioned by the irregular backward and forward movements of the worm's head. The thread is covered with gum, so that it adheres firmly and forms a tight covering when the cocoon is complete, impervious to water, and inside of which the worm has imprisoned itself.

The right temperature of the room must still be kept up, as cold would interfere with spinning. It congeals, as some think, the liquid in the cocoons, making it difficult for the worm to spin the thread, but quite as likely the primary effect of cold is to benumb the worm, and so weaken it for work. Whatever the fact may be, this much is certain, that when it is too cold the worm spins a shorter thread, and the cocoon is not so complete as it otherwise would be.

ESCAPE FROM PRISON.

Within the cocoon the worm undergoes a wonderful transformation, requiring a period of from twenty to forty days. It passes into the chrysalis state, and finally emerges from the chrysalis a perfect moth. It then ejects a liquid from its mouth, which softens the texture of one end of the cocoon; then, by frequent forward motions of the head, it forces a passage through, and escapes from its prison, making its appearance usually in the morning. What a splendid creation now do we behold! It is a beautiful butterfly, of a grayish white color, with four wings and a pair of delicate black, feather-like antennæ. The wealth of its own apparel is not more amazing than the rich and lustrous silk in the cocoon which it has woven and forsaken for the use of man.

REPRODUCTION OF THE SILK-WORM.

As soon, now, as the sexes meet copulation takes place. Almost immediately after, the female begins to lay her eggs, in a regular circular order, from 200 to 400 in number. Three hundred is the usual number for one layer. This done, the mission of this wondrous insect is ended. It has given its life in labor for the adornment of the human race. Its last act was a provision for the reproduction of its life three hundred fold in a new generation. It has now exhausted all its vitality. Not having eaten anything, it dies.

TREATMENT OF THE EGGS AND COCOONS.

The preservation of the eggs requires attention. The Chinese use bits of Canton flannel or other material on which to receive them from the worm. They are then laid away in cellars, or some cool place, and kept until needed for the purposes of sale, or for another hatching season. If kept cool and preserved with care they will maintain their excellence for a long period. As they are small, not larger than a small pin's head, many millions can be kept in a very small compass. When the worms have finished making their cocoons, those which may be required for the development of the eggs should be selected with care, and immediately stored in some convenient place having a temperature of about 80°. The chrysalide will then develop in from thirty to forty days, as already described. If, on the other hand, the cocoons are to be used solely for reeling, either as a part of the home work of the women and children of the family or for sale, then the chysalides in the cocoons must be destroyed. This can be done by subjecting them to the heat of an oven, the common method in Europe. But the heat must not be too intense, as it would injure the silk. In California the natural heat of the sun is all sufficient. Let the cocoons be exposed to the scorching rays of our summer's sun for two or three days, from 10 to 4 o'clock. This will usually destroy the chrysalide and leave the cocoons free to be used for reeling purposes, at such times through the year as may be convenient to devote to that delightful domestic employment.

PROFITS FROM SILK INDUSTRY.

It may seem premature to estimate the profits of silk industry, but we have certain data to guide us, and the people should know what they may count upon as a return for their labor. The prices for silk manufactured goods are enormous. In the manufacture of dress silks a great field is open. These silks, when made in Europe, cannot enter the United States without paying for freight, exchange, insurance and a duty of 50 to 100 per cent. One pound of raw silk is worth from $4 to $9. The average is about $7 50. This will make five or six yards of dress silk, sold in San Francisco for from $20 to $25. The European workman will make five or six yards a day. His wages are about $1. The actual cost to the manufacturer in Europe is about $8 50 to $10. Here is the liberal margin of $10 in favor of home manufacture. We can pay double, treble, or even quadruple, in wages for the work done here, and still have left one-quarter of the present cost in our stores for our profits. The statement seems astonishing, but it is the truth. We have gone over the calculation again and again, with the same result. It is really astonishing that such an industry as this should have been so long neglected or overlooked by our people—an industry full of pecuniary blessing to the State, and affording thousands of the unemployed profitable labor.

THE PROFITS FROM GROWING RAW SILK

Are equally sure. One acre planted properly with the mulberry tree will, in three or four years, yield 50,000 pounds of leaves—enough to feed 1,000,000 worms. If the object be only to raise eggs, each female will produce from 200 to 400. The average is 300. Take the lowest number for our calculation, and only one in ten of the worms. One hundred thousand females yield 20,000,000 eggs. Forty thousand eggs weigh an ounce. You thus have 500 ounces. The eggs sell readily for $2 an ounce. The product, therefore, is $1,000 an acre, on the lowest yield of eggs from only one-tenth of the worms. If, however, the cocoons are to be reeled off at home, 2,500 cocoons yield one pound of raw silk. The entire yield will therefore be 400 pounds. The average price of the raw silk is $7 50. This equals $3,000. The total for eggs and reeled silk is $4,000. Deduct from this one-half for accidents and all possible expenses, you still have a net profit of from $1,500 to $2,000 per acre. The statement looks large; but it is in the fact and figures, and the proof that we are correct is abundant. (See Provost's Silk-Growers' Manual, published in San Francisco in 1867, pages 236 and 237.)

MARKETS FOR SILK PRODUCTS.

The demand for silk, raw and manufactured products, is immense. The eggs enter largely into the commerce of the world. Europe seeks for its supplies in various countries. Commissioners annually visit Australia, Japan and China for this purpose. Every year millions of eggs pass through San Francisco, crossing the continent and making the voyage of two oceans to reach their destination. In his "Silk-Growers' Manual," published in California a few years a ago, Mr. Provost says: "Last year I had an order for 100 pounds of silk-worm eggs from Italy." He could not meet the demand. He sold all he could spare at $12 an ounce, keeping only one ounce for himself. That order, at wholesale, would have netted him $12,000. He had another order for 500 ounces from Mexico, and a smaller one from Italy for 60 ounces. There is always an ever-increasing market for the silk-worm eggs, and with the advance of civilization this demand can never be less.

INFLUENCE OF SILK CULTURE ON NATIONAL CHARACTER.

Dr. Curtiss said recently, in the *Scientific Monthly*: "The interaction of land and people on one another's character and destiny is the prime motor; but not men and women alone—it is the great physical power of nature, counting everything in the game of life." Who can doubt that Great Britain has been profoundly affected by the existence and development of the immense coal fields beneath her surface? Without coal and iron, utilized, her people must have been mere merchants, not manufacturers. The prosecution of any industry, by any people, when it is peculiarly adapted to their land and climate, has great influence upon their character, socially, morally and physically; and their destiny is inexorably wedded to their industrial pursuits.

CALIFORNIA SUITED TO SILK CULTURE.

California has peculiar advantages for success in all the branches of silk industry. Its culture was begun in this State in 1860. Mr. Provost raised silk that year for the first time. He sent some of the cocoons to Lyons and Paris, and received certificates from both cities that the California silk was of the best quality. During the centennial year in 1876, California cocoons were sent to Philadelphia for exhibition at the World's Fair. The size and beauty of the cocoons excited universal astonishment, and led beholders to ask, "Where are California's manufactured silks?" The only answer was a display of a beautiful American flag, for manufacturing had not then been established; but this flag was a promise for the future. Mrs. Keeney, of Nevada City, has been raising cocoons for many years. She presented some specimens to the Smithsonian Institute at Washington. They were so far superior to all others on the shelves of the Institute gathered from other countries, that Professor Henry, the Director, had them removed to make room for the splendid productions of California. This industry is now a paramount necessity for this State. It should be the aim of our people to establish such an industry where its success is sure. Our geographical position and material resources for this, as well as our other pursuits, are equal to those which made Greece so grand in the days of her glory. We have an ocean-bound shore, a varied climate, a soil capable of producing the grains, fruits and staples of every zone; with gold, silver, quicksilver, iron, cinnabar, lead, coal, granite, marble, sulphur, asphaltum, porcelain-earth, petroleum, everything, in fact, in the industrial arts. The soil and climate of California are so gifted that it can furnish for ages to come all the demands of modern civilized life. The time has come when home silk culture should be zealously prosecuted.

IF WISELY BEGUN

And patiently continued, our people will be able in a short time to realize from it a larger profit than from one-half of all our other agricultural productions. With little labor prolific crops of mulberry leaves can be produced in almost any part of the State. In all the world there is not better land, or a better temperature for silk culture. A species of the silk-worm is indigenous in our valleys, and thrives almost anywhere. In a few years this industry might rank, if not first, certainly among the first of our most profitable pursuits. Such abundant natural gifts as we possess impose great responsibilities. It depends upon the serious determination of those who know the capabilities of the State whether or not it shall become one of the most prosperous on the globe. The real prosperity of any country, in its length and breadth, is founded on labor with honest pay. Keen attention should, therefore, be given by all who wish well for the future of the people of such a State as California, to the introduction of any new befitting industry that will insure that pay. One of the first considerations with those who would benefit the human race by the introduction and encouragement of new industries, is profitable employment for the greatest number. Silk culture gives such employment, whether it be to the small farmer of a few acres or the large planter. It secures almost incalculable wealth to those who prosecute it as a chief industry. It is different from wheat-raising and mining operations, which require a large outlay of capital. But any one who owns, or rents, only a single acre, can grow the mulberry and raise cocoons, and the value of the reeled silk is nearly as great in the forests of Mendocino, or the gorges of San Diego, as in San Francisco. The freight is as nothing in comparison with the cost of transporting other productions.

SILK MANUFACTURE IN CALIFORNIA.

California should begin the work of silk manufacture in real earnest. In a small way the enterprise has been prosecuted for several years. For reasons well known and satisfactorily explained, some who started in manufacturing have failed. It was not the fault of the business, but the methods of conducting it, which largely overwhelmed the projectors. Others have succeeded. There are now two flourishing silk factories in operation in this State—one at South San Francisco, Mr. Meyer's, employing 100 girls, and one in Santa Clara county, Ch. G. Hermann's. It is believed that the manufacture of silk from pierced cocoons could be carried on equally well, if not more successfully, in California as in Connecticut, owing to the nearer proximity to the source of supply. The success of our two pioneer silk factories is a demonstration that profitable silk manufacturing in this State is no longer a debatable question. The source of supply is at our doors, and when silk culture is well begun, the grower and the manufacturer will dwell side by side. Even now our manufacturers make satisfactory profits in working on raw imported material. But think of their expenses! They pay more than double for freight, insurance, exchange, interest and duties on the imported articles what they would have to pay for the same raised at home. Though the cost of labor is higher in California than in Europe or the East, still the difference is not so great as to destroy the balance in our favor.

SILK AND COMMERCE.

The silk business of the world is immense. As an article of commerce it has never lost its power since silk first passed beyond the confines of China. Its value is real. It is not more a luxury than a necessity as an article of clothing; and the nations therefore which produce and fit it for human wants have the world for their customers. The annual production of the raw material is, in China to-day, valued at one hundred million dollars; in France, at twenty-five millions; in Japan, at seventeen millions. The United States in 1876 imported, in addition to the raw material, twenty million dollars worth of manufactured silks. These millions ought to be added to the wealth of our own country, and not subtracted from it. While we continue to buy from others what we could just as well produce and make at home, we are foolishly squandering a portion of our rich inheritance.

SILK CULTURE AND HOME LIFE.

But aside from the pecuniary benefits of silk culture there is a reason for its introduction infinitely more important—it is the elevation of the people in their home life. It is an alarming truth that the youth of California are not the equals of the young people in Eastern States in patient and honest industry. The reason may be traced partly to their surroundings. We are just emerging from the nomadic, half-barbarous life of the frontier mining camp. Suddenly we find ourselves dwelling in a land that is wondrously prolific and great in its natural resources and possibilities. It is not without peril to any people that they are blessed with such spontaneous abundance in their soil. There is a tendency to indolence in such a country. Only by sober thought, exertion and zealous industry can we overcome the danger of social dissipation and personal poverty. Nature helps us here so bountifully that we are in danger of forgetting the lesson of the ages, that "if a man will not work neither shall he eat." Then, too, we are surrounded on all sides by the influences of the pernicious and decaying Spanish civilization. Only one element more would seem to be needed to complete the list of dangers so unfavorable to our better civilization, and this is furnished in the character of our immigration. It has come from all parts of the world; it brings with it every variety of religious conviction, social training and national prejudice. It has but one common feeling, and that is a feeling pregnant with evil—the desire for sudden wealth, to become rich without labor. This is our inheritance. It is wonderful, therefore, if California society contains many of the evils and few of the better influences which, in other communities, make healthy, happy and permanent homes. There is, in fact, an almost total absence of home life in this State.

Observant critics say: "There are no homes in California." Must this always be so? Homes there must be if we would be prosperous. In order to make homes, and make them attractive, this great industry of home silk culture is earnestly recommended. It has the three important elements needed for family welfare—it is profitable, pleasing and attractive. It will help to keep farmers' sons from straying from the parental roof, and losing themselves in the livelier, but not better, life of the great cities. Its influence over young women will be even greater. Every element of motherly care and prudence is needed in rearing the silk-worm; and the reeling of the thread from the cocoon will furnish delightful and profitable employment for the children and mother all the year round. Such an industry cannot fail to develop a spirit and disposition of true womanhood, now too deplorably lacking in the young women of California. If in their youth they can be trained to habits of self-reliance, if they can be employed in pleasing and profitable industry at home, then, on account of their nobler and better culture, there will radiate from them the influence of a newer and purer life for California. It is for our safety that we build up and consecrate this great industry to our home life. More than any other occupation it will dignify labor in our homes. It is pre-eminently a family industry. Scarcely any capital, a very small amount of land, and no skilled labor are needed. Women and children can bestow nearly all the required labor. In no event need the work interfere with other home and farm operations, and the industry can be pursued when other matters are not pressing.

THE WOMAN'S SILK CULTURE ASSOCIATION OF CALIFORNIA.

This in fact is one of the chief motives that has aroused so many wives and mothers of late, and led them to organize the Woman's Silk Culture Association of California. This association seeks to enrich the State through industry instead of speculation, by fostering one of the most desirable of all industries in the homes of the people. It is woman working for woman's elevation; it is the mother educating her children to love their home, and find in home employments such remuneration as will make it worthy to be called a home. The benevolent and patriotic purpose of this Association has enlisted the interest of some of the best men of the State. The Governor of California stands at the head of its Advisory Board. With him are associated bankers, merchants, clergymen and other philanthropic men, who will not permit the enterprise to fail, so far as their advice or their money may be needed to insure success. The Association has resolved that it will use the press, and employ every possible means to reach the ear and heart of every mother in California, and arouse every family to the importance of home silk culture. It will furnish all needed information to those who seek instruction. It will supply seeds and cuttings to those inclined to enter upon the work, to grow the mulberry. It will procure and supply eggs for the silk-worm, at the proper time. It will also probably procure land and establish a school of instruction, if needed, to which farmers' daughters may come and in a few months be instructed in all the steps of this industry, so that, returning to their homes, they may impart the knowledge to others.

OBJECTIONS AND DOUBTS CONSIDERED.

Men who have once failed, and men who for other selfish and unpatriotic reasons would wish us to fail, seek to arrest the progress of this movement. They tell us that California is not suited to silk culture and manufacture. They say that her men are too speculative, her women too giddy and frivolous, and that they will not awake to the utility of this industry; that wages are too high, and that land is held by large monopolists. We have carefully considered all the objections of the pessimists, and all the difficulties which others would suggest in order to discourage and dishearten, and we know that they are groundless. There is no good reason why home silk culture should not be begun in this State, and prosecuted as a chief industry. To the chief objections just stated we answer: The few who have engaged in it have succeeded, and their success has astonished the people of other silk-growing countries. Speculation has run its race; the fever cannot always last; men are getting tired of pursuing a course of life that destroys their homes, beggars their families and ends in the suicide's grave. Women are not so giddy and frivolous that they will not be heroines for the sake of happy homes, if men will show them how and encourage them to be what they were formed by their maker to be—helps suited to men. High wages might have been an objection once. They are not so now. There are idle people in California, begging for work. There are poor people, asking for bread. During the last two winters thousands were fed at public expense, and many a man has toiled for less than a dollar a day to procure food for his wife and children, who were on

THE VERGE OF STARVATION.

As to the land, it is true that vast tracts are held by large owners; but it is equally true that thousands of acres of good land can be bought in California to-day with less money per acre than the annual rentage would be in France, where the workers in silk culture grow the mulberry mostly on rented lands, live in rented houses, and raise, spin and weave the silk which yields to their country $25,000,000 every year.

When Earth is freeing itself from winter's bondage, she sends forth a hopeful messenger, a prophet of the coming spring, a little flower, the snowdrop. Who, in his own childhood, has not seen and hailed this tender flower, fulfilling its mission, calling to its companions to awake, and decorate and clothe the earth with beauty? This beautiful prophet, standing amid the cold and desolation of departing winter, is a herald of new times, of blooming flowers and abundant harvests. Thus, too, are many messengers sent to men, to bring hope to the disappointed and help to the weary. To-day California needs hope to quicken intelligent thought and cheerful action; to give profitable industry to the people, and remunerative trade to her merchants. Is there not in home silk culture the sure prophecy of a new and nobler life for this Golden State of the Pacific coast? That was a grand spirit that called into existence a great city like San Francisco, and stretched one of the world's most magnificent railways from the Golden Gate to the Atlantic. Doubts and difficulties fled before such daring. And that spirit is not dead. For some reason it has been depressed. It may be dreaming or paralyzed. It is not dead; it will awake. Our silk industry will help to give it new life and vigor. What the discovery of gold did for us in the past, will this do for us in the future, and far more. It will help to make industry more universal and honorable, bring happiness to our families, and ever-increasing prosperity and solid wealth to the State.

AN IMPENDING DANGER.

To all objectors and doubters we submit now for their most serious thought the consideration of an impending danger. There is at this moment in one of the ports of China a ship-builder from the Clyde. He is building steamers for the Chinese by the aid of Chinese workmen, whose wages are three cents a day. England is alarmed at the prospect. Russia is preparing herself against this common foe to our modern civilization and the blessings of home life. Soon the distance between China and other countries will be lessened, by swift-running steamers, with cheap fares and freights. In every country where it is possible the Chinese cheap-labor curse will spread itself. Wherever this goes the American family system must perish. There are already not far from 80,000 Chinese on the Pacific Coast; they are a great factor in the ranks of labor. They represent neither wife nor child. Of American homes they know nothing; for American civilization they care nothing. Such a number of American laborers would represent nearly or quite 400,000 people—dwelling in homes—parents and children, zealous for the prosperity of the State. But these unassimilating workers are an anom ly. The labor of 80,000 men, *only such men*, crushes out the family, and so puts the future of the State in peril. When the family relation is destroyed what hope can there be for such a community? These 80,000 anomalous laborers level our roads, build our railways, cultivate and can our fruits, catch and can our salmon, raise and peddle our vegetables, make our brooms, boots and cigars, harvest our grain, work in our mines and vineyards, manufacture our woolens, compete for house-work, sew and wash our linen, and make embroideries, ruches and many of the fine rufflings which are worn by our women. Step by step they are crowding into every possible industry. We have become used to their presence, and have grown dependent upon them, in the same way that our own people in the Southern States became dependent upon their slaves. Labor there became discrowned, and soon it will cease to be honorable here if there be no change. The Chinese hold to their creeds, to their degrading customs, their national prejudices, and their anti-American civilization, to the destruction of our own. As compared with ourselves they have some advantages that promise victory for them and ruin for our laborers. We are isolated in California from the protection and home influence of the East, where the Pilgrims and the Dutch founded happy homes; where free and enlightened, they sought and found honor in labor. We are weakened by conflicting interests, and by many old national or religious prejudices. But they are a unit. It is time for us to be vigilant and dilligent.

SILK INDUSTRY THE DUTY OF THE HOUR.

We owe something to our children and the generations after them. Men and women alike have duties to discharge for the good of the race and the hopes of mankind. He who makes two blades of grass grow where before there was only one, is a benefactor to his race. We owe something to the community besides taxes. When an opportunity to benefit our country for all time presents itself, we should be willing and eager to seize it. We may thus do much to relieve our suffering fellow men. If we neglect this great silk industry, others will not. They who have already almost monopolized nearly every other industry in California will soon be seeking the advantages of this for themselves. Unless we awake at once to action, we will soon discover that enterprising Chinese capitalists have set their own countrymen to the culture of mulberry farms all over the State, in such numbers that the production and trade in silk will be so secure in their hands that successful competition will be hopeless. The danger is all the greater as the product in California is so superior, the State is so peculiarly suited to the culture, and the Chinese are, by long familiarity with the business, the most expert of all the nations in every branch of the industry.

For twenty years the cry of the boys and girls of California has been: "Give us work; give us an honorable trade; give us something by which we can earn an honest living." If we heed this cry, and provide for our children an industry like this, our reformatory schools and prisons will lose a chief source of supply; our people will be richer and happier; our families will be our joy and our homes will be secure; we will have less taxes to pay for the execution of the criminal laws.

Why hesitate! Ye are full-grown men,
With God-implanted will, and courage, if
Ye dare but show it. Never yet was will
But found some way or means to work it out,
Nor e'er did Fortune frown on him who dared.
Shall we in presence of such joy, or peril,
In this supreme moment for the people's need
Stand trembling, when by one bold stroke
Our homes for ages might be rich and free?—
And that one stroke so just, so greatly good,
So level with the happiness of man,
That all the angels will applaud the deed!

A BROADWAY MERCHANT'S STORY.

[Brooklyn Eagle.]

Mr. W. A. Davenport, holding a responsible position in the prominent wholesale notion house of Butler Pitkin & Co., at 476 Broadway, related the following remarkable story; it touches closely our social economy, and involves a question of personal safety widely interesting to the people of the two countries: "Two years ago," said Mr. Davenport, "while connected with a large wholesale house down town as salesman, I happened to spend a night in Newark. The next morning, while standing on the platform of the Market-street depot waiting for the train to New York, I noticed near me a young man on crutches, his legs so bent and distorted that I wondered how he could maintain an upright position, much less move about. He was, however, attended by a stalwart colored servant, who, when the train reached the platform and stopped, assisted him tenderly and carefully into the car, and placed him in a comfortable seat. I followed closely behind, and placed myself in quite near proximity to them. As the train moved out of the city, I felt impelled by sympathy, and perhaps by curiosity also, to inquire concerning his ailment. He replied that for more than three years he had been afflicted with rheumatism—slight at first, but gradually becoming worse with every changing season, until he was reduced to his present condition—that all remedies had failed so far, and as a last resort, he was on his way to enter a New York hospital in Fifteenth street, with a faint hope of obtaining some benefit in that great institution. I expressed my sorrow and regrets in a few words, and then opened a paper, which I purchased before entering the train, and the first thing that caught my eye was the report of a stubborn case of rheumatism which had been thoroughly cured by St. Jacobs Oil. I had never heard of this remedy before that I could remember, though I have since been told that it is an old German remedy whose virtues had been long tested in the old country. Without saying anything I handed the paper to the invalid and pointed out to him the notice I had just read. He seemed to study it with care, but with no cheerfulness, as appeared by his despondent countenance. When we reached the Jersey City ferry he still held the open paper in his hand, and in the hurry and bustle of leaving the train and getting on the ferry-boat, I lost sight of him and his servant. About a year passed, and I had forgotten all about him, when, one morning on going down Broadway, I stepped into the St. Nicholas to see if any of my country customers were stopping at that hotel, and while examining the register somebody tapped me on the shoulder. I looked up and saw before me a tall, robust and healthy young man, who, with a smiling face, extended his hand, and said: You do not remember me, I see. No wonder. When we met a year ago I was a cripple on crutches and rather lighter in weight than I am now.' I at once recognized my invalid traveling companion between Newark and Jersey City. He then informed me that on reading and maturely considering the notice I had called his attention to on the train, he had changed his mind about the hospital plan, and instead had gone to a hotel, sent his servant out and procured a half dozen bottles of St. Jacobs Oil, and commenced its use immediately, making his servant rub him with it thoroughly every day two or three times. In a week he was able to get about his room without crutches; in two weeks he was able to discard all attention, being free from all traces of the disease from which he once thought he would never recover. 'I returned home,' said he, 'a new and healthy man, and you can fancy the astonishment of my friends when they saw me. I live in the country just out of Newark, but spent my time mostly in that city or New York, and I trust we shall meet again.' He handed me his card. It bore the name of Ezra D. Clarkson. I carried it in my pocket for several days and carelessly lost or mislaid it, much to my regret, as I should like to hand it to you; but his postoffice address is, I suppose, Newark, and no doubt he would be glad to answer any inquiries made to him on the subject of his remarkable cure. Now let me tell you what I know about St. Jacobs Oil. My last interview with Mr. Clarkson set me to thinking. I had always entertained a particular repugnance for what are called proprietary medicines, and refused to use them in any shape, but I harbor no such feeling now. I made up my mind to try the Oil myself, should the occasion ever arise. It was not very long in coming. A few months ago I caught a violent cold in a rain shower which laid me up with stiffened knee-joints, attended with throbbing, pains in my limbs and a disagreeable numbness in my feet and hands, and slow fever. I thought of Mr. Clarkson and sent my servant to the nearest drug store for a bottle of St. Jacobs Oil. I got my wife to apply it according to the printed directions, and the next morning I was well. What do you think of that? Now I'll give you another item. My wife, although a generally healthy and strong woman, has for years been subject to what is called sick headache. I never had it myself and don't know how it feels, but she suffered severely with it on an average of once a week. That morning when I had found the oil had so promptly and wonderfully relieved me she was taken with one of these attacks. I thought it worth while to try the efficacy on her, so I rubbed her forehead and temples and the back of her neck well with it, and in five minutes she was relieved from pain, and she has had but one slight attack since, which by the same means was promptly relieved in a few minutes. Now, if you ask me what I think of St. Jacobs Oil, I will tell you. I think there is nothing equal to it in the world. Although I had no return of my complaint since I was singularly relieved by its use—neither has my wife suffered from the slightest symptoms of her old ailment—I keep a supply of the oil always on hand; and wherever in my movements about town, either on foot or in the street car, I see a lame man I stop; I say, "What is the matter?" If he says rheumatism, I whisper in his ear, St. Jacobs Oil, and pass on.

[Written for the Record-Union.

THE DYING YEAR.

[December 31, 1881.]

The old year dies to night, and goes to take
Its place with all the myriads of the past;
And, sad or pleasant, it can be no more.
The years, the years, that have been rushing on
Since God first bade them roll, where have they gone?
Where are they going, swift as blazing stars
Shoot from their courses? Oh, the years, the years
They go and leave their traces on our hearts;
They go, and leave their impress on our brows;
They go, and take us with them to the dust.
Though life whirls round us so, we scarcely know
Our little day begun till it is night.
Night? No, eternal morn. If we have used
The earthly days aright, we know no night,
Only a change, a putting off of this
Worn out, mayhap, and tired humanity
That held the soul from freedom long before.
Then speed, swift years, nor let our hearts grow faint,
As to eternity ye circle on.

But, oh! pray God, each heart, that every hour
May be so fragrant with true love and faith—
And sweeter incense still, of kindly deeds—
That we may meet the years again, nor shrink
To read the record we have written there,
When all the years have flitted to their place,
And lose themselves in God's eternal day.

—[Annie K. Fader Field.

Igo, Shasta county, Cal.

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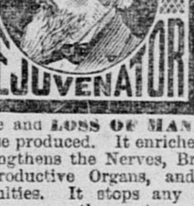

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