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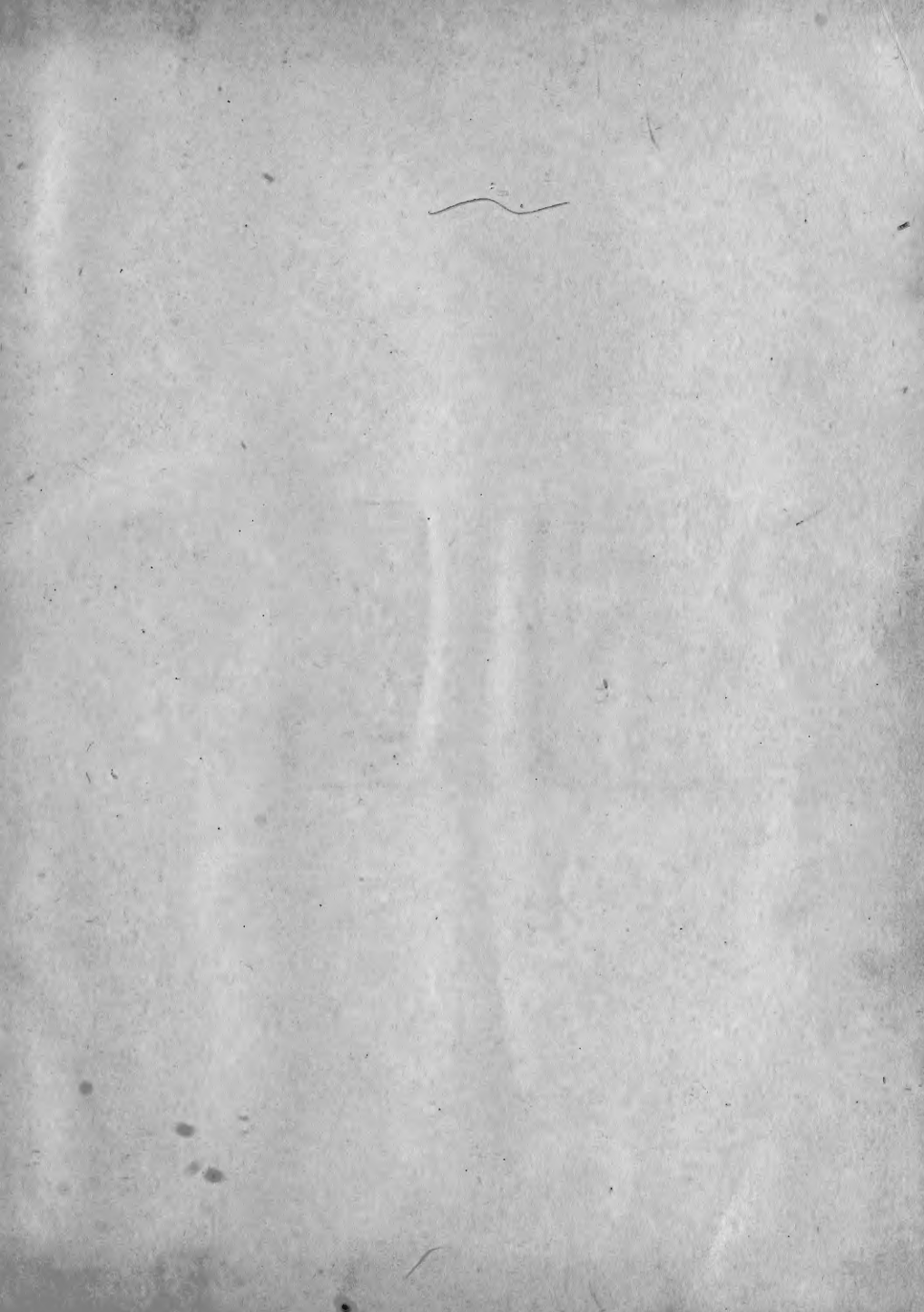
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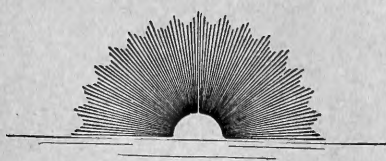
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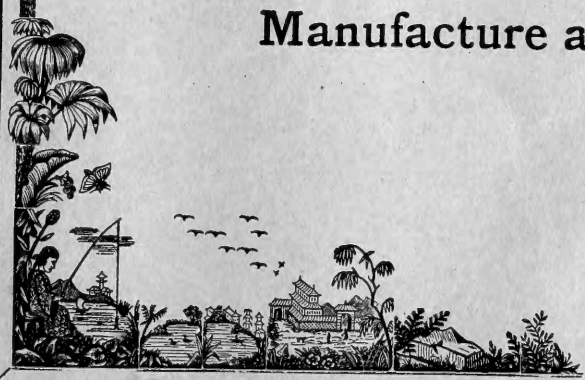




**C** **E A**

ITS

**Origin, Cultivation,  
Manufacture and Use.**











End of Tea Twig  
Natural Size  
& Color

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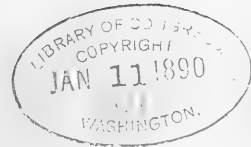
# TEA:

Its Origin, Cultivation, Manufacture and Use.

BY I. L. HAUSER,

BAREILLY, INDIA.

1890  
9  
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1890.

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# TEA.

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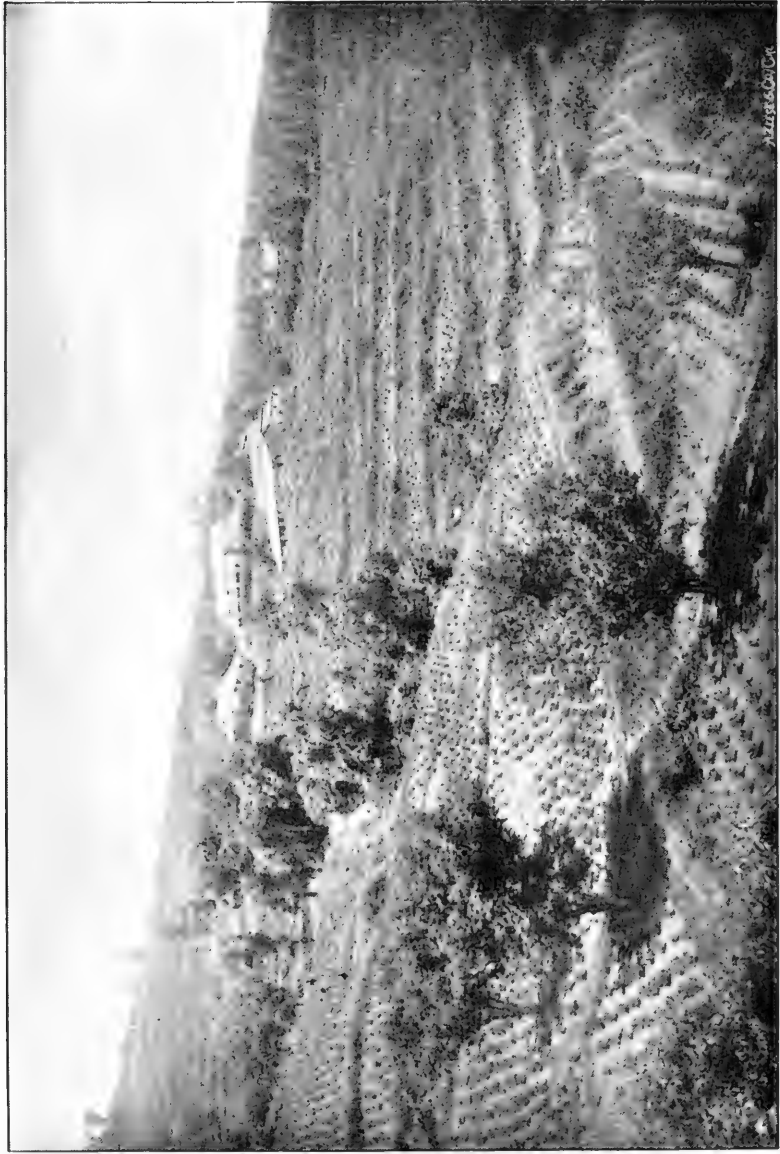
TEA is the dried leaves of an evergreen shrub, *camellia theifera* and called *chhà* by the Chinese and natives of India. The following account of its origin is given in the "History of Japan," by Kaempfer, who went as Dutch embassy to Japan in 1691. The work was translated into English in 1727 :

## ORIGIN OF TEA.

"The tea plant is considered by the Japanese to represent the eyebrows of Dhurma, an ancient saint among the heathens. It will not be improper here to insert the history of this man, not only as it is pleasant and singular in its kind, but chiefly as it serves to ascertain the time when, according to the Japanese, this plant first came into use. Dhurma was the third son of Kasiumo, an Indian king. He was a holy and religious person, as it were a pope in the Indies, and the eighth and twentieth successor of the Holy See of Siaka, the founder of the eastern Paganism, who was an Indian himself and a negro, born 1,028 years before our Saviour's nativity. About the year of Christ 519 this Dhurma came into China. His design was to bring the inhabitants of that populous empire to the knowledge of God, and to preach his gospel to them as the true and only one that would lead them to salvation. Nor was it only with his doctrine that he endeavored to make himself useful to men and acceptable unto God. He went still further and strove for divine grace by leading an austere and exemplary life, exposing himself to all the injuries of the weather, chastising and mortifying his body, and subduing the passions of his mind. He lived only upon vegetables, and thought this to be the highest

degree of holiness to pass days and nights in an uninterrupted *satori*—that is, a contemplation of the Divine Being. To deny all manner of rest and relaxation to the body, and to consecrate the mind entirely and without intermission to God, was what he took to be sincerest repentance and the most eminent degree of perfection human nature could attain to. After a continued waking of many years he at last grew so weary of his fatigues and fastings that he fell asleep. Awakening next morning and with sorrow remembering that he had broken his vow, he resolved to take to severe repentance, and in the first place, lest the like accident should happen to him hereafter, he cut off both his eyebrows as the instruments and ministers of his crime and then threw them upon the ground. Returning next day to the place where he had done this execution, he observed that by a wonderful change each eyebrow was become a shrub, and the one which is now called tea, whose virtues and use were then as yet unknown to the world, no more than the plant itself. Dhurma, eating of the leaves of the plant, found with surprise an uncommon joy and gladness to fill his heart and his mind endowed with new strength to pursue his divine meditations. This uncommon event and the excellent virtues of the leaves of the tea he forthwith discovered to the multitudes of his disciples, together with the way of using them. If the leaves were to be taken fresh they would affect the head very much, having something narcotic in them which intoxicates the animal spirits and occasions a trembling, convulsive motion in the nerves. This inebriating quality they lose by being dried, and there remains only a virtue of gently refreshing the animal spirit. This ill quality is taken off in a good measure by a repeated and gradual roasting, though not quite so effectually but that some of it still remains which will affect the head, and which they cannot be deprived of but by degrees in ten months' time or more. The best and most delicate tea which possesses its most refreshing quality in the most eminent degree must be at least a year old. It is never drunk fresher unless it be mixed with an equal amount of an older sort. \* \* \* I believe there is no plant as yet known in the world whose infusion or decoction, taken so plentifully as that of tea in Japan, sits so easy upon the stomach, passes so quickly through the body, so gently refreshes the drooping animal spirits or recreates the mind.





TEA PLANTATION IN THE HIMALAYA MOUNTAINS.



“Emperor’s tea is grown at Udsi, on the sea coast. The grounds are swept every day and secluded from intruders. Pickers abstain from coarse food for three weeks previous to picking lest they should have bad breaths, bathe twice a day and do not pick with bare hands, but gloved. Dried tea, put up in paper bags, then in porcelain jars nearly filled with common tea, costs from forty-two to fifty-six crowns a pound. I remember that one of the gentlemen at court presented me with a dish of tea with the following compliment: ‘Drink heartily and with pleasure, for one dish costs one *itzebo*,’ a square gold coin, worth about twelve or thirteen English shillings.”

Thus ends the ancient chronicler’s narrative, which could not well be condensed and be a full account of the origin of tea, so I have been liberal in quotation.

It was well, since silk worms’ eggs, concealed in bamboo canes, were taken from China by missionaries and introduced into Europe, that a missionary from the West should take tea seed with him into China and Japan, even if it did cost him his eyebrows.

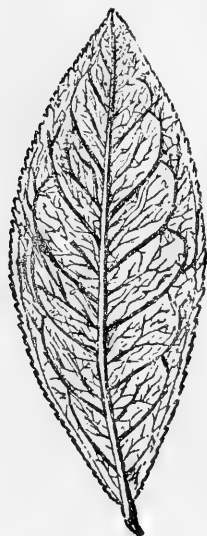
Tea trees were discovered in the forests of Assam, about the year 1826. As this is the only place in the world where tea has been found indigenous, there can be no doubt that some Dhurma from India did carry tea seed with him as he went eastward on his mission.

#### VARIETIES OF TEA PLANT AND OF ITS PRODUCT.

There is only one true tea plant, botanically, and that is called *camellia theifera*, and it is now generally conceded that the China plant was from Assam seed and became dwarfed by a less congenial climate. Indigenous plants or trees are found in the forests of Assam with a diameter of eight and twelve inches and from thirty to forty feet high, while the China variety will not grow higher than eight feet. That of Assam has one stem and its branches are one foot from the ground, while that of China has numerous stems after the second year, and its branches are close to the ground. The leaves of the Assam variety will grow to a length of ten inches, while those of China never more than five. The color of the former is a pale light green, of the latter, a dull dark green. The Assam gives more flushes, that is, growths of tender leaf. The China is the more hardy, much easier to raise, and will grow where

the indigenous will not. The two plants have been mixed by the inoculation of the pollen of the one with flowers of the other, and the results are called "hybrids." This process has been so often repeated that there are now over a hundred varieties of the tea plant. The original indigenous is a better plant, but does not thrive so well in a garden. The best qualities of black teas are made from indigenous and high class hybrids, the nearer the indigenous the better. The introduction of the Chinese plant into India is now considered a misfortune, as the indigenous produces a much more desirable tea. The leaves of the indigenous are of a much finer and softer texture than those of China; the former may be compared to satin, the latter to leather.

The ordinary tea plants, hybrids, if not cut down would grow to eight or ten feet high, with several upright branches containing but a few leaves, or be but a straggling bush. I had once near my house on a tea plantation a plant that had never been pruned. It was about ten feet high with several upright branches projecting from the stem about two feet from the ground, and had but few leaves. When cultivated for leaf the shrub is kept pruned three to four feet high, and the bush two to three feet in diameter, becomes a mass of



branches and leaves, making a beautiful as well as a useful ornament.

The shrub will live for thirty to forty years, but will not be very productive of leaf after twenty years. The stem of an old shrub is several inches in diameter near the ground, and has a large tap root that will go down to a depth of six feet when not obstructed.

The full grown leaves are of a glossy green color, from two to five inches in length, of elliptical-oblong shape, and about an inch in width at the center, serrated and marked with transverse veins, but differing from other leaves in this, that the veins do not go to the edge of the leaf, but turn and form a loop with the next vein, as seen in the illustration. This is a peculiarity characteristic of the tea leaf. The old leaves on the plant are not picked, as they would be worthless for tea, and plucking them would injure or kill the shrub.

The flowers are slightly odorous and of a pure white color. They are usually solitary or at the most two or three together on separate pedicles, at the axils of the leaves. When leaf only is desired, and not seed, the flowers are picked as soon as they appear in the autumn, and thrown away. The seed takes nearly a year to ripen. It is enclosed in a brown shell, looking like a hazel nut, and when on the shrub is encased, one to four of them, in a bulb like that of a hickory nut. When ripe the capsule opens and the nuts drop out. The seeds are bitter and astringent. A fine lubricating oil can be made from them.

Soil, climate and cultivation make a great difference in the varieties of the plants and in the product, as they do in varieties of fruit and grain. Peaches and grapes show very distinctly this difference. A potato raised on a sandy soil is altogether another article from that of the same kind of seed grown rankly in a muddy bottom.

The planters have each their own methods of curing. One will take the greatest care and observe the exact time for each process, while another will be ignorant or indifferent, and the results are what might be expected. One skilled in testing teas can tell not only the country but the district, and even the plantation on which a particular tea is produced, and he can distinguish the teas of two plantations lying side by side, prepared by different managers, though both the teas may be pure and of excellent quality. I have often been asked, "How is it that so many kinds of tea can be made from the same plant?" and my answer has been, "How can there be so many kinds of butter made from cow's milk?"

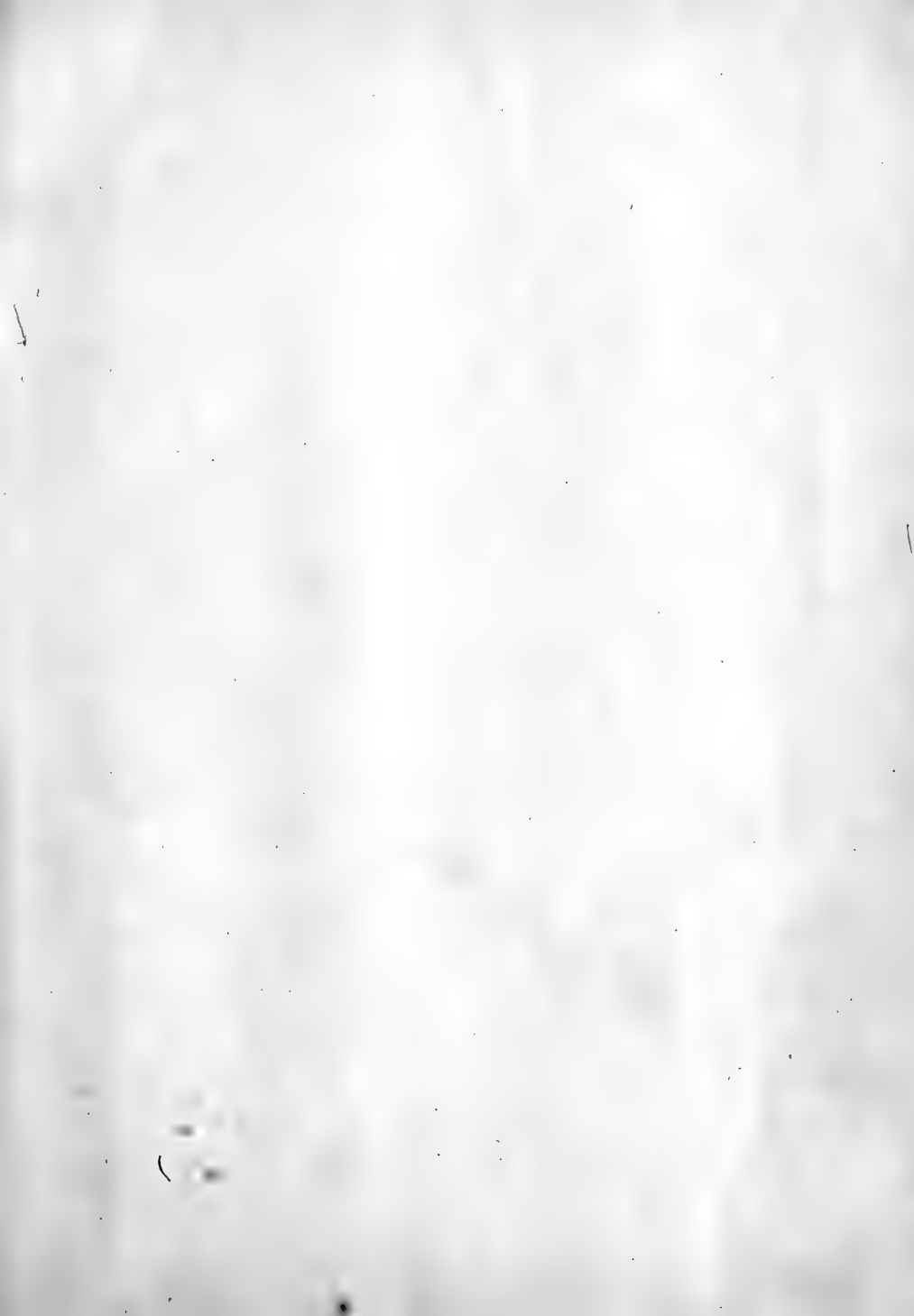
#### THE CULTIVATION OF THE TEA PLANT.

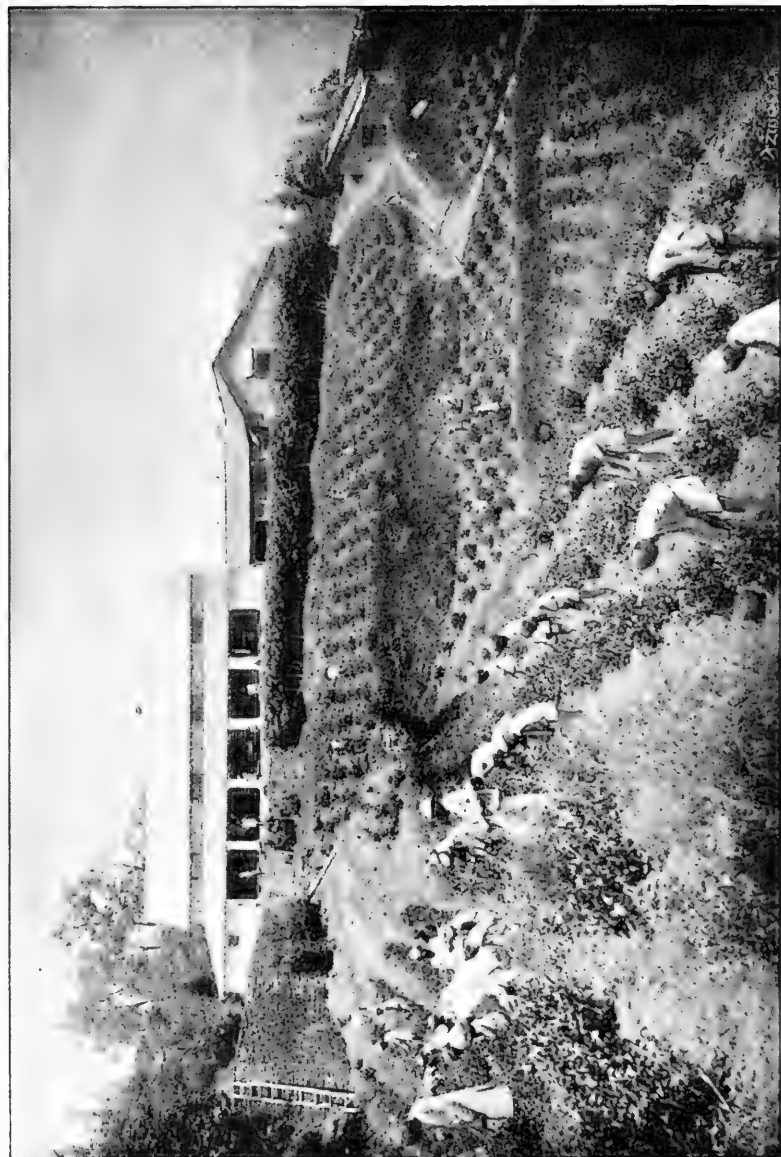
It is supposed that the tea plant can be grown only in tropical countries. This is not the case, as there are thriving plantations in climates and at altitudes where for a short season the shrubs are covered with snow, but the hot, moist climate and rich soil of Assam are nearly perfect for tea growing. This is particularly so in respect to the growth of the plant and supply of leaf, but the Assam teas do not have the delicate fragrance of those grown in the dryer atmosphere of the more northern Himalayas. The tea grown in temperate climates is more delicate in flavor, while that grown in hot climates

has more body. Tea requires a good soil and to be well tilled. The seeds are usually sown thickly in a nursery where the young plants remain for about nine months. They are then transplanted in rows about four feet apart each way. The ground is kept clean of grass and weeds and well manured. In the Himalayas the plantations are usually on the terraced mountain sides, and as it is desirable to have the soil receive and retain as much water as possible, it is dug deeply with hoes and left very loose. Leaf can be picked after three or four years' growth of the shrub. If done sooner the growth of the branches would be retarded. Pruning is done annually, during the winter season when the sap is down, with large shears, to increase the number of branches, the quantity of leaves, and to keep the shrub a convenient size for gathering the leaves. Sometimes the seeds are planted *in situ*, or at "stake," as it is called, as stakes are placed to indicate where the trees are to be, and the seeds are sown near them.

#### THE PLANTATIONS.

These consist of from fifty to one thousand acres each. In a convenient spot is the manager's bungalow surrounded by fruit trees and flowers, with paths leading from it to all parts of the plantation, a delightful place of residence, especially as the plantations in the Himalayas are in the finest climate of the world; but there is this drawback, that the planter sometimes for months sees no one but his own family and laborers. Not far from the bungalow are the *godowns*, or houses for curing, drying, boxing and storing the tea. Not far from the plantation are the villages of the laborers. It requires one laborer for every planted acre, besides those employed in the factory. When there are no flushes, the laborers are employed in digging the ground, making new terraces, repairing the old ones, carrying manure and carrying the tea to the nearest railway station, from fifty to one hundred miles distant. In the Himalayas all carrying is done on the backs or heads of natives. During this rest season, wood is procured for boxes and charcoal, boxes are made, buildings repaired or erected, and everything got ready for picking.





PICKING TEA LEAF.

## PROGRESS OF TEA CULTURE IN INDIA.

An English gentleman, known throughout India and Great Britain for his knowledge and interest in the growth and manufacture of tea, who has written several books on the subject, and is interested pecuniarily in several plantations, says: "We have advanced greatly in the last few years; but tea manufacture, as regards economy in doing it, is yet comparatively in its infancy. Still we have done a great deal since the indigenous plant was discovered in the jungles of Assam, now nearly fifty years ago; we have advanced more in tea manufacture than the Chinese, who have been making tea for many centuries. That is to say, I affirm that the India planter of ordinary intelligence knows more of both tea cultivation and tea manufacture to-day than any of his Chinese contemporaries. The Chinaman grows tea and makes tea as he taught us to do it twenty or thirty years ago. The pupil in this case has certainly beat his master. We have made some improvements in tea planting and tea cultivation, but where we have left our teachers far behind is in manufacture. 'Johnny' makes his tea as his father made it before him, taught by his grandfather, who made it the same way; and for aught we know no improvements in that way have taken place in the course of many centuries. All is hand labor; machinery to them is unknown. The most primitive ideas in tea manufacture are still adhered to. In support of the latter I will quote one instance: Tea from time immemorial has always been dried by charcoal in China; no other way is known there now. How is it here in India? A large proportion of the produce is fired with other fuel, aided by machinery; and it is only a question of time (and a very short time) when the whole of it will be thus prepared. I could quote other instances; let this suffice, for no comparison can be drawn between tea manufacture as followed out in China and India in this year 1881. The former is as crude as it was two or five hundred years ago; the latter (though still far from perfection) in its many details, in its numerous machines cleverly contrived to save labor and better the teas, is a striking illustration of the activity, the energy, the inventive genius of the Anglo-Saxon race."

"An Indian tea factory, well set up with machinery, that is to say, with a green-leaf drying apparatus, rolling machines, tea dryers, equalizers, and sifting and sorting machines, all driven by an engine of 15-horse power, offers a

wonderful contrast to a Chinese tea factory, where all is handwork. But more strange still is the comparison alongside of the fact, that in the former case, the industry dates back only some thirty years, in the latter, many centuries."

#### KINDS OF TEA.

Different kinds of tea can be made from the same bush, and the real difference in the grades of pure tea, either black or green, depends mainly on the age of the leaf when picked. Those who have strolled through the woods in spring-time and picked wintergreen leaves, know that the young shoots are preferable to the old woody leaves; as in making hay, the first cut of the tender grass is far better than that made from old tough grass. Tea can be made of young leaf only. The younger the leaf the better the tea.

If the very finest tea is desired the order is given in the morning to pick only the tips of the twigs. These are the tiny rolled-up leaves or buds that in a day or two would expand into several leaves. When this leaf is dried it is of a grayish color, and if closely examined, is covered with a hairy down or fuzz. I once showed this kind of tea to a wool buyer. He at once took out of his vest pocket a little microscope by which he determined the fineness of wool by counting the number of threads in a half inch. Looking at one of the little rolled leaves he exclaimed: "Why, this is just like a lamb's tail covered with hair!" Another, a sportsman, said it was like a fawn's leg. This tea has a mild, delicate flavor and fragrance, but not much body or strength. By most people and the best of judges, the tea made from two or three leaves next the tip is preferred, as it has the same flavor but more body. But little from the tip is made, as it would take too many tips for a pound, destroy too many embryo leaves and be too expensive for the general market. So on down the twig to the large old tough leaves, that are used for the coarsest and cheapest grades of tea.

About all the tea made in India is black, as the European demand is mainly for that kind. Black tea is made by the oxidation of the leaves while being rolled and dried; green tea is made by quickly rolling and drying before oxidation takes place. Japan tea is the leaf quickly dried without rolling and might be called flat leaf green tea.



The "Encyclopædia Britannica" says: "The color of genuine green tea is entirely due to the rapid drying of the fresh leaves which prevents the chlorophyle from undergoing any alteration."

Chlorophyle is the green coloring matter in all plants.

The difference between black and green tea lies in the manufacture and nothing else.

Mr. Samuel Ball, inspector of teas in China for the East India company, says: "The ease with which starch is converted into sugar is seen in the process of germination in the malting of barley; in the ripening of certain pulpy fruits; and by the action of acids. Now there is no one substance so universally diffused throughout the vegetable economy as starch. \* \* It is abundant in all the green parts of plants, especially leaves and fruit, so long as the functions of these organs are required. Thus in hay it is found in the largest quantity just at the period when the seed is perfected, which is the cutting time. In unripe fruits it is found so long as the green growth continues; but not a trace when ripe. It is transformed into sugar; and the sweetness of the fruit when ripe will always be in exact proportion to the quantity of starch it contains unripe. \* \*. This change is effected by the absorption of oxygen from the air, which converts the starch into sugar. \* \* Newly gathered leaves exposed to sun and air, soon begin to suffer change; and all organic substances during this state of change absorb oxygen from the atmosphere. The green resinous principle of the leaf disappears" and in leaves containing tannin, as tea leaves, "red or brown coloring matters are formed; the tannic acid disappears, and is replaced by sugar." Thus is the loss of tannin in black tea accounted for; and the red coloring matter of the leaf, as well as the red infusion, explained.

It is sometimes asserted that green tea cannot be made without the use of coloring matter. Once while enjoying a delicious cup of tea with a manager, a Scotchman, in his bungalow, I remarked in a bantering way that planters were a graceless set of scamps. "Why! What are you going for now?" "Oh, nothing, only that they color their tea green and send it out to poison the people." He took me in dead earnest, and going to the *godown* soon sent for me. On entering, he said: "I want you to stand there by that pan and not stir from it and watch the process from beginning

to end and see for yourself that green tea can be made without a particle of coloring matter." A fire was burning under the *cast iron* pan. A man threw a basket of fresh green leaves, just brought from the bushes for the purpose, into the pan and commenced stirring and rolling the leaves around the pan, first with one hand and then with the other, for it was hot work, and none but a tea roller could have kept his hand in that hot pan of hot leaves. He used the palm or ball of his hand in rolling and not the fingers. If a single leaf had stuck to the pan it would have been scorched and the whole batch been spoiled. In a few minutes there was whipped into the basket several pounds of as fine green tea as one could wish, by as simple a process as possible and without the least coloring matter. It had the dull green color of young, tender new mown hay and its fragrance was delightful. I had a cup made from it that evening, but wished for many an hour during that long night that the Scotchman had never shown me how pure green tea was made. I had rather take opium and dream in a heaven of bliss than to be frantically mad from drinking such a tea. Though it is absolutely pure, anyone who wishes to sleep or has any regard for his life, would not be a constant green tea drinker. Nevertheless, and notwithstanding that the Scotchman did show me how pure green tea could be made, there is no doubt that most of the green tea is made in another way. It is cheaper and just as easy to use coloring matter and old tea grounds.

Notwithstanding the abundance of tea grown and the cheapness of the ordinary kinds, there is probably not an article of food or drink that is so badly adulterated as tea.

Sometimes tea is colored to suit customers. Once passing through a plantation owned by a Hindu, the only one I know of belonging to a native, I saw them making tea. I handled it in the pan and felt and saw that it was colored. I asked why they colored it and the native manager replied that it was for the Bhotias, Tibetans, who would not buy it unless it was of such a color, and that they specially asked that it should be colored. Powdered soapstone was thrown into the pan while the tea was moist and being rolled. The tea had a whitish gray appearance and a slippery, greasy touch. This was a pure tea and the coloring matter harmless and only put in to please the Bhotias. For the same reason, the Chinese make tea green to please the

Melican man, because the American people want it green, and the greener the better, so more indigo and Prussian blue is thrown into the pan. All nonsense about the copper pan. A Chinaman would never use copper, when an iron pan is so much cheaper, and coloring materials so plentiful, besides a copper pan would not do the business; "altee samee," he would make white tea, blue or red tea, if "Melican man likee so so."

Coloring with soapstone is but an innocent matter compared with the adulterations made by the heathen Chinees, and the worse heathen in Europe and America. Once at St. Paul I was told that there was a man from India there in the tea business. I found him in a large loft among the wholesale houses. He was a Mr. Jackson, the inventor, with his brother, of several machines for rolling and drying tea, that are now used in India. He had malarial fever and was obliged to leave India. He went to San Francisco and thence to Washington, where he met Mr. Le Duc, Commissioner of Agriculture, who engaged him to start a tea plantation in South Carolina, for the government. On the commissioner leaving office the project was given up, and Mr. Jackson went to St. Paul. As I entered his office and saw no one, I went on through an open door into a large room, extending from one end of the building to the other, where I found him. He was very reserved, and turned to go out, as if he did not wish me to see his business, but when I told him I was from India he received me very cordially. All through the great room were piles of tea open on the floor. At the farther end was an engine and a kind of fanning-mill. When I asked him what he was doing, he said, "I am cleaning tea for the merchants, by running it through this mill, trying to get out some of the poison, and it is killing me, breathing this poisonous dust. Look here," and he drew his fingers across a shelf, leaving deep marks in the green dust. Everything was covered with it. His face was wan and haggard, and he looked more fit for a hospital than for work. When I asked him why he did not quit the business, he replied that he knew nothing but tea, and had to do it for a living. A few months afterward I was again in St. Paul and called at his place, but he had gone to the hospital. When I spoke of going to see him I was told that no one was allowed to visit him. A few days after, meeting an undertaker and referring to India, he said he had just buried a Mr. Jackson from that country; that the man had been

poisoned to death cleaning green tea. The people who drink such tea take the poison in small quantities along with their food, and work off the effects in a measure, yet it is poison and cannot be harmless.

Various substances are used in coloring and weighting tea, such as subacetate of copper, indigo and turmeric mixed together to make a bright vegetable green, sulphate of lime or gypsum, to give the tea a grayish, smooth glossy color, glucose, to make the gypsum adhere to the tea, Prussian blue, Dutch pink, soapstone, graphite, rice starch, and foreign leaves. Kaolin, or porcelain clay, is shipped in quantities from the United States to China, which the Chinese buy to mix with tea. Japan tea is largely made up of leaves other than from the tea shrub. These consist principally of wisteria, willow, a species of ash, and other species of shrubs.

Much of the tea is colored after it leaves China and Japan. If a cargo of tea is damaged on the voyage, or if it lacks color, it is doctored in Europe or America to suit the market. A merchant in an eastern city, a very large dealer, makes a business of buying damaged or inferior teas. He buys them at almost nothing, doctors and sends them off to the country and sells them from thirty to fifty cents a pound. He was never known to buy any but rejected or inferior teas, and has accumulated a fortune as a tea doctor.

In China no tea grounds are thrown away. They are re-dried, mixed with new tea or colored. Much of the green is made from exhausted leaves, and the only strength it has, is derived from the chemicals that give it pungency and color, and the old or young ladies who color their ribbons with green tea leaves may be assured that it is not the tea, but the drugs in it, that does the coloring. It is not only in China that exhausted leaves or those that have been used are reclaimed for further use. A gentleman called on an acquaintance of his, an engineer in a large tea house in an eastern city. While conversing in the engine-room, a two-horse wagon, filled with barrels of tea grounds, drove up to the alley door. On asking what they were going to do with that stuff, the engineer replied: "Oh, we will send it up-stairs, heat it, roll it, dry it and mix it with some new tea, and send it off to the country for fifty cents." On further inquiry it appeared that the company had a contract with the leading hotels for all their tea grounds, and sent its wagons round daily to gather them in.

At the special request of an India tea planter, I once took a number of samples of his teas to New York. A prominent tea broker invited a number of his friends, all tea brokers and importers. After testing, all declared that it was the finest lot of teas they had ever seen, but unanimously agreed that they were too good for the American market, as the Americans wanted cheap tea.

It is a world-wide fact that most of the inferior, refuse teas, such as will sell nowhere else, are dumped into the American market, and the great American people, so "cute" in most things, and with a reputation for driving sharp bargains, think they are very shrewd and do a big stroke of business when they get cheap teas. They might as well buy tough or damaged meat of a butcher, at a few cents a pound, and try to delude themselves that they had got the best meat, as to think they are getting pure, fine tea when they buy it cheap. It is well known by all Oriental tea shippers that America is the poorest market of the world for the finest and best teas, so these are shipped to Europe and Russia, the latter being the best market for them.

The Rev. Wm. Speer, D.D., a missionary of the American Presbyterian Board in China, writes: "The green tea obtains its complexion in most of what is exported, from the presence of coloring matter. By some of those perverse tastes which obtain among us, our early tea purchasers betrayed a strange predilection for a certain color. 'Foreigners,' said the Chinese, 'like their tea uniform and pretty,' so they poison the herb to gratify the ridiculous tastes of England and America for bright green, just as many of our pickle makers poison their pickles. They throw in a blue substance commonly known as Prussian blue or prussiate of iron (cyanide of potassium and iron), and they mix with it a quantity of gypsum. They never think of drinking this tea themselves, but the more gypsum and blue they can communicate to the tea, the higher becomes its value in the eyes of their best customers, and the dyeing process goes on in China to an alarming extent. It is calculated that in every hundred pounds of the cheaper green tea consumed by our people, more than half a pound of coloring matter is contained."

The "Cyclopaedia Britannica" says: "The green tea sent out of China is almost invariably faced or glazed with artificial coloring matter."

“Johnson’s Cyclopaedia :” “The restoration of a poor grade of tea and the conversion from black to green (or *vice versa*) are in constant practice in England and the United States, and have given rise to a special branch of industry.”

In reclaiming black tea but little coloring matter is required, and that not of a poisonous nature. Exhausted leaves or tea grounds can be easily redried and rolled, and if a small quantity of new tea is mixed with them they can be easily passed off as good, cheap black tea. Damaged black teas can be moistened or washed, heated, re-rolled, and, if off color, be faced with some licorice, burnt sugar water, catechu, graphite, or other substances. There can be this satisfaction to the drinker of cheap black tea, that if he has been deceived in the quality and cheated in the purchase, he is not liable to be poisoned, as in drinking cheap green tea. It is best always to get all the comfort we can out of our misfortunes.

#### THE TEA TRADE.

On this the London *Standard* says: “If the tea trade is ceasing to be as profitable as it used to be, the tea drinker is also well aware that the quality of the stuff sold is no longer what it was. Japan, India and Ceylon send us very sound teas, though the English palate has still to be fully educated to a liking for these brands. China, which at one time had a monopoly of the supply, is falling off. It has still rare samples for those who can pay for them. But few buyers being at hand, the importers naturally prefer to minister to the coarser tastes of the less opulent public. Accordingly, every year seems to bring cheaper and cheaper and worse and worse teas into England. Everybody wants something that costs little, and after a course of cheap teas the buyer loses the appetite for good ones. He is even unable to distinguish a first-class from an inferior article. For fifty men who can talk wine there is not one woman who has an educated taste for tea. A well-to-do citizen would scorn to ask his guests to drink a bottle of the acrid vintage which is associated with the Premier’s name, and will instantly send from the table a bottle of corked wine; yet that same host will himself drink and offer to his friends tea which a coolie in Canton or Yokohoma would toss into the street. The housewife who considers three shillings and sixpence (90 cents) a sufficient price for the

best of tea would be astonished to hear of Japanese growths worth £3 and £4, or to be told that in Russia, opulent families rarely drink anything under ten or twelve shillings (\$2.50 or \$3.00). Even now plenty of the best India teas bring at auction as much as three shillings and sixpence (90 cents) to four shillings per pound wholesale, though these fine brands, like the best qualities of China teas, are usually disposed of privately. Of the 70,000,000 pounds of India tea sold every year in England fully 40,000,000 pounds are of a higher quality than anything received from China, but people prefer the poorer sorts simply because they are supposed to be cheaper. What is worse, the Chinese, finding that the rage among the western barbarians is all for cheapness, minister to our deteriorated taste by sending us worse qualities than they used to do, or reserve the best for themselves or for the Russians, who not only know what is good, but are ready to back their opinions with their purses. A little more extravagance in this direction would be excusable. Economy in tea drinking is wastefulness."

#### PACKING AND SHIPPING OF TEA.

<sup>1</sup> Most of the tea from China, Japan, and considerable from India, is put up in the flimsiest kind of chests, scarcely holding together till they reach the market. On this account all the genuine, natural flavor of the tea is lost, and besides, tea being a most sensitive absorbent, absorbs very quickly the effluvia or fragrance of everything near it. Once, on leaving a plantation, my friend, the manager, presented me with a small box of very fine tea for use on my journey. The box was opened and kept in a trunk with other articles. Reaching home and leaving the trunk unopened for a few days, I then found the tea had a very peculiar fragrance and flavor that I had not observed in it at first. At last I discovered the cause. My tea had borrowed or stolen its fragrance from some highly scented soap kept in a package in the same trunk.

The hold of a ship is a kind of chemical laboratory in which are compounded more smells than were ever heard of in Cologne. Place the broken and open chests of tea along with hides, bilge water, rusty iron, tobacco, gums, resins, jute, a heterogeneous mass of essences and smells in a close air-tight oven or retort, which the hold of a vessel becomes as it passes

through the tropics, and—well, such tea needs a doctor before it can go into market.

Tea should not be left open near other substances, as onions, kerosene oil, codfish, spices, unless the grocer or housekeeper wishes to furnish a kind of Irish stew broth instead of tea. It all depends on what is wanted. If it is real tea that is desired, then buy that kind, preserve it carefully and make it properly.

It is absurd to say that tea cannot be packed so as to retain all its original flavor, and be absolutely free from that of other substances.

If Mr. Armour and others can put up meat in air-tight cans to remain good for years in the tropics, why cannot such an article as tea be kept in the same manner? If tea is properly packed it can be sent by caravan or steamer, overland or underland, or be towed through the sea, for that matter, and be just as pure and fragrant as the day it was put up.

Some years ago I adopted the following method, and the results have been so satisfactory that I have never thought of changing it. The tea is first packed in lead, soldered up air-tight in ten-pound packages. Each lead package is enclosed in a stout wooden box. After this box is nailed up paper is pasted all round it. The package is now doubly air-tight. Four of these ten-pound boxes are then put in a very tight wood box, which is strongly nailed. This outer box is covered with strong hemp cloth, and this is covered all over with tar. 1,000 pounds of tea when packed weighs 2,250 pounds, so that the packing alone weighs 1,250 pounds, or 250 pounds more than the tea itself. These packages are so well made and secured that they might be thrown into water and left for months, or be taken on a voyage of years and the tea be as pure, dry and fragrant as when it was packed on the plantation. I might say that a European is manager of the plantation and has the leaf picked for me that I prefer, and follows implicitly my directions in regard to the packing.

It is the fashion among some to talk of "new-crop tea," and "this year's picking," but those who really understand what good tea is, know that it improves with age, as wine becomes mellow with years, but both tea and wine must be hermetically preserved.



## AN ORIENTAL FIVE O'CLOCK TEA.

Professor Edmund S. Morse, in "Japanese Homes and Their Surroundings," gives a careful description of many varieties of tea houses in Japan, and a brief summary of the tea ceremonies. He says:

"A volume might be filled with a description of the various forms of buildings connected with tea observances, and, indeed, another might be filled with the minor details associated with their different schools. In brief, the party comes about by the host inviting a company of four to attend the tea ceremony, and in their presence making the tea in a bowl, after prescribed forms, and offering it to the guests. To be more explicit as to the mode of conducting this ceremony, the tea is first prepared by grinding it to a fine, almost impalpable powder. This may be done by a servant before the assemblage of guests, or may be ordered ground from a tea shop; indeed, the host may grind it himself.

This material, always freshly ground for each party, is usually put in a little earthen jar having an ivory cover, the well-known *cha-ire* of the collector. Lacquer boxes may also be used for this purpose. The principal utensils used in the ceremony consist of a *furo* or fire-pot, made of pottery, or made of a depression in the floor, partially filled with ashes, in which charcoal may be placed; an iron kettle to boil the water, a bamboo dipper of the most delicate construction, to dip out the water; a wide-mouthed jar from which to replenish the water in the kettle; a bamboo spoon to dip out the powdered tea; a bamboo stirrer not unlike certain forms of egg-beaters, by which the tea is briskly stirred after the hot water has been added; a square silk cloth with which to wipe the jar and spoon properly; a little rest for the tea-kettle cover made of pottery or bronze or section of bamboo; a shallow vessel in which the rinsings of the tea bowl are poured after washing; a brush, consisting of three feathers of the eagle or some other large bird, to dust the edge of the fire vessel, and, finally, a shallow basket in which is not only charcoal to replenish the fire, but a pair of metal rods or *hibashi*, to handle the coal; two interrupted rings by which the kettle is lifted off the fire; a circular mat upon which the kettle is placed and a small box containing incense or bits of wood that give out a peculiar fragrance when burned. With the exception of the fire vessel and iron kettle, all these vessels have to be brought in by the host

with great formality and in a certain sequence, and placed with great precision upon the mats after the prescribed rules of certain schools. In the making of tea the utensils are used in a most exact and formal manner.

“To watch the making of the tea, knowing nothing about the ceremony, seems as grotesque a performance as one can well imagine. Many of the forms connected with it seem uselessly absurd, and yet, having taken many lessons in the art of tea making, I found that, without exception, it was natural and easy, and the guests assembled on such occasions, though at first sight appearing stiff, are always perfectly at their ease.

“The proper placing of the utensils and the sequence in handling them and making the tea, are all natural and easy movements, as I have said. The light wiping of the tea jar and the washing of the bowl, and its wiping with so many peripheral jerks; the dropping of the stirrer against the side of the bowl with a click in rinsing, and a few of the other usual movements are certainly grotesquely formal enough, but I question whether the etiquette of a ceremonious dinner party at home, with the decorum observed in the proper use of each utensil does not strike a Japanese as equally odd and incomprehensible, when experienced by him for the first time. Many books are devoted to the exposition of different schools of tea ceremonies, illustrated with diagrams, showing the various ways of placing the utensils, plans of the tea rooms, and all the details involved in the observances.”

Professor Morse gives six illustrations showing different styles of tea rooms.

#### ANALYSIS OF TEA.

There are four principal ingredients in tea. First, an aromatic, volatile oil which gives the tea its odor or fragrance, which though not observed in the fresh leaves is developed in the curing or firing. This oil is in such minute proportions that there is only a single pound of it in a hundred pounds of tea. Damaged teas, or those left exposed to the air, leaves that are boiled or left uncovered in the pot, lose this element so essential to a good, fragrant cup of tea.

Secondly, a principle called theine, similar to coffeeine in coffee or cocaine in cocoa. The proportions of this vary in different kinds of teas, ranging from two to six per cent.

Thirdly, tannin, which gives tea its bitter, astringent taste. There is about a third more tannin in green tea than in black.

Fourthly, a vegetable substance called gluten, the same as that which gives grain its nutritive qualities. *Youman's Household Science* says: "But the leaves contain another constituent, viz.: gluten, which not being dissolved by hot water is usually lost with the dregs and grounds. The proportion of this is stated to be as high as 25 per cent., so that the leaves by exhaustion or steeping are still highly nutritious. In some countries it is customary to eat them." In keeping tea and in making it, great care should be taken to preserve all these elements in the same proportion that nature has provided them.

#### TEA MAKING. ✓

Many or most people do not know how, or are too careless and indifferent, to make tea properly. Buckle was a most fastidious tea drinker. He declared that no woman could make tea until he taught her, and insisted that the cups and even the spoons should be warmed. Those who have resided in India and enjoyed its delicious tea say, after visiting in the United States, that they hardly ever got a cup of tea that they cared to drink. Even the best tea can be spoiled in the making, as the best of flour can be turned into poor bread, and the best potato or steak be ruined by the cooking.

#### HOW TO SPOIL TEA. ✓

If you want to spoil your good tea this is the way to do it. Take water that has been standing in an old ill-flavored bucket for several hours. Pour this into an old tea kettle with its sides covered with lime. Place the kettle over a slow fire and let it boil for an hour or more until the life has all gone out of it, then put it on the back part of the stove to simmer and become cold until you wish to make tea. Put the tea leaves into an old rusty, musty, cold teapot and pour on the water that is nearly cold. Place the pot on the table without a cover, while you put the food on the table and call the folks. After awhile pour out into thick, cold teacups, add cold milk and sugar, and lastly put in the cold spoons. You then have something—not for a heathen Chinese or Hindu, for they would not drink such a mess—but for careless Americans,

who do not know any better or care little what they drink, only that it is cheap, wet and warm.

#### HOW TO MAKE TEA.

If you really want a good cup of tea try this method. First, get real, genuine black tea—India is the best—keep it air-tight, in close-fitting stoppered glass jars, if possible. Just before you wish your tea make a brisk fire, get fresh water directly from the spring, well or hydrant. Pour it into a clean kettle and boil it quickly. Scald your earthen tea pot and place it empty on the back part of the stove a few minutes, to drive out all the stale vapor. Put into the teapot a teaspoonful of leaves to a half pint of water if you wish only a moderate strength. Be sure that the water is boiling, not that steam comes out of the spout—a common delusion—but that bubbles, “cat’s eyes,” are in the water. Just when the water boils, not one minute before or a minute after, so as to catch the very life of the water, pour it on to the tea, and over the teapot on the table place the cosy to keep in all the heat and fragrance. Have a bowl of hot water on the tea tray. Take each thin teacup by the handle and dip it into the hot water. Also dip the spoons into the bowl. Shake the teapot a little to bring the water out of the spout, and to equalize the infusion, or use a wire tea stirrer. Do all this as quickly as you can and pour the tea. Then put in the sugar and good cream. “Drink heartily and with pleasure,” for this is tea. If this does not please you, then be a teatotaler.

#### THE BHOTEA OR TIBETAN METHOD.

When traveling in the Himalayas, I have often met parties of Bhotas—the name Tibet is not known among them—with their caravans of yuks, Bhotea cattle, sheep and goats on which were carried various kinds of merchandise from Bhot to the plains of India. There was always in each party a man or woman carrying a wooden covered bucket or churn shaped vessel in which was a boiled mixture of tea leaves, butter and water; that had been prepared the night previous or in the morning before starting. When any one was hungry a visit was made to the bucket for a lunch. They did not seem to need any other food during the day. “For a breakfast of ten persons in Tibet, this,” says Moorcroft, “would be the preparation: About one

ounce of brick tea, and a like quantity of soda, are boiled in a quart of water for one hour, or until the leaves of the tea are sufficiently steeped. It is then strained and mixed with ten quarts of boiling water, in which an ounce and a half of fossil salt has been previously dissolved. The whole is then put into a narrow cylindrical churn, along with the butter, and well stirred with a churning stick, till it becomes a smooth, oily, and brown liquid the color and consistence of chocolate, from which it is transferred to a teapot for immediate use."

Mr. Manning describes another method: "A small quantity of flour is put into an iron vessel over a slow fire and gradually parched; to which is added a small portion of butter. These two ingredients are then stirred and formed into a paste; to which is added at intervals a portion of the strong decoction of tea, the whole being constantly stirred and well mixed, and blended together. It is then diluted with milk or water and churned. I also understood that it is poured from one vessel into another backwards and forwards several times. It obviously thus forms not merely a refreshing beverage, but a somewhat nutritious meal."

Mr. Manning found this mixture so agreeable to his taste, that he frequently indulged in its use for breakfast on his return to England.

In Tibet, Moorcroft informs us that all classes of Tibetans eat three meals a day. The first consists of tea; the second of tea, or of meal porridge, if tea cannot be afforded; the third of meat, rice, vegetables and bread by the upper, and soup and meat by the lower classes. At breakfast each person drinks about five or ten cups of tea, each cup containing about one-third of a pint, and when the last is half finished, he mixes with the remainder as much barley meal as makes a paste with it, which he eats. At the midday meal, those who can afford tea, take it again with the wheaten cakes, accompanied with a paste of wheat flour, butter and sugar, served hot. Captain Turner says, "that habit not only rendered this camp custom agreeable to our tastes, but experience most fully proved that warm liquids at all hours, contribute to alleviate the sensation of fatigue. I was never more disposed to praise the comfortable practice of the country, having constantly observed that the first object of attention with every man, at the end of a long journey, is to procure for himself a dish of hot tea."

## PECULIARITIES OF TEAS.

There is a great difference in the teas of China, Japan and India. The two former are more pungent, somewhat bitter and more quickly affect the nervous system, while that of India is richer in color, milder, and has what some call an herby, or a flavor like that of new mown hay. Some who have used China and Japan tea, at first, do not like that of India, but soon become accustomed to it so as to prefer it above all others.

## SOME SUGGESTIONS.

If tea be ground like coffee just before steeping, it will yield much more strength and a finer flavor, for the reason that all the elements in the tea are dissolved at once, and the infusion is composed of the proper proportion of each ingredient. When ground, tea is ready as soon as the boiling water is poured upon it.

When the leaves are not ground a lump of sugar in the teapot will hasten the infusion.

A "cosey" is a wadded cover made to fit the tea pot. It is generally shaped in two half-circles, stitched around, lined and corded. It can be made very ornamental by braiding or crewel work.

Tea, "à la Russe" is much liked by some people. It is to place a piece of peeled, well sugared lemon at the bottom of each cup before pouring over it the tea, hot and strong. Iced tea can be served in the same way.

The wealthy Japanese continue the ancient mode of grinding the leaves to powder; and after infusion in a cup it is whipped with a split bamboo or denticulated instrument until it creams, when they drink both the infusion and powder, as coffee is used in many parts of Asia.

There can be no doubt of the advantage derived from grinding tea, and any one interested in having a good cup, should try the experiment.

Cream is essential in making good tea. The Mongols use rich milk, the Tibetans butter, which takes the place of cream. In some parts of China, the people do not use milk or cream, for the reason they cannot get it.

Johnson's "Chemistry of Common Life," suggests that "a pinch of soda be put into the water along with the tea to dissolve the gluten and make the beverage more nutritious."

The Tibetans use soda, probably without knowing why, only that their forefathers did so. I have found many customs prevalent among what are termed uncivilized people, for which they can give no scientific reason, that are most essential and beneficial.

Tea contains more nitrogen than any other vegetable substance yet examined, which will account for its being so nutritious.

Mankind everywhere craves stimulating food and drink. Many an appetite would be satisfied with a good, strong, nourishing cup of tea instead of alcoholic beverages, if the tea was only provided.

Good pure water is very essential, that from a spring the best. A *bon vivant* in Chicago says he always uses Waukesha water with the best results. The color of a good "liquor" in a china cup is that of a bright, new, copper cent. Finally, get pure, good black tea, have everything in order, make in a hurry, and drink "right away."

I. L. HAUSER,

Bareilly, India.

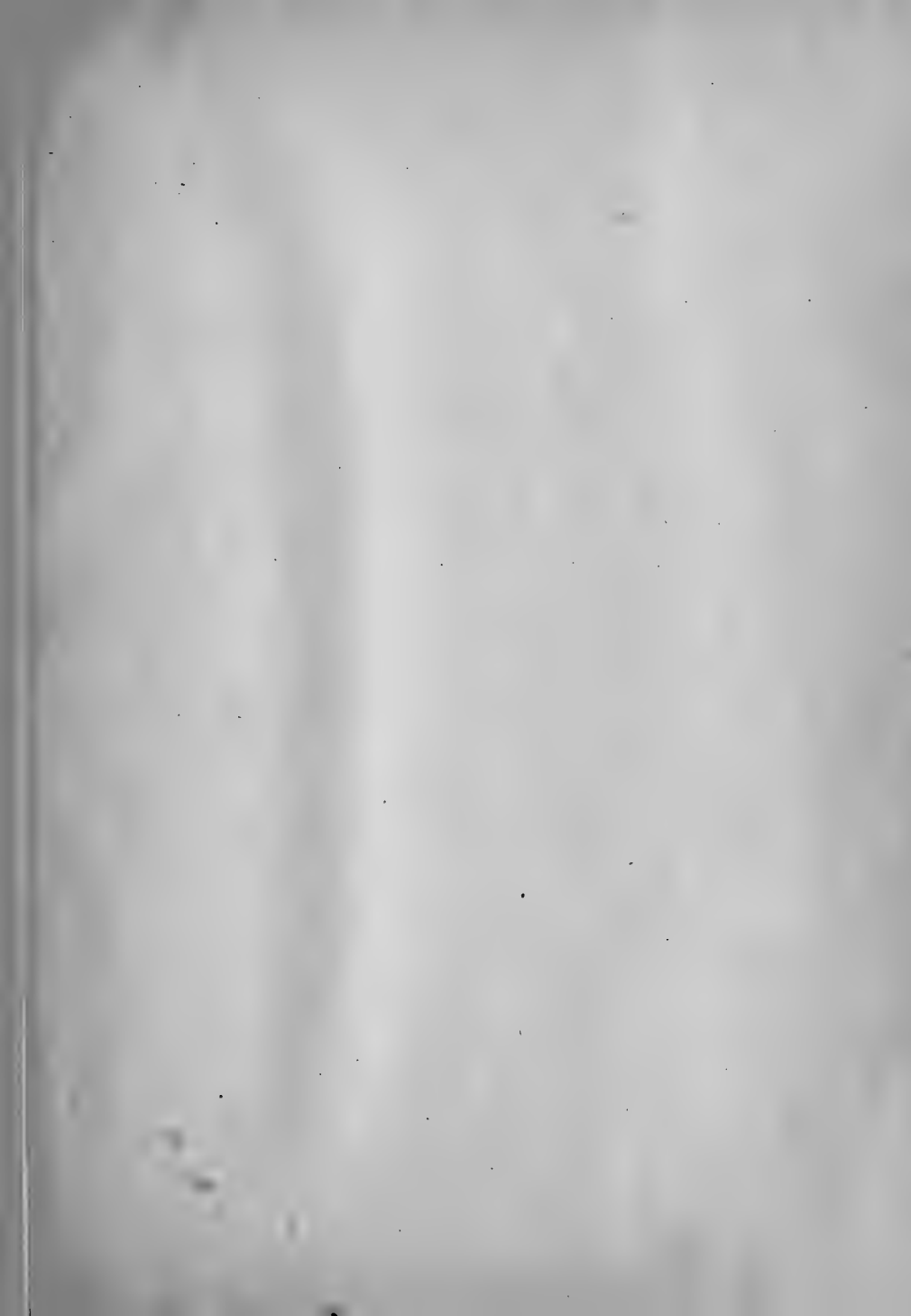
*Tea put up on the plantation expressly  
for consumers and sent to them in the  
original packages.*

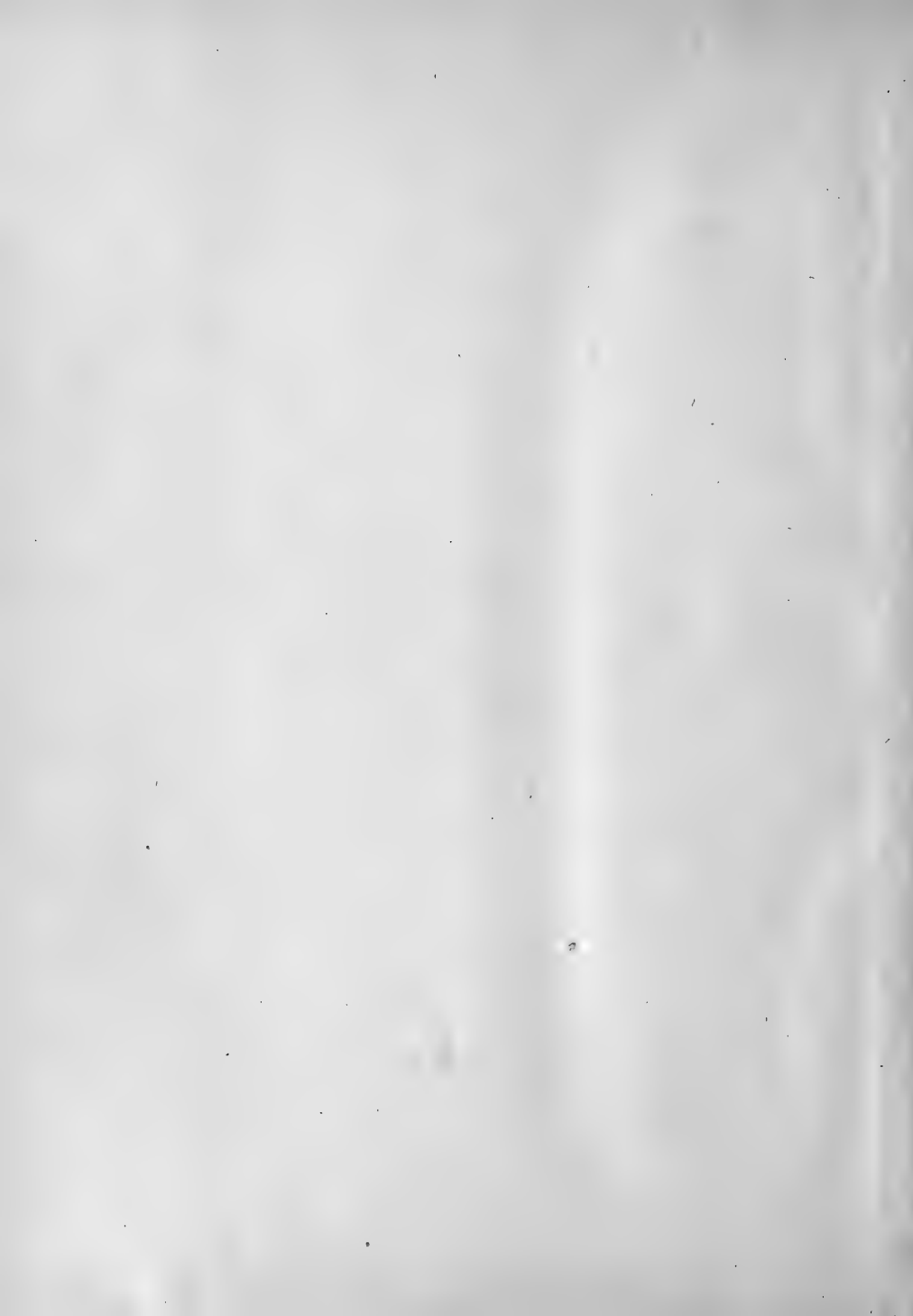
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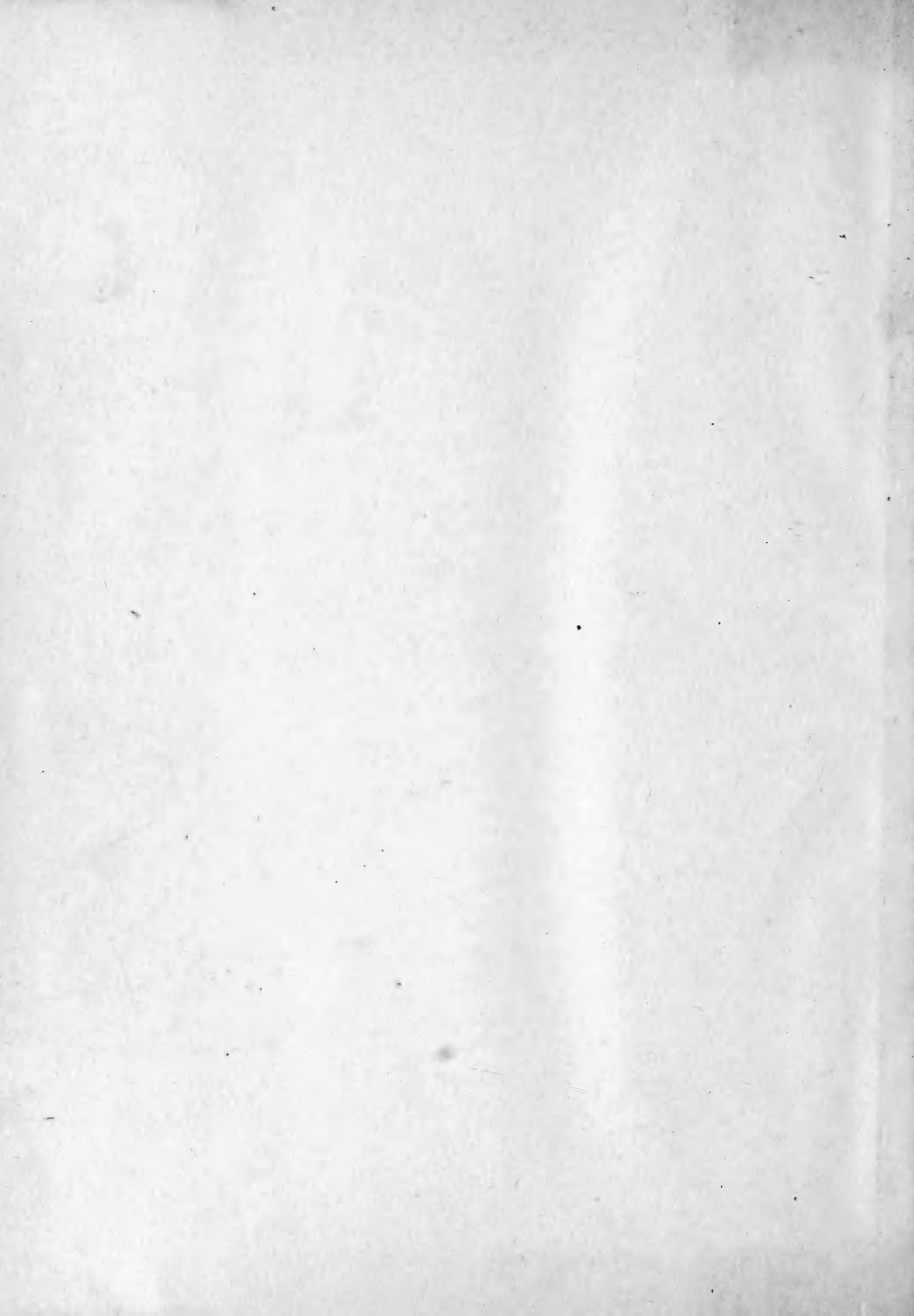
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