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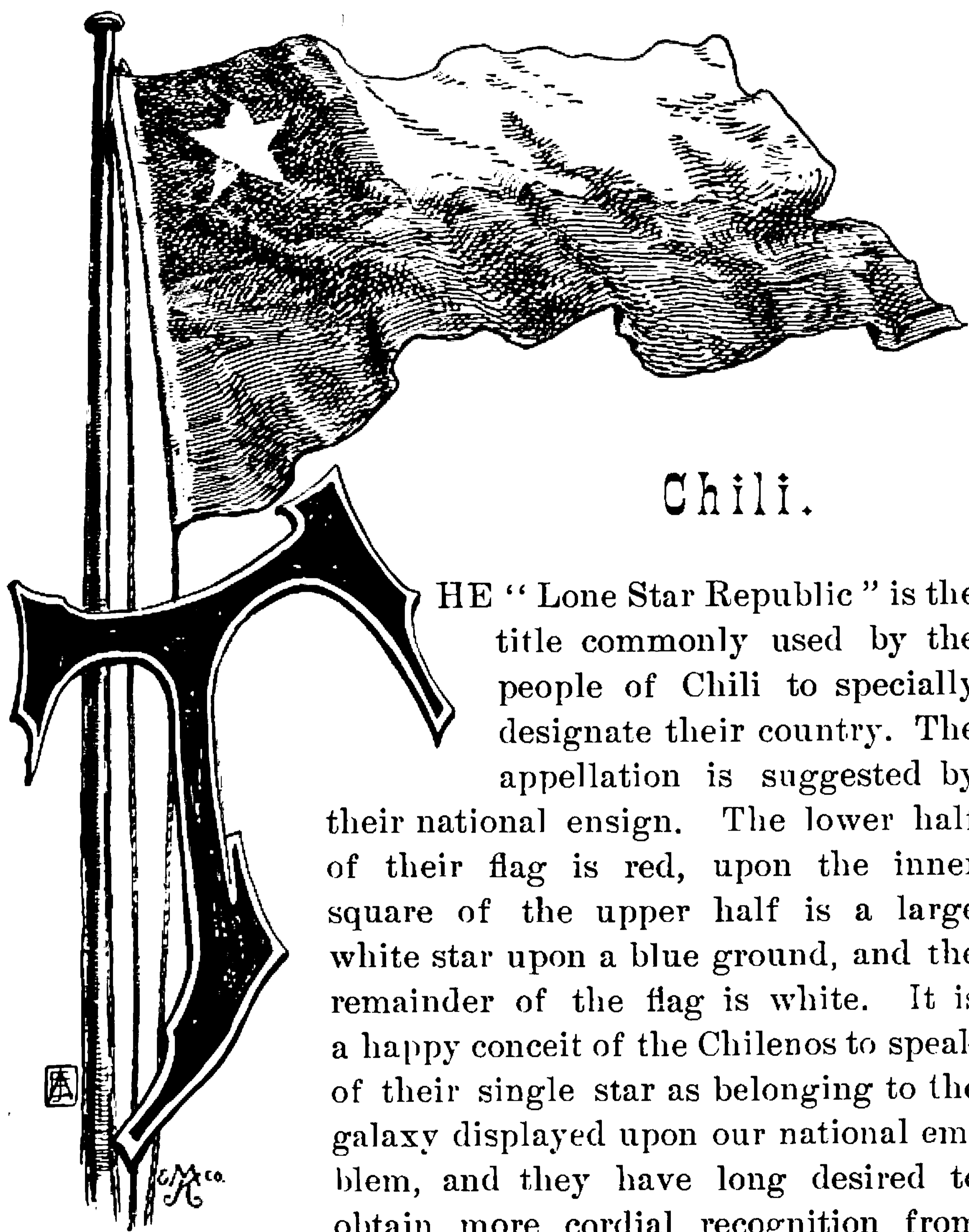
DEMOREST'S FAMILY MAGAZINE.

No. CCCXXXVII.

JULY, 1891.

Vol. XXVII., No. 9.

REPUBLICS OF AMERICA.



Chili.

THE "Lone Star Republic" is the title commonly used by the people of Chili to specially designate their country. The appellation is suggested by their national ensign. The lower half of their flag is red, upon the inner square of the upper half is a large white star upon a blue ground, and the remainder of the flag is white. It is a happy conceit of the Chilenos to speak of their single star as belonging to the galaxy displayed upon our national emblem, and they have long desired to obtain more cordial recognition from

the "Great Republic," as they call our country.

The mention of Chili to the average reader calls up a mental picture formed in school-days, having the following outline: A long fringe of sea-coast, a few scattered towns of respectable size, a background of snow-capped mountains, a mixed Indian and Spanish population having a limited civilization and resources of little value to anybody but themselves. It was a surprise to the writer (and probably has been to many others) to discover, during a late residence there, that Chili was not, after all, such an insignificant little country as had been supposed. To be sure, it is not so very wide measured from east to west; but what it lacks in breadth is a good deal made up in length. Its coast-line is more than twice that of our Atlantic sea-board, from Maine to Florida inclusive, and its area in square miles is about equal to that covered by ten of the thirteen original States of our Union. Like ourselves, the Chilenos passed through

some hard struggles and overcame many disabilities in attaining their position among the sisterhood of free republics; but until recently they have enjoyed great peace and prosperity, unbroken except by the somewhat sanguinary conflict with Peru, a conflict that was provoked by an unwarrantable interference of the latter power in matters that did not rightfully concern her.

While the form of government is in some respects similar to our own, its constitution and the mode of administration differ from it in some important particulars. The President is chosen by electors appointed by the people, the term of office is for five years, and he is not re-eligible. He is assisted by a Council of State consisting of eleven members, and a Cabinet of five Departments. The legislative power is in the hands of a Senate and a Chamber of Deputies. The senators are chosen directly by provinces, for terms of six years, and the deputies for three years, on the basis of one for every 20,000 of population. The age qualification for suffrage is, for married men, twenty-one years; for unmarried men, twenty-five years: thus a sort of political premium is paid on early marriages. There is also a property qualification, the amount being fixed every ten years. Deputies must have an income of \$500 per year, and senators, of \$2,000.

The State is divided into twenty-two provinces, and these each into counties, one of the latter divisions including sometimes but a single city, or, in the rural districts, several townships. At the head of each province is a *gobernador*, or governor, and over a county an *intendente*, or mayor. These officers are appointed directly by the President. They have no separate municipal taxes for meeting the expenses of local government, but all funds for that purpose are drawn from the general treasury. The police are all members of what is known as the National Guard, receiving their pay and being otherwise provided for by the general government, the same as the standing army. Thus it will be seen that there is rather more centralization of power than would be in keeping with our republican ideas; and the Chilean revolution is proof that the despotism resulting from the exercise of this almost unlimited power by an arrogant and unprincipled man has aroused the Chilenos to the realization of the fact that some modification would be advisable. It is to be regretted that the violation of the neutrality laws by a vessel-of-war belonging to the insurgent party has involved the United States Government



VIEW OF SANTIAGO.

in this foreign disturbance, in which it has no other concern.

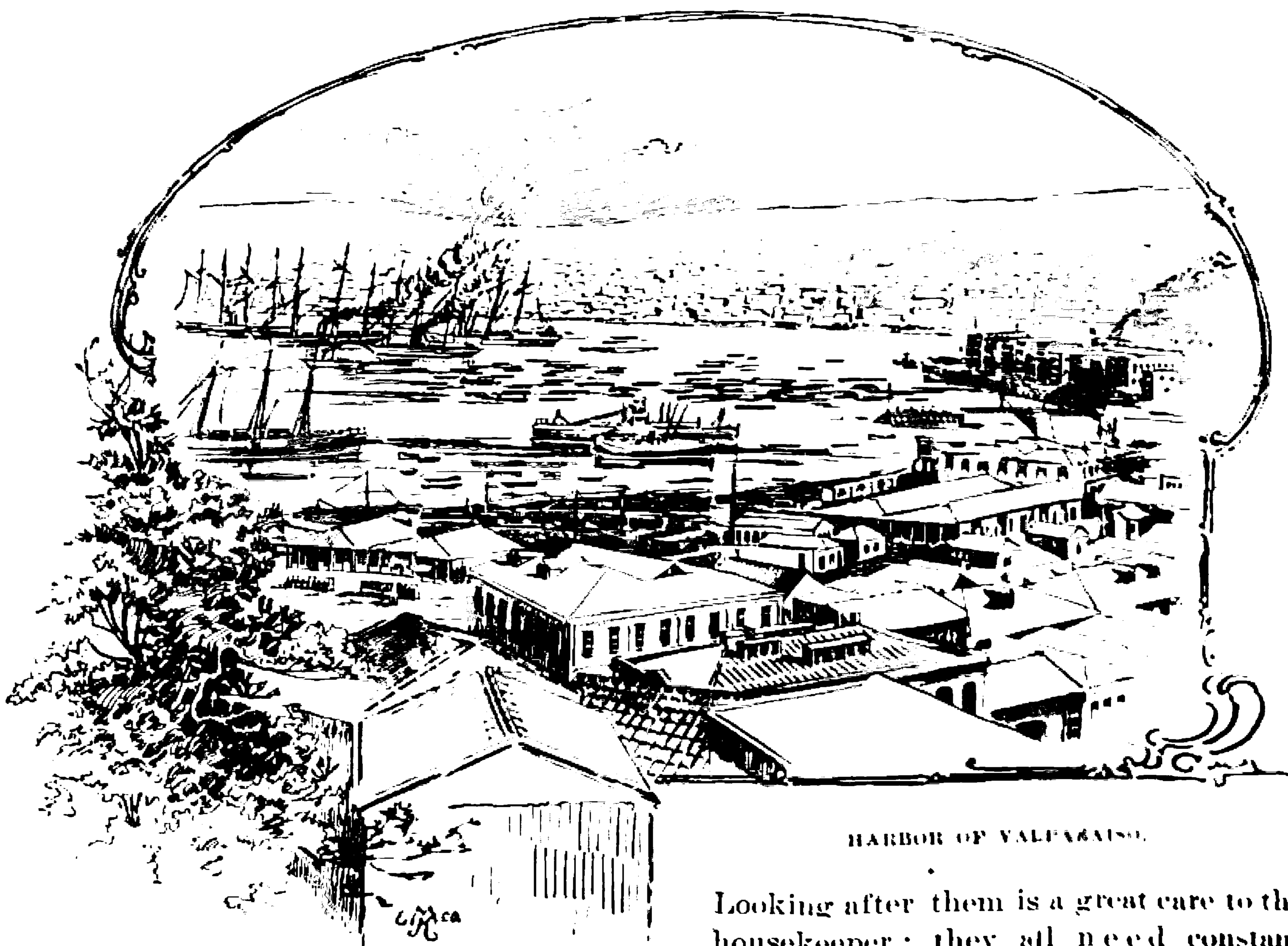
There is probably in Chili more Spanish "blue blood" than in any other South-American State. The direct descendants of the old Spanish barons and land-owners by right of original conquest are the ruling class to-day, and they own the major part of the improved real-estate of the country. Proud, boastful, passionately fond of dress and display, loose and voluptuous in their social habits and domestic life, with little religious restraint, the wonder is that the average grade of personal character and national life has not fallen much lower than is apparent to the general observer. While the idea of soiling or hardening their hands by any form of manual labor has been regarded with thorough disdain, and even an active mercantile business career has hardly been tolerated as becoming a Chileno gentleman "to the manor born," they have a taste for the learned professions, law and medicine, have proved themselves great adepts at politics, and many enter the priesthood.

Among the natives belonging to the middle class are the trades-people, small shop-keepers, mechanics, skilled artisans, and farmers. This middle class has more mixed blood, and constitutes the most hardy and industrious portion of the population, although, as to habits of industry, all classes in Chili are inclined to take life easy. No Chileno does work to-day that can be put off until to-morrow. *Mañana* (to-morrow) is usually the first word which a foreigner learns to distinguish after landing in the country; and if he chance to be a Yankee fresh from the United States, full of energy and push, he will hear this synonym for patience-exhausting procrastination with almost

unendurable frequency. But though not naturally given to severe application in ordinary lines of work, if there is any excitement in the way of fun or fighting, you can count on the average Chileno to be wide-awake, get there early, and stay through. In war, especially, as has lately been so sadly demonstrated, they are desperate fighters; and their prowess on the battlefield is their proudest boast.

The *peons*, numbering about one-third of the population, are an interesting study. They are the servant

class, and, as society is constituted, a necessary nuisance. They live, for the most part, in a half-gypsy, half-serf style, and as a class are thriftless, aimless, ignorant, degraded, thievish, superstitious, and ugly both in appearance and disposition. Their habitations may be seen in the country by the roadsides and upon out-of-the-way corners of large estates; in the larger towns and cities, in the suburbs and alleys and upon otherwise vacant lots. Into little huts with adobe or sun-dried brick walls, thatched or tiled roofs, floorless, filthy, and, in the rainy season (which in the southern part of the country lasts several months), damp and cheerless, whole families herd together in a single room. They live, ostensibly, by service and odd jobs. Every household of any pretensions keeps regularly a retinue of from three to a dozen of this class, variously employed or idling about.

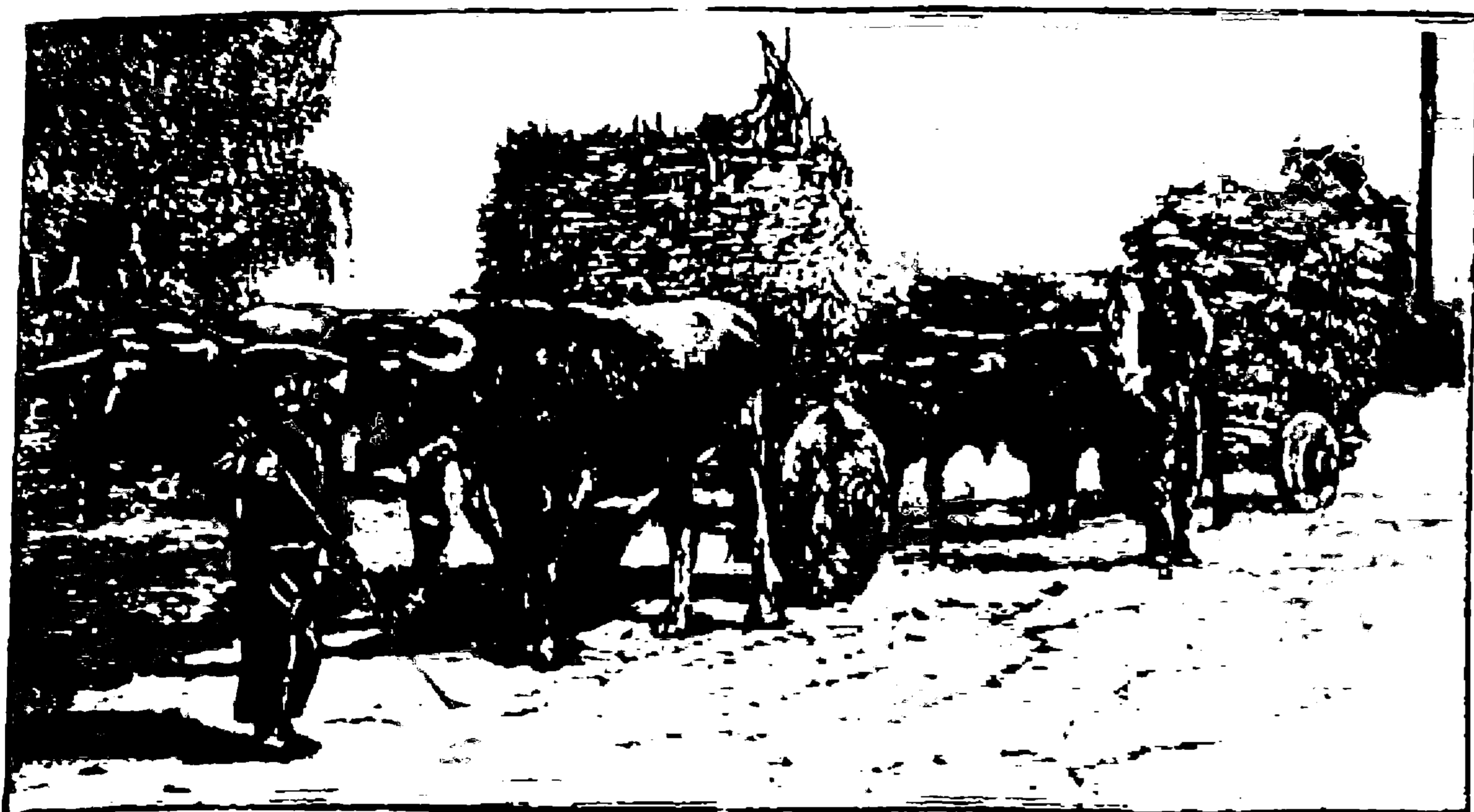


HARBOR OF VALPARAISO.

Looking after them is a great care to the housekeeper: they all need constant watching. They will steal and carry off everything about a house that they can lay hands on without prospect of being found out, and they are expert at

their skill in the finishing process with starch and iron, barring the rents, seems to leave them quite presentable.

There is one article for men's wear that should be noticed in speaking of native dress, and that is the *poncho*. This may be described best as a square or rectangular blanket



CHILIAN OX-CART.

with a slit in the middle just large enough to slip over the head, falling loosely from the shoulders, coming down usually only a little below the waistband, though sometimes reaching as low as the knees. These *ponchos* are worn by the natives of the *peon* and middle class in place of an overcoat, especially by those who live in the country. Groups of mounted herdsmen or other natives from the country may often be seen riding into town clad in *ponchos* of various colors, and they present a very picturesque appearance. It may be said, in passing, that horseback riding is the favorite mode of traveling across country, either for business or pleasure, as the roads are few and poor for carriage driving. Native horsemen appear as if born to the saddle, and their wild riding would excite the envy of the average Western cow-boy.

The Chilean ox-cart is the typical country conveyance. Wagons and carts of foreign style and make are obtainable, but they cost money, and many of the farmers and truckmen manage to get along with a very simple home-made affair constructed after this fashion: Cousin Chileno goes to the woods, chops down a big tree, saws off from the butt a couple of six-inch cuts, bores an axle-hole in the middle, attaches axle and wheel, rigs a coarse frame or rack, and the cart is ready for use. With wear, the axle-holes enlarge sometimes more upon one side than upon the other; and of all the hideous, creaking noises that ever fell upon mortal ear, none can beat that produced by a procession of these carts loaded with farm produce or merchandise, as they are drawn slowly along a village street or through the ruts and mire-pits of a country road by oxen with straight yokes tied to their horns with leather thongs.

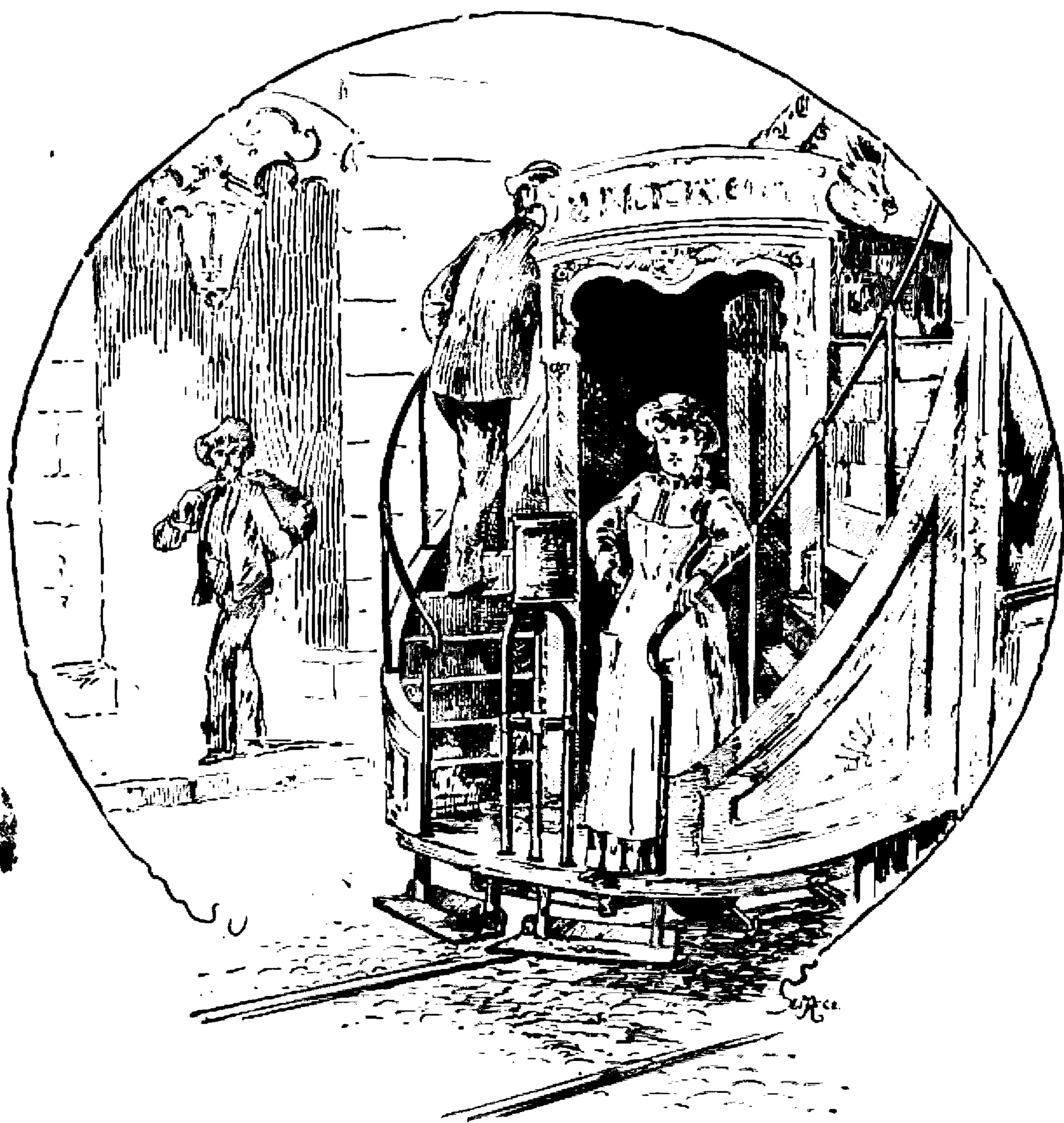
In the cities and large towns English and American hacks and barouches are becoming very popular, though one seldom sees the light single buggy so common with us. Upon the public hacks three horses are usually driven abreast. Horses are plenty and cheap, animals of the ordinary type being valued at from fifteen to forty dollars. The manner in which they are treated would be likely to swamp with business a society for the prevention of cruelty to animals. The first experience of a foreigner just landed in the country and being driven from station or dock with a typical *cochero* at the reins, usually gives his nerves a bit of a shock. These drivers frequently have premiums offered by their employers as a spur to their diligence in getting business, so each one is bent on outstripping his fellow. As soon as passengers are seated, away they drive like mad, with horses upon a furious gallop, excited and stung by cracks and cuts of the long lashes, that are unmercifully laid upon them.

With a dozen or two of these three-horse conveyances driven at this rate in close proximity along a street, with apparently reckless regard to property, limb, or life, one is likely to speedily regret that he did not walk or take the horse-cars. But accidents rarely happen, and, aside from pitying the poor horses, you come to accept this sort of public service with a measurable degree of composure.

Speaking of street-cars suggests reference to one custom peculiar to the country. All the street-car conductors are young women. Wearing jaunty straw hats, the principal distinguishing badge as to dress, and perched upon a high stool upon the platform, they are not wholly unattractive in appearance; but they are exposed to the chaffing of passengers of the other sex, who make very free with them, hence the occupation is one not likely to be desired by any self-respecting young woman.

One sad blot upon the domestic life in Chili has been the loose way in which the sanctity of the marriage relation has been regarded. Previous to the passage of the civil marriage law, a few years since, such exorbitant fees were demanded by the priests for performing the ceremony, that multitudes paid no attention whatever to the legal and moral obligations of this divinely instituted rite, but paired off to suit fancy or present convenience.

There is an air of distrust thrown about all the association of the sexes that is a great barrier to the healthy freedom of social intercourse enjoyed by people of our country. After seven years of age, boys and girls are entirely separated from each other in day-schools, separate buildings and playgrounds being required for them. No young girl can appear upon the street, day or evening, unattended by an

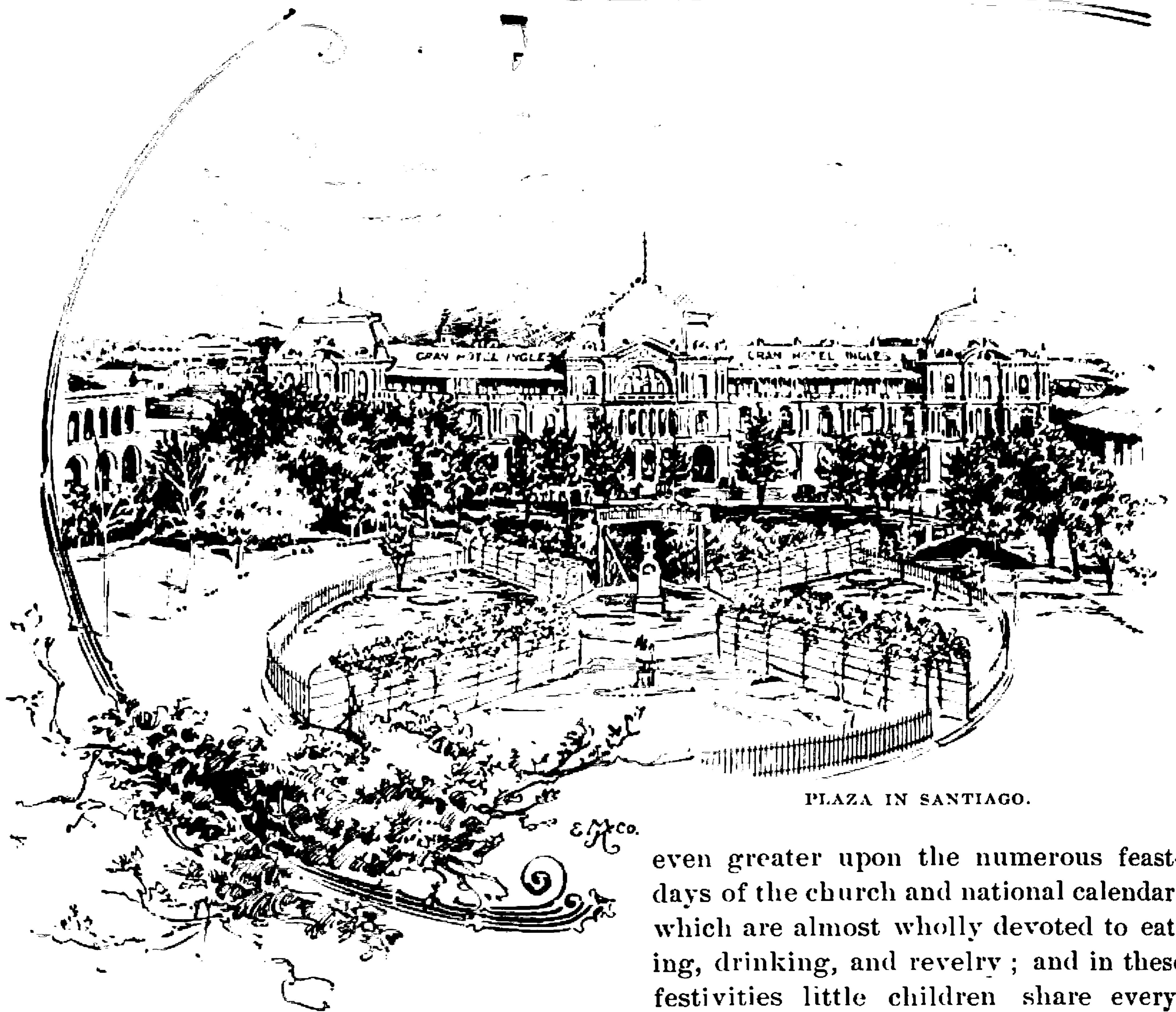


A CHILIAN STREET-CAR CONDUCTOR.

older female relative or servant, without violating the law of social espionage designed to protect them.

In the homes of the better classes, children, especially the younger ones, are left almost wholly to the care of servants. They are crossed and indulged by turns, according to the caprice of their attendants, and as a rule are pretty thoroughly spoiled, both in disposition and morals, by the treatment which they receive. Irregularity and excessive indulgence in eating and drinking are habits formed by them in childhood and maintained through life. The cus-

tomary restaurant sign, "Meals At All Hours," would be an appropriate one in every Chileno household. With some attempt at regularity, however, they have five set meals per day, served something after the following fashion: *Desayuno*, from seven to nine, consisting of coffee or chocolate and hot rolls, a little fruit or cheese sometimes being added. This is usually served to society ladies in bed. From eleven to one, *almuerzo*, or breakfast, a full meal with several courses, the first being always the *cazuela*, a peculiar soup that only a native cook can produce. From two to four, *las once*, the lunch, consisting of bread and butter, cake, and tea, with something usually in the way of fruit or sweetmeats. At six, *comida*, dinner, the big meal of the day, is served; and although you will wonder how people who have already eaten three regular meals, besides, as is often the case, indulging between times in candy, fruit, and wine, or something stronger, can be hungry, nevertheless, the way the average Chileno attacks his dinner would hardly suggest the suspicion that he had eaten anything before during the whole day. Nor is this all; for after attending the theatre, promenading on the *plaza*, the great outdoor parlor of every city or large



PLAZA IN SANTIAGO.

even greater upon the numerous feast-days of the church and national calendar, which are almost wholly devoted to eating, drinking, and revelry; and in these festivities little children share everything freely with adults.

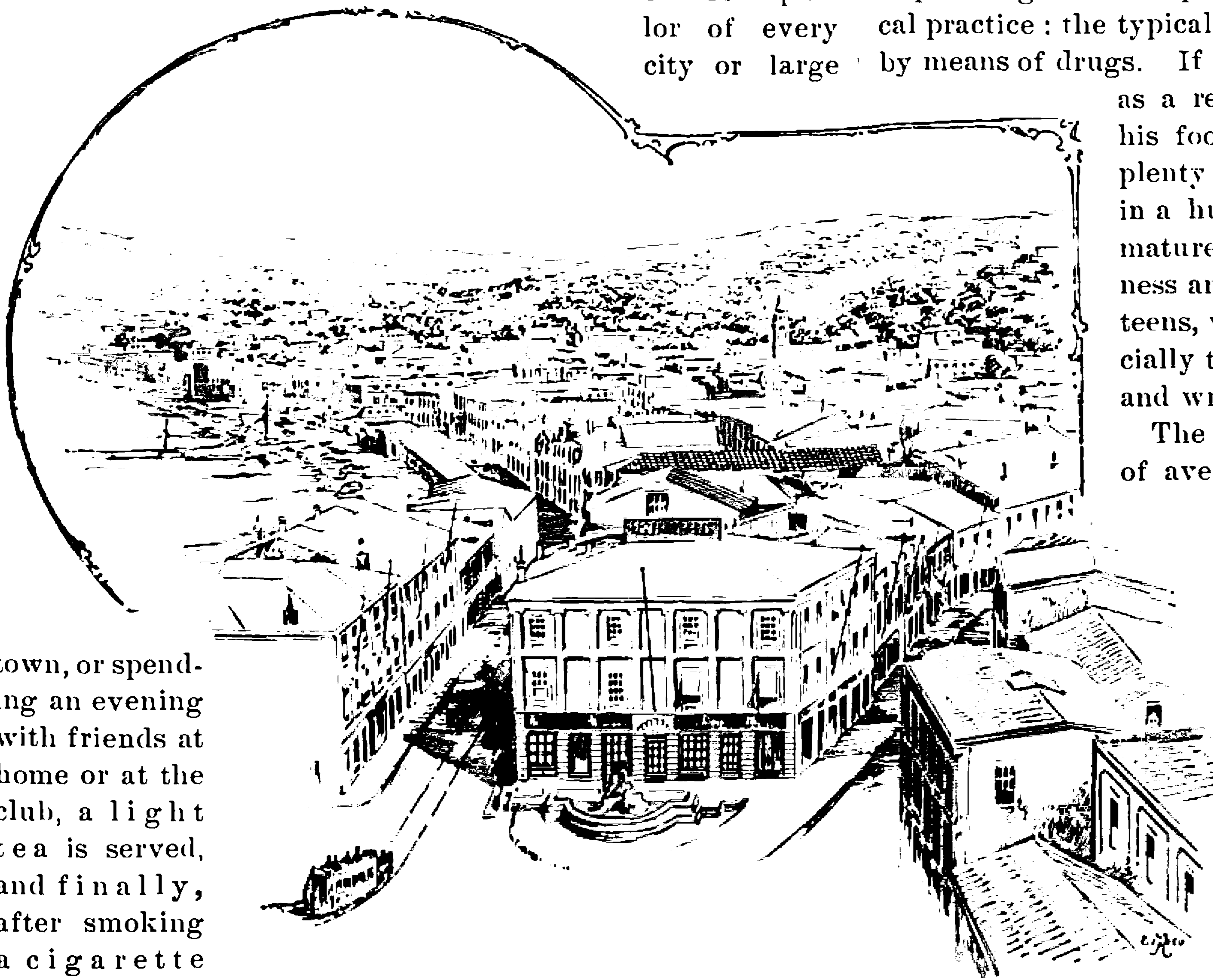
There is something peculiar about the climate of Chili. Except in the extreme north it is very stimulating, and the physicians say that the requirements of health demand food more frequently and in larger quantities than in most other countries. Possibly this opinion is given, however, with an eye to business: one thing is certain, doctors and druggists wax rich and fat very speedily, owing to abundance of patronage. Homeopathy is not popular as a mode of medical practice: the typical Chileno believes in heroic treatment by means of drugs. If he is sick he never thinks of fasting as a remedy: he wants his physic, like his food, strong, highly seasoned, and plenty of it, something that will kill or cure in a hurry. The Chilenos show age prematurely, women often losing their freshness and beauty even before they pass their teens, while at forty many of them, especially the lower-class women, look haggard and wrinkled enough to be fourscore.

The principal streets in towns and cities of average size are lined with low, substantial brick buildings, the walls plastered with cement, and roofed with tiles. The better class of dwelling-houses are built, as a rule, with rooms all upon the ground floor, inclosing a spacious open *patio*, or court, ornamented with flowers and shrubbery, with sometimes a fountain in the center. The most attractive feature of all towns is the *plaza*, or esplanade, where the people throng in great numbers to gossip, promenade, and enjoy open-air concerts, of which they are very fond.

In a few of the chief cities, buildings of the style of architecture above referred to are being replaced by tall structures of modern style. This is especially true of Con-

town, or spending an evening with friends at home or at the club, a light tea is served, and finally, after smoking a cigarette (likely enough the twentieth for the day) and emptying the wine flask, our stuffed cousin is ready for bed.

Great as are these excesses on ordinary days, they are

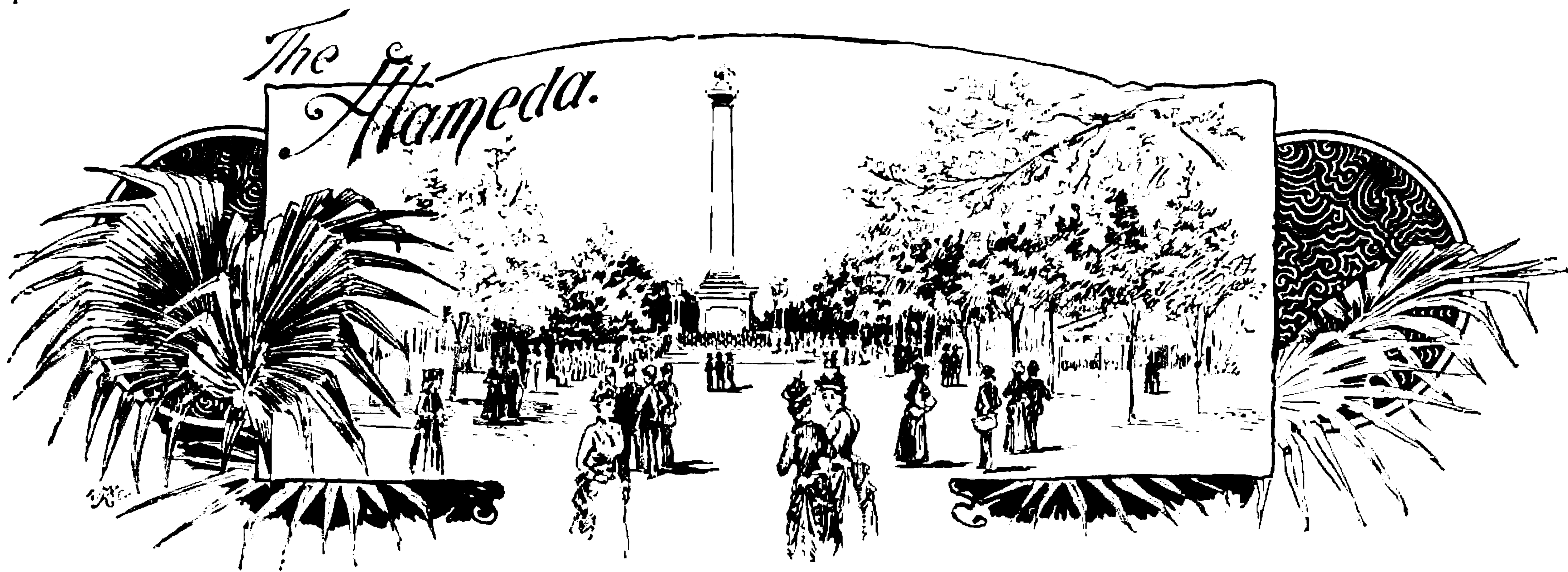


VIEW IN VALPARAISO.

ception and Valparaiso, the two great commercial centers, and at Santiago, the capital. The latter city, which disputes with Buenos Ayres the right to the title of the "Paris of South America," has streets, government houses, private residences, wholesale and retail stores, churches, and other public buildings that would do credit to any of our northern

cities. Upon the *alameda*, a sort of Fifth Avenue and Central Park in one, of a pleasant afternoon may be seen elegant equipages filled with richly appareled men and women, giving evidence of wealth and luxury almost equal to that exhibited on the fashionable drives of New York City.

J. G. Ross.



THE RIVER OF PEARLS.

BY RENE DE PONT-JEST.

PART II. THE WHITE WATER-LILY.

(Continued from page 469.)

SYNOPSIS OF PREVIOUS CHAPTERS.

As the beautiful Chinese maiden Liou-Siou, or Embroidered Willow, was one day watering her flowers at her window, she accidentally let a drop of water fall into the eye of an admiring neighbor, the butcher Tchou, who fell in love with her at once. He bribed her maid, Rose, to carry a love-letter to her, but Rose deceived him in the matter, and Tchou, when he learned that Embroidered Willow was to marry the wealthy Ling-Ta-Lang, vowed a fearful vengeance on all concerned. The unfortunate young bridegroom was murdered by an unknown assassin on his wedding-night. Suspicion fell on his bride and her cousin I-té, a professor of astronomy who was known to be attached to her, and both were cruelly tortured until they made false confessions, and then condemned to death. But an American, one Captain Perkins, an opium smuggler, who had been at the trial and knew the judge, Ming, aided Embroidered Willow's mother to prepare a petition and present it to the viceroy, Prince Kong. The prince called Ming severely to account, and threatened him with one hundred blows with the bamboo if he did not discover the real assassin within a month, the viceroy being convinced that the condemned were innocent. The abduction of Rose, the maid, at this time, presumably by river pirates, gave the judge a new clue, and the second part of the narrative begins with his search for the murderer among the nefarious band of thieves and pirates known as "The White Water-Lily." Some of them had been condemned to be hung; and Captain Perkins and Ming made a midnight visit to the executioner of Canton, and for purposes best known to the American, and not quite clear to Ming, bribed the executioner to deliver to them the body of one Pei-ho, chief of the river pirates, after hanging him so as not to hurt him much. Meanwhile, Embroidered Willow, languishing in prison, was one day permitted to go to the hospital and see I-té, who was slowly recovering from the torture he had received. The two young people no longer attempted to conceal their love for each other; but during the interview, I-té, too weak for violent emotion, fainted, and Embroidered Willow and her mother were obliged to withdraw, and started to return to the prison. On their way back, passing through a dark tunnel under the city wall, a man seized Embroidered Willow by the shoulder, saying, "You know now how Tchou avenges," and other words of vengeance. The terrified girl screamed for help, all at once recognizing the assassin and his identity. He disappeared before the attendants could seize him; but Mrs. Liou hastened to Ming with the news, and search was instantly made for the "Red Spider," as Tchou was sometimes called. The city gates were ordered closed, and the prefect of police and Ming set forth to visit all suspicious places in the city. They visited the gaming-houses, the realm of Sang, King of the Beggars, and the House of Hen-feathers, and had various curious adventures, but failed to find Tchou, who had safely escaped to the Ladrone Islands, where, after his crime, he had fled and joined the White Water-Lily, and was chief of the association, having been chosen as such in place of Pei-ho. Captain Perkins, meanwhile, with Sir Arthur Murray, an English friend of his, and Dr. Clifton, visited Pei-ho in prison and agreed to save his life if he would assist them to find the lair of the river pirates at the Ladrone Islands, and tell them the name of the Water-Lily's chief,—after he had been hung. The pirate consented, and the operation of tracheotomy was performed on him, so that he was hung without death ensuing. After he was taken down from the gallows unconscious, Perkins carried him to his own villa at Hong-Kong, where President Ming was waiting. The hung man was resuscitated and confessed that Tchou was chief of the pirates. With this knowledge, Ming and Perkins immediately planned an expedition to the Ladrones to take Tchou, and Pei-ho was to be pilot. Ming visited the viceroy to obtain permission to raid the pirates, and was promised the latter's permission later, if it could be managed. Perkins was notified, and the latter immediately hurried back to his quarters in Canton to report to another companion of his, a young watch-dealer, Mr. Lauters, who resided with him.

CHAPTER IX.

THE PIRATE'S VICTIM.

TO the captain's astonishment, his friend did not manifest the enthusiasm which he expected.

"You see, my dear fellow," said the Swiss merchant, "all that would be very fine, perhaps, at another time; but I fear I have made a mistake not to acquaint you with the apprehensions I have had for more than a fortnight."

"What do you mean?"

"Have you seen nothing on your way here?"

"I landed at our pier, where I met no one."

"Ah! well, if you had come by the port, you would have remarked a very suspicious agitation."

"The people doubtless are aware that the rebel army is marching south."

"Yes, perhaps; but you probably do not know that this real or pretended terror which the Tai-pings inspire is often made a pretext by the authorities of Canton to seek a quarrel with us."



THE PEOPLE AT THE PORT.

“But Prince Kong is our ally.”

“If he wanted to placate the populace he would allow us to be left in the lurch and pillaged, and afterwards give us all the satisfaction in his power.”

“What are your intentions then?”

“To get away from here to-morrow morning. I ought to go to-night.”

“Have you informed Mrs. Lauters?”

“Yes, but without alarming her. I have told her that business calls me to Hong-Kong, and that, as it may happen that we shall be detained there some weeks, she must be prepared to act accordingly.”

“Very good! Then we can go to-morrow at daybreak.”

“You will come with us?”

“Certainly. I had only to see you and President Ming. He is doubtless at his villa. I will hurry there. I will then be quite at your service, although I am persuaded of your error.”

“My dear Perkins, I need not tell you that if I were alone I would be more calm; but I have a charming companion who is so devoted to me as to live here with me. I have done wrong to accept such a sacrifice, for the law which forbids residence in Canton to European women has not been repealed. It is only by tolerance that Mrs. Lauters has been allowed to remain at the factory. Only the most trivial pretext is wanted to annoy us greatly.”

“You are right. I will go see Ming while you get ready to disappear to-morrow morning before daylight.”

With this the captain went to his own quarters to fetch Pei-ho, and they set off for Honan in his yawl. As they crossed the harbor he noticed great animation, and feared that Mr. Lauters had only too well divined the general state of affairs; for he thought that his canoe, whose crew was of Hindus, was greeted here and there with murmurs and evil-sounding epithets. But Perkins did not give himself much concern: he continued quietly on his way, and very soon arrived at the little pier which Ming had built at the foot of his property.

The mandarin, who was at the villa, received him with open arms; but as the viceroy had not yet communicated his intentions to him, he could give the captain no information. He affirmed, however, that Prince Kong viewed the projected expedition favorably, and he added that, according to him, the governor of Hong-Kong would not keep him waiting long, for the truth was that the imperial government would be enchanted to have such a service rendered it as the riddance of the pirates, even if a little force were used.

It is true that the honorable Ming was so interested in this expedition to the Ladrões that his opinion was slightly tinged with partiality: he contemplated with profound terror the fact that he had but eight days more. Perkins was more calm, and not entirely of his opinion; but the captain's American independence revolted at the idea of awaiting the permission of the Chinese authorities to attend to his own affairs. Ming did not have to talk him over.

“However,” said the president to his friend, whom he had accompanied to the latter's canoe, “I will send you an express as soon as I hear from the palace, as your expedition cannot take place under forty-eight hours at the earliest. How I regret not to be on it! Unfortunately, under the present circumstances I ought not to leave Canton: you understand that. The duties of my office keep me here. Oh! if it were not for that, I would go myself—” But here the intrepid magistrate stopped short in the heroic expression of faith he was, without doubt, about to utter, for he recognized in the stern of the captain's boat the pirate who had been hung at Hong-Kong, regarding him with an ironical air; and this unexpected sight aroused in his mind all the successive emotions which he had recently experienced.

“Yes, it is really he,” said Perkins with a laugh, observing this mutual recognition of the judge and the convict. “Here is a fellow who has had quite a journey, eh?”



AT MING'S VILLA.

“Incredible! Unheard-of!” murmured Ming, raising his arms to the sky. “Ah! my friend, if you do not bring back Tchou dead or alive, you have no regard for me.”

“You know to the contrary. In four or five days we shall be back from the Ladrões; and if anything interesting occurs at Canton in the meantime, do not fail to inform me of it.” Saying this the commander of the “Lightning” waved a friendly adieu to the unfortunate mandarin, and embarked.

As he was returning to the factory, half an hour later, two

ragged beggars of most repulsive appearance were leaning against the railing. He went by them without paying any attention to them; but these men recognized him, for one of them said quite low to the other,



ONE OF THE BEGGARS.

"Are you sure that this is Captain Perkins?"

"I am certain," replied the other. "I know all the crew of the 'Lightning,' and the second captain, Morton, is as dangerous as his chief.

This one will doubtless follow his friends to-morrow."

"They are going away then?"

"Mr. Lauters has paid and discharged his porters."

"Then do not budge from here."

Meanwhile, the defender of injured innocence rejoined Mr. Lauters. The latter had previously advised his wife, who had comprehended all at a word, and finished her preparations.

The smuggler comforted her a little by assuring her that he would accompany them, and all retired to take a few hours of repose.

The next morning it was the opium clipper's captain who gave the signal to depart. Mrs. Lauters had dressed herself like a man. Perkins gave her his arm, and Pei-ho walked beside her. Mr. Lauters came after with his servant, a sturdy Malay in whom he had perfect confidence. In this order they left the factory.

The environs

were absolutely deserted, and the captain was not very much surprised to be accosted by two wretches who begged an alms of him. To get rid of them he gave them several pieces of copper; but under pretext of offering those hyperbolic thanks to which the Chinese are accustomed, the beggars followed them down to the quay of the custom-house, where their canoe was waiting.

As they reached the pier Mr. Lauters was really frightened. A mandarin's boat was lashed there, and the fugitives had to pass before its crew, who were loading it with powder. If one of the Chinese officers were to recognize Mrs. Lauters, the situation might become serious; but the gray light of the dawn favored them, and they got away safely and made for Whampoa by the least frequented water-ways. Having watched their departure one of the beggars started on a run to the city.

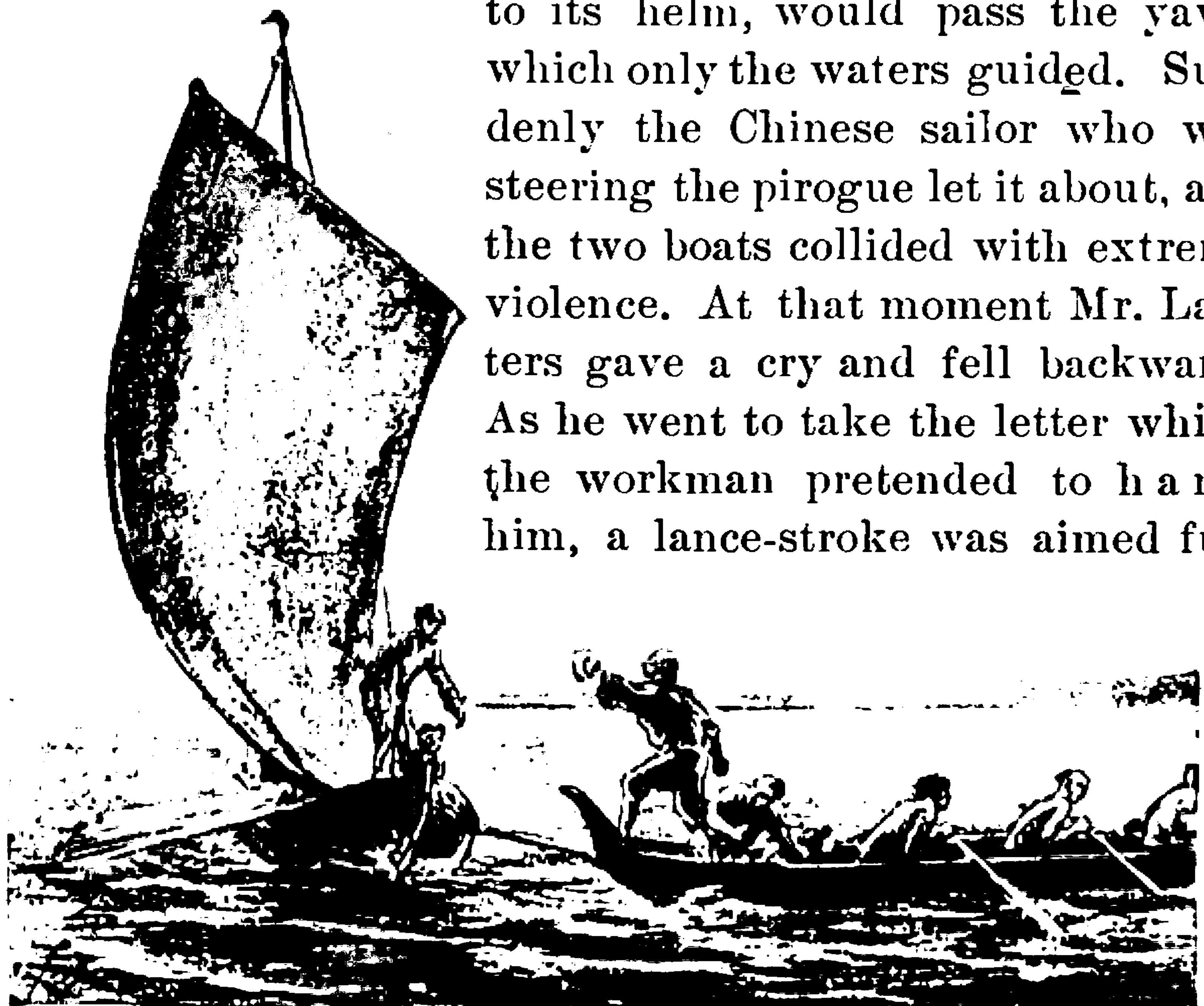
Among the thousand arms of the River of Pearls navigation is both difficult and dangerous. All this part of China is like a great lake sown with islands. At every moment the boatman meets barriers, raised by the maritime authorities to arrest strange vessels, or by the river-people to protect themselves from pirates. Although Captain Perkins had traversed this route before, it had been some time since; and he was obliged to summon all his sailing ability and often to consult Pei-ho, so as not to get lost in this inextricable maze of canals. They therefore proceeded somewhat slowly, while Mr. Lauters devoted himself to reassuring and encouraging his wife, in which he very soon succeeded so well that he came out and sat down in the stern. Mrs. Lauters, quite herself again, put her pretty blonde head out of the awning on deck, to view the lovely effect of the sunrise on the marshes.

As they were passing the southern part of the island of Honan, Perkins suddenly perceived, coming around the extremity of the Seapoys Island, a large skiff, whose crew was evidently in a hurry. He mounted upon a bench to see if this vessel was coming towards him, and he thought he discovered a man in the forward part of it making signs and waving something white. Without unshipping, but simply raising the oars, so as to be ready to start at once if he should be mistaken, the commander of the "Lightning" went along under sails barely lifted by the breeze. In about ten minutes he could distinguish the skiff in all particulars: it was a long boat rowed by six men, who seemed to manage it as awkwardly as Chinese. The yawl would have easily left it far behind if it had looked any ways threatening.

At its bow stood an individual dressed like a workman, with a letter in his hand. Thinking that Ming had sent him some interesting communication, the smuggler motioned to his rowers to allow the mandarin's messenger to come up with them. Floating with the current, they doubled Point Tuffnell and entered an absolutely deserted channel, when the native boat, propelled by a vigorous effort of its oarsmen, reached them.

To avoid a dangerous collision Perkins had ordered the oars taken in, and Lauters had risen to take the missive at

the moment when the skiff, obedient to its helm, would pass the yawl, which only the waters guided. Suddenly the Chinese sailor who was steering the pirogue let it about, and the two boats collided with extreme violence. At that moment Mr. Lauters gave a cry and fell backward. As he went to take the letter which the workman pretended to hand him, a lance-stroke was aimed full



THE COLLISION.



ON A RUN TO THE CITY.

at his breast, and ten men suddenly sprang up from the bottom of the boat where they had remained hidden up to that time.

Our friends were at odds with twenty members of the Water-Lily, bandits armed with arrows and lances. With his usual energy Perkins began by discharging his revolver into the compact mass of pirates. The shock of the enemy's boat had made the yawl take the direction of the current, and the assassin of Mr. Lauters, in trying to jump aboard, had fallen into the water; but he was a skilled swimmer and had come up and seized the gunwale, when Pei-ho struck him so hard on the head with the copper-covered handle of the tiller, that he let go and rolled over, leaving only a large red stain on the water.

The front of the pirogue touched the back of the yawl, and Mrs. Lauters, who had sprung to her husband's side, was endeavoring to staunch the blood from his wound.

"Forward! my boys, forward!" commanded the captain, exciting his sailors by voice and gesture. But although the men were brave Malabars they knew the pirates too well: they were struck with terror, and Perkins thought for a moment that all was lost, when all at once he heard the wretches uttering loud cries of astonishment and malediction, and almost instantly their vessel was left behind motionless.

"The master!" cried that one of the assailants who seemed to command the others.

Pei-ho had drawn himself up to his full height, and those whom he had so often conducted to the pillage had recognized him. Given over to the horror which they felt at this apparition of one whom some of them had seen hung from the gallows at Hong-Kong, they believed it to be a sorcery, a work of magic, and this sentiment, fleeting as it was, saved our friends.

Abandoned for a moment by the man who guided it, the pirogue had drifted into the river current, and a second howl from the pirates testified to their rage and despair. Their skiff, left to itself, had grounded upon a sand-bar, which the yawl, thanks to its lesser draught of water, easily crossed. It would take fifteen minutes' hard work to get afloat again.

"Pull! boys, pull!" cried the smuggler. His men bent to their oars, and the light boat went on its way.

"As for you, my good fellow," he added, putting out his hand to Pei-ho, "without you we should have been lost. You shall see that we have a good memory. Take the tiller."

"You saved my life," simply replied the former chief of the Water-Lily, taking the helm; "but we are not yet quits. I will keep all my promises." And he made for the Elliot passage, an arm of the river which led directly to Whampoa.

Free to attend to his unfortunate friend, Perkins examined the wound. It was most serious: the lance had deeply pierced the chest between the fourth and fifth ribs, and it was to be feared that some vital organ had been wounded. Mrs. Lauters was wild with grief. Speechless and tearless she held



THE DEATH OF LAUTERS.

upon her lap the head of her husband, who had not recovered consciousness.

Like all naval officers, the commander of the "Lightning" had a few ideas about surgery: he bandaged the poor

merchant's wound as well as he could, and tried to dissimulate his fears for the worst. Mr. Lauters gave no sign of life. As for his wife, she kept her eyes fixed upon the face of her husband, and seemed the image of despair. When, half an hour later, the boat doubled the point of Cape Bernard, to enter the harbor of Whampoa, the smuggler hailed a great three-masted merchant-ship, the "Britannia," and her captain sent them the ship's doctor; but it was too late: the pirate's victim had ceased to live.

At this assurance Mrs. Lauters came to her senses, only, however, to make the air ring with her cries, accusing herself of having caused the assassination of her husband, and refusing to be separated from his body. She almost had to be removed by force, and only yielded upon the solemn promise that it should be sent to Hong-Kong to be interred. The commander of the "Lightning" swore to her that this should be done, and thus prevailed upon the poor creature to go ashore and wait until his men, who needed a few hours' rest, could get ready to resume their oars and go down to Lintin.

He did not intend to stay long at Whampoa, for he saw, in the attack of which he had been the object, a proof that the members of the Water-Lily were aware of his projects, in part, at least. It was therefore important not to give them time to put themselves more fully upon the defensive.



CHAPTER X.

TCHOU'S VENGEANCE.

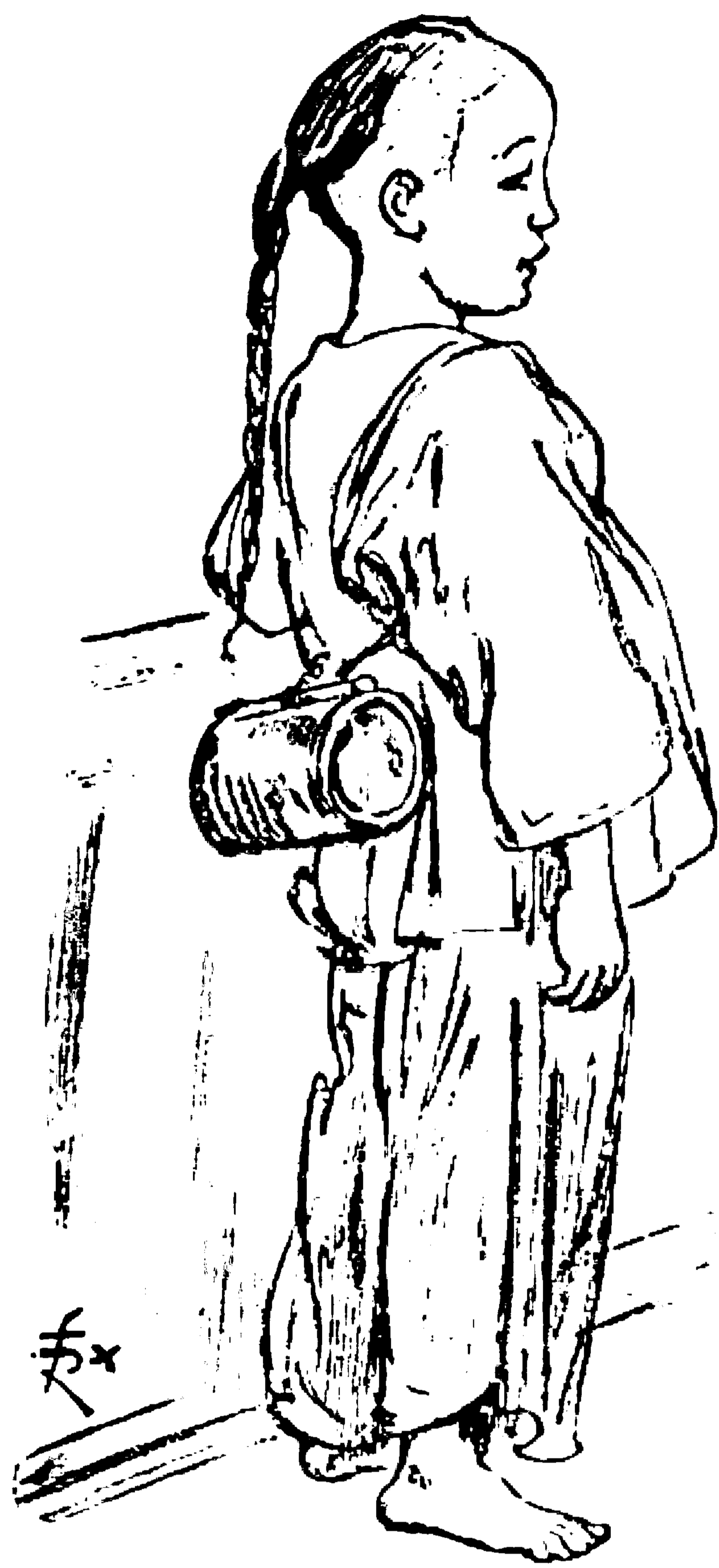
SITUATED above the famous forts of Boca-Tigris, more than twenty leagues above the mouth of the Li-Kiang, the harbor of Whampoa was certainly, at the time we speak of, one of the most curious stations on the globe. Formed of divers canals which separated the islands with which the river is interspersed at this place, canals which outlined across, and where each nation had its own particular

moorings, it was, properly speaking, being ten miles from Canton, a great quarantine, which foreign ships could not pass on every pretext.

The strangest of the vessels moored there were those of which veritable business houses had been



A BOATWOMAN.



A GROCER'S BOY.

made. Upon large pontoons were stores with their shelves, counters, and all their furnishings. The purchasers' boats stopped at the foot of a narrow stairway which led to the entrance, above which, in large letters, was the name of the tailor, the shoemaker, or dealer in provisions, and the edge of each one of these singular constructions was fortified with small sharp stones intended to impress upon malefactors respect for property. Thanks to this system, the captain shoemaker, grocer, or tailor could, at will, and at the first alarm, transport his establishment to a place of safety: all he had to do was to lift anchor and allow himself to drift ashore.

As for the village of Whampoa, it was com-

posed of a single street about fourteen feet wide and a quarter of a mile long. All the houses, or, rather, all the cabins, which turned their backs upon the river, were built upon piles. They were reached from the water by ladders with slippery rungs, which the rapidity of the current and their instability sometimes rendered the ascension of dangerous. Besides, there were only small shopkeepers, and ordinary tradesmen, laundrymen, butchers, and fishermen, for no foreigner would spend a single night on land in this lacustrine village.

When Perkins arrived, the whole harbor was in a state of unusual excitement. The news of the approach of the Tai-pings had reached there already, and it was to be feared, among his fresh troubles, that the viceroy might not be able to protect foreigners as he had done hitherto. The merchant vessels which were loaded were making hasty preparations to depart, while others were putting themselves in a state of defense. The most part of the floating shops had drifted down to Alcester Point, at the extremity of the harbor, so as to be ready at the first signal to descend the river. Numerous mandarin-boats had crossed the bay during the night, and were making for the forts. Obsequious as the population had been the evening before, it had all at once become brutal and insolent. There was rebellion in the air.

Perkins hastened to rejoin Sir Arthur on board of the "Lightning," so as to profit by the daylight to conduct his schooner from Lintin to Lantao, and to transport the body of Mr. Lauters to Hong-Kong. Therefore he urged his men, and his yawl very soon took its course towards the lower part of the river. Wrapped in a flag, the dead man had been laid under the awning, where Mrs. Lauters prayed and



A SHOPKEEPER.

wept over him. Pei-ho was at the helm, and the captain watched the shores through his telescope. The little skiff thus crossed the channel of Boca-Tigris without difficulty, and it was scarcely five o'clock in the evening when it hailed the "Lightning" at the moorings of Lintin. Aided by the current they had been less than eight hours in coming the forty miles which lay between that island and Whampoa.

The schooner was a hundred and ten feet long by twenty-two wide, and it was as elegant a vessel as could be seen. When it was under sail, with its immense cloud of canvas covering its two backward-leaning masts, it looked like an albatross with snowy plumage skimming the waves. Its bow, finely shaped as that of a steamer, supported a bow-sprit the end of which, slightly curving, was ornamented, like the stays, with head-sticks cut in suns. Her sides were painted black, and her brasses gleamed like gold. Her masts were so carefully resined that they looked like mahogany. Her armament was composed of two carronades, which looked out of the stern port-holes, like two coquettes from their balcony, a long, pivoted copper gun upon the forward deck, and here and there half a dozen little swivel-guns of most attractive appearance. The "Lightning" had neither poop nor fore-castle. Her deck, smooth as glass, extended fore and aft, and was made of narrow boards, which made it seem longer yet. At the stern the boxes holding the flags and steering-gear were large enough to serve as couches, and were shaded with curtained awnings, which were put up all around the vessel.

It will be seen that Perkins often sacrificed the useful to the agreeable, but his fortune was made: for a long time he had been merely making voyages almost like an amateur. Only the middle of the schooner, between the two masts, was reserved for the cargo of opium: all the rest was for himself, his officers, and his crew, which was composed of thirty robust Malabars, who had been abroad several years. His staff consisted of only three white men: Morton, the second captain; James, the mate; and a steward.

Having compelled Mrs. Lauters to get aboard, the captain immediately set sail, dragging in their wake the yawl containing the body of his unfortunate friend; and the sun had scarcely disappeared back of Macao when the "Lightning" dropped anchor in the little bay of Lamna, four or five miles from Victoria.

Intent on his own manœuvres, the captain had not noticed, as he came to moorings, a dozen boats coming up in the offing and making towards the eastern point of the island. For several reasons he had decided to push on towards Lamna in place of stopping at Lintin: in the first place he wished to transfer the remains of Lauters ashore, that very evening; furthermore, he wished to make his declaration to the authorities without delaying till the next day. He had also some information relating to the attitude of the Chinese in regard



MORTON, OF THE "LIGHTNING."

to strangers, which duty bade him publish without delay. He therefore hastened to re-man his yawl, for the men who had rowed him from Canton to Liutin were exhausted. He had the useless awning taken down, and then he embarked with Mrs. Lauters, the body of her husband, Sir Arthur, and Pei-ho. He took the latter to make use of him, if necessary, as a last argument with the governor of Hong-Kong, by presenting him as pilot. He left the "Lightning" under the care of Morton, who had all his confidence, and had proved a hundred times how worthy he was of it.

As the yawl sped from the schooner the night shadows were falling fast; but Perkins knew his route too well for that to deter him for a moment. Wishing to profit by the evening breeze he set sail for Victoria. The graceful skiff slid lightly over waves tortured by the currents, and the rapidity of its flight would have taken it to Hong-Kong in less than an hour, when, all at once, at the moment when it was about to enter the channel between the English colony and Green Island, a squall struck it so violently that, before the sail could be run down, the mast snapped. The captain ordered his men to the oars. Unfortunately, in the shaking the yawl had got, four of the oars had fallen overboard. However, the men seized those which remained, and began to row vigorously; but during the few moments that the yawl had been bereft of its sail it had drifted, and the smuggler knew, by the noise of the sea and the shadow of the shore, that they were being carried by the current upon the rocks of Lamma. In fact, inside of two minutes he felt the rudder, which he had not left, turned aside by a rock above the level of the water, and the boat swung around upon itself, and was caught by the breakers of the reef.

"We are lost!" said he at once, with perfect coolness. "Leave me this woman, Sir Arthur, I will save her. You, my friend, swim ashore. You, Pei-ho, must take charge of the body of Mr. Lauters. Come, boys, have courage, and, God be praised! we will get out of this." These last words the intrepid sailor addressed to his men; but none of them had time to reply, for the yawl suddenly gave two or three lurches and upset in the breakers.

Perkins seized Mrs. Lauters, whose face was calm and almost smiling at the approach of death. It might be that the poor woman saw the end of her grief in that way only. Although loaded with his sad and heavy burden, Pei-ho reached the shore at the same time as Sir Arthur, and they both assisted the captain to obtain a footing. Mrs. Lauters had fainted, and they laid her on the sand by her husband. Two of the Malabars only had come ashore; but the captain hoped that the others, who were excellent swimmers, were also saved. He thought himself lucky to get off with the loss of his boat.

But it was necessary to get away from there. The place where the shipwrecked ones had taken refuge was a little sand-bank about twelve feet wide, which the sea had thrown up in one of the clefts of the promontory which towered above and surrounded them like an inaccessible wall.

The night was by turns clear and cloudy. At one moment great black clouds extended to the horizon, to be swept away by the wind in a few moments, when the sky glittered with stars. Then Perkins could distinguish the "Lightning" balancing upon the tide. All at once it seemed to him that among the roars of the waves which dashed at his feet mingled a noise from a distance. He bent his ear to listen and trembled at a sinister foreboding. Soon he distinguished rapid musketry, and then he uttered a cry

of rage. His schooner was attacked by pirates, and he could not get to her!

He looked all around him to see if there were no way to scale the promontory; but one of his men, having had the same thought, had attempted to ascend it, and had fallen from the rocks when he had got about twenty feet up. Crouched upon the sand, the other sailor witnessed the tragedy with the insensibility of Hindu fatalism, and Pei-ho was endeavoring to keep the sea, which had risen rapidly, from carrying off the body of Mr. Lauters. As for Sir Arthur, he had taken in his arms the poor widow, who had recovered from her swoon, and, wild with terror, wished to fling herself into the sea.

The doughty captain, ordinarily so strong, was cast down: the feeling of his impotency overpowered him. He could not get away from here unless someone should come to his assistance; but, in the first place, where was assistance to come from? and then, might it not come too late? Would not the high tide cover this narrow sand-bar where they were? It seemed to him that the space diminished, little by little, around them. Desperate, he counted the detonations of artillery which succeeded without cessation, when suddenly he began to shout loudly. He had heard at a little distance the regular stroke of oars upon the water.

"Help! Help!" he shouted with all his might. Sir



"CROUCHED UPON THE SAND."



ON THE SAND-BAR AT LAMMA.

Arthur also shouted, and very soon they saw the boat, which they had guessed was doubling the point. It was manned by half a dozen men. They redoubled their calls and soon had proof that they were heard, for the new arrivals managed so as to pass between the reefs and the sand-bank. Perkins, in the water up to his knees, showed them the dangers and the places where they could pass. Thanks to its slight draught of water the boat was able to cross the breakers. Ten oar-strokes more and it could take them in



"HELP! HELP!"

The smuggler encouraged the oarsmen, and recommended Sir Arthur to carry Mrs. Lauters, if she could not walk. The boat came sidewise, so as not to run her nose into the sand; only two arms' lengths separated it from those who awaited it so impatiently.

"Hold hard, my brave fellows," repeated the commander of the "Lightning," as he came up to seize the boat by the stern so as to hold it off and permit his friends to get in it.

"Ah! it is you, you dog!" cried the man who held the tiller. "Ah! it is you who would save Embroidered Willow! Hold on! This is how the 'Red Spider' avenges!" and he discharged a pistol which he drew from his girdle. But, in his precipitation the assassin did not take time to sight his enemy, and the ball only whizzed past Perkins' head.

Tchou cocked his revolver again and was leaning forward to shoot, when suddenly the boat capsized and all disappeared in the breakers. Pei-ho had dashed into the water and whirled the boat around.

It was a moment of inexpressible anguish. The captain was armed with an oar which the sea had cast on the sand. With his arm raised and his eye fixed on the abyss, he prepared to break the head of the first who came out of the water. Uttering cries of affright, Mrs. Lauters clung to Sir Arthur and paralyzed his movements. The moon came through the clouds and its rays made rainbows on the wave-crests. In the direction of the "Lightning" the combat still continued.

Two or three heads appeared at the same time in the midst of the breakers. The arm of the smuggler fell: simultaneously a stifled groan was heard under the waters. Almost at the same moment two men set foot on the opposite end of the bank, and, before Perkins could bar their passage, they had sprung to the precipice. There, backed against the rock, they seemed prepared for a desperate resistance. Tchou was one of these two bandits.

"Ah! you cannot escape me this time, wretch!" cried the American, darting towards him and threatening him with the terrible weapon he held.

A demoniac laugh responded. The rising waves had invaded a part of the sand. A deep, wide crevasse, impossible to be crossed in the darkness, separated the foreigners from their enemies, and the assassin of Ling, with a long Malay creese in his hand, prepared to fling himself upon the commander if he attempted to join them.

"Curse it all!" groaned the defender of Embroidered Willow. "The sea itself is against us!"

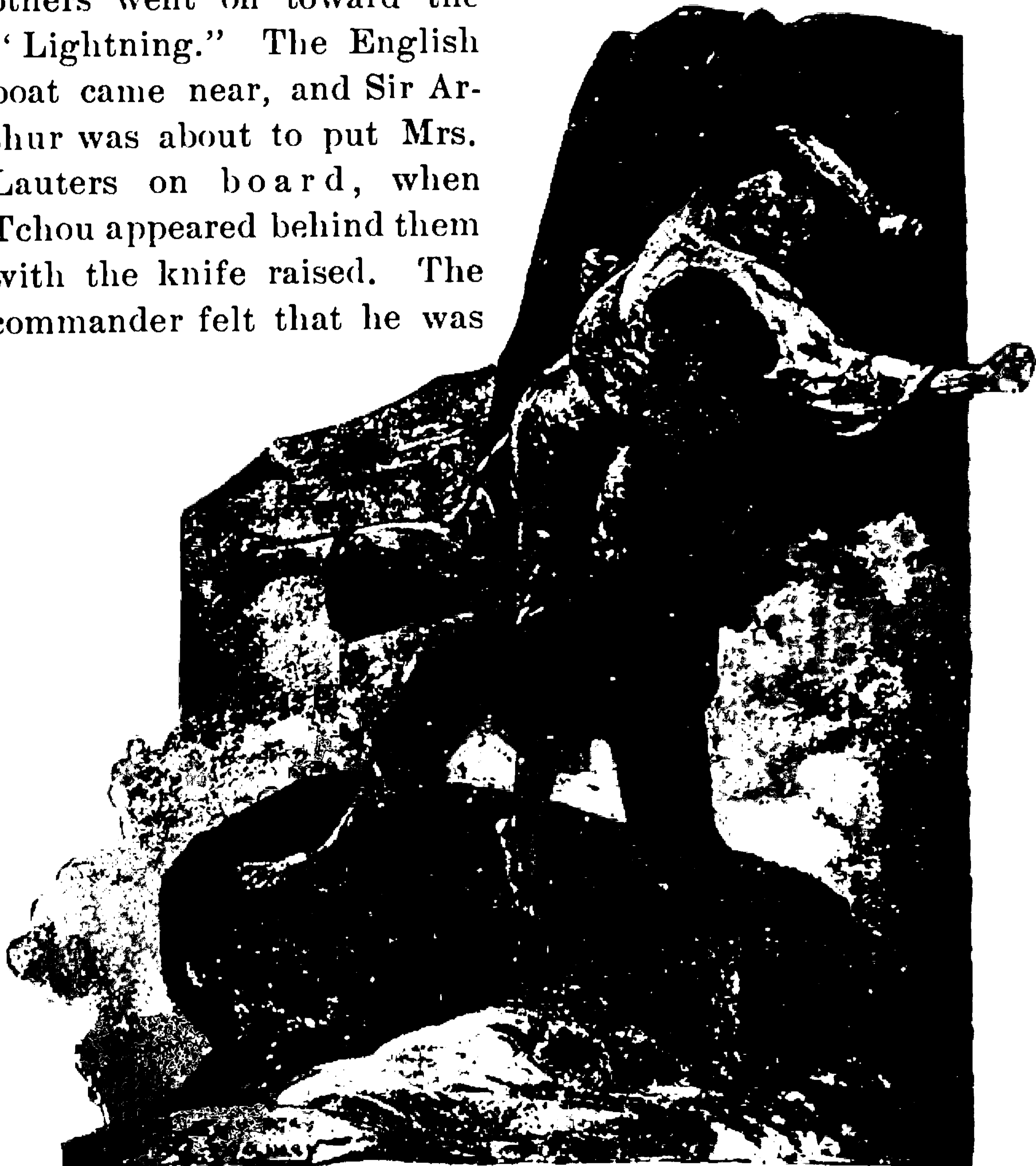
Suddenly a brilliant light flamed up in the horizon, and the American became mad with rage. Among the thick

shadows of the moorings, at Lamma, flames shot up the masts of the "Lightning" to the sky. Mrs. Lauters had let go the arm of Sir Arthur, and with haggard eyes, and pale, burning hands extended toward the fantastic serpents of flame which climbed up the masts of the opium clipper, she shrieked aloud at the progress of the destroying element.

"Ah, ha! dog of a foreigner!" howled the former butcher, whose hideous features shone with horrid joy, "you know now what it costs to meddle with Tchou's affairs. In spite of your promises Embroidered Willow will be hung, and you will not lead your men to the Ladrones. In one hour the sea will have risen ten feet, and you will be swallowed up! Ah, you dared to struggle with the members of the Water-Lily! See what they have done to your schooner!"

The sea, indeed, was gaining upon them; the place of refuge was but a few feet wide, and the firing recommenced from the "Lightning." Suddenly the smuggler, who scorned to respond to the murderer, uttered a cry of joy. Numerous strokes of the oar, the regularity of which denoted a European boat, were heard to the right of the point of Lamma, that is to say, from the roadstead of Hong-Kong. Tchou also heard this sound, and a horrible oath escaped his lips.

Sir Arthur and Perkins shouted loudly, and their cries were heard. One of the boats came toward them, and the others went on toward the "Lightning." The English boat came near, and Sir Arthur was about to put Mrs. Lauters on board, when Tchou appeared behind them with the knife raised. The commander felt that he was



PEI-HO SEIZED THE BANDIT IN HIS ARMS.

lost; but before the bandit could commit another crime, he suddenly disappeared. Pei-ho had flung himself upon the bandit, seized the latter in his arms, and was trying to throw his adversary into the sea. But the wretch was strong. Recovered from his first surprise, he had clinched with his antagonist, and before the witnesses of this struggle could assist the ex-pirate, Tchou had made him lose his balance, and both rolled into the water. The waves closed over them; then they were seen to reappear about thirty feet away, still struggling, and again disappear. Five minutes passed. The deeps were doubtless the theater of a terrible duel, for as the boat pushed out to give a refuge to Pei-ho, Sir Arthur perceived that he had regained his footing, but only to fall exhausted upon the sand. Perkins then darted toward him. He was terribly wounded in the breast.

"We are quits, captain," murmured he, in a dying voice. "I shall not pilot you to the Ladrões, but the Water-Lily now has no chief." And he breathed his last.

The smuggler carried him into the boat, where Mrs. Lauters had already taken refuge, but without the body of her husband. The sea had covered it, or carried it off. In fifteen minutes the captain sprang on board his schooner. The attack of the pirates had been severe, but Morton had valiantly repulsed them. The schooner had lost only about

a dozen of its sailors in all, but its deck and masts being destroyed by fire rendered it unfit for service, therefore Perkins resolved to return the next day to Victoria.

His first care at sunrise was to send to the sand-bar at Lamma to get the body of Mr. Lauters. It was discovered between two rocks, and the captain had it brought aboard and started for land. As for the body of Tchou, it had disappeared. Had the waters swallowed up their prey?

(To be concluded.)

AMERICAN ANIMALS THAT ARE BECOMING EXTINCT.



1. PRONG-HORN, OR AMERICAN ANTELOPE. 2. SKULL OF SAME. 3. HEAD OF FEMALE, SHOWING RUDIMENTARY HORNS. 4. MODE OF HUNTING BY MEANS OF A HANDKERCHIEF.

VII.

THE PRONG-HORN.

REGULARLY, every season, the dealers in wild animals who supply our parks and menageries receive invoices from Asia and Africa, and occasionally from South America and Australia, but seldom, if ever, from

our own native wilds. We are perfectly familiar with the appearance of lions, tigers, leopards, and elephants, but very few of us, at least those among us who stay at home, have ever seen an American moose, a caribou, a musk-ox, a Rocky Mountain sheep or goat, or even a prong-horn. Indeed, I venture to assert that some of the foregoing names of American mammals are unfamiliar to many Americans.

"The prong-horn," says an educated American, "what is it? a goat or a deer?" The answer to his question also answers it for numbers of otherwise well-informed Americans on the Atlantic slope. The prong-horn is our only antelope, and is a peculiar animal, different in many respects from his class in Europe, Asia, and Africa. He is a well-made, handsome fellow, with a boldly marked coat of Isabel gray, black, and immaculate white. Throwing a cloth over the head of one of these animals that has been prepared by a taxidermist, and gradually and slowly drawing it back, beginning at the nose, it really appears, after the covering has been removed far behind the place where it would seem the eye ought to be, that the animal is eyeless; and yet it has eyes, very dark, expressive eyes, too, placed immediately under the base of its horns, and very remarkable for their magnitude: they are the largest, in fact, of any animal of the same size,—the prong-horn being a little smaller than the common Virginian deer,—larger than the eyes of a horse or cow, and very nearly the size of those of the elephant.

Speaking of its eyes, a gentleman who had a tame antelope says that it can shed tears, and has given an affecting account of its power to do so. "Our antelope," he writes, "has the faculty of weeping when in affliction. I first observed this in a specimen that had been taken wild

when adult, and still retained all his natural fear of man. I had placed him in a close cage in the evening, intending to familiarize him with my presence, and divest him of his fears when he saw me, by convincing him that I would not hurt him. When I approached him the next morning, he seemed struck with terror, and made frantic attempts to break out, which he soon found was impossible. His great black eyes glistened with affright. I spoke softly and kindly as I introduced my hand and placed it on his shoulder. Despair now seemed to possess him, and he dropped on his knees, bowed his head to the ground, and burst into a copious flood of tears, which, coursing down his innocent nose, wet the floor. My sensibilities were touched, my sympathies were awakened, and I liberated him from his cage as quickly as I could tear the slats from one side. Whether he appreciated this or not I cannot say; but, certain it is, his great fear seemed to leave him as soon as he was at liberty, and running but a little way, and that not at full speed, he stopped and began to pick the grass."

The horns of the American antelope are remarkable, both in their growth and the form they assume: they are the only hollow horns that are cast off and are annually renewed. Solid horns, such as deer have, are shed every year; but those of the ox and bison, which are hollow, last a lifetime. The prong-horn, too, is the only antelope that has a prong or spur on his horns: all others have simply unbranched horns; but in this, as in the shedding of his horns, the prong-horn approaches the deer. Among females, it is only in those fully grown that the horn appears, and it is then a slender spike, never more than two or three inches long. It is to be remarked, in this connection, that in hollow-horned animals the female is fully armed, while among the solid horns, with perhaps a single exception, the female has no horns at all, so that in this, as in other respects, the prong-horn may be considered a sort of compromise between the two.

A very curious failing on the part of the prong-horn has resulted from never leaving the plains he inhabits, for a forest life. Although the swiftest of native quadrupeds, often outstripping greyhound and trained horses, and taking tremendous jumps across ravines in a race for life, he cannot, or does not, know enough to leap over any small obstacle placed in his way. A log a few feet in thickness, or a rock of very moderate height, turns him from his course, and he can, in captivity, be safely kept in an inclosure surrounded by a fence from three to four feet high.

"Sometimes," writes Irving, in the account he gives from Captain Bonneville, of the manner in which the Shoshokoe Indians of the upper Lewis River capture the antelope, "the diggers aspire to nobler game and succeed in entrapping the antelope, the fleetest animal of the plains. The process by which this is effected is somewhat singular. When the snow has disappeared and the ground becomes soft, the women go into the thickest fields of wormwood, and pulling it up in great quantities construct with it a hedge about three feet high, including about a hundred acres. A single opening is left for the admission of the game. This done, the women conceal themselves behind the wormwood and wait patiently for the coming of the antelopes, which sometimes enter the capacious trap in considerable numbers. As soon as they are in, the women give the signal, and the men hasten to play their part. But one of them enters the pen at a time, and after chasing the terrified animals around the inclosure is relieved by one of his companions. In this way the hunters take their turns, relieving each other and keeping up a continual pursuit by relays, without fatigue to themselves. The poor antelopes, in the end, are so worried down that the whole party of men enter and dispatch them, not one escaping which has entered the inclosure."

Another mode of hunting the antelope is one in which the sportsman takes advantage of another failing of the prong-horn, which it shares with Mother Eve. Carefully avoiding the windward side of the game, so that no odor may taint the air that reaches their sensitive nostrils, the hunter seeks the cover of some hollow, ravine, or sage-bush, or, in the absence of these, of the thin grass which clothes the plains, to partially conceal himself, or, rather, the necessary motions he has to make, for it matters not if he is seen, provided he does not move. Having stolen as near as he dares, moving only when the animals are feeding or are looking in another direction, and remaining absolutely motionless when they have their heads turned in his direction, he plants a stick in the earth, from the upper end of which flaunts a gayly colored or white handkerchief. If he has succeeded in taking his position without alarming them, the timid creatures, attracted by the fluttering bit of silk, gradually draw within gun-shot, and pay the penalty of their lives for their inordinate curiosity.

The flesh of the antelope is one of the most delicate and the choicest of meats, and is especially relished by invalids whose appetite is both weak and dainty. Not many years ago it was the cheapest animal food to be had in California; but it would now be the costliest, if it is to be had at all. Formerly vast numbers of these beautiful and valuable animals ranged the vast plains west of the Mississippi, but, like the bison, they are on the verge of extinction, and although they may linger a little longer in north-western Mexico, they will soon join the long list of extinct animals driven off the earth and out of existence by the wanton greed of the human family for blood.

J. CARTER BEARD.

Foes Afield.

II.

PLANTS POISONOUS TO THE STOMACH.

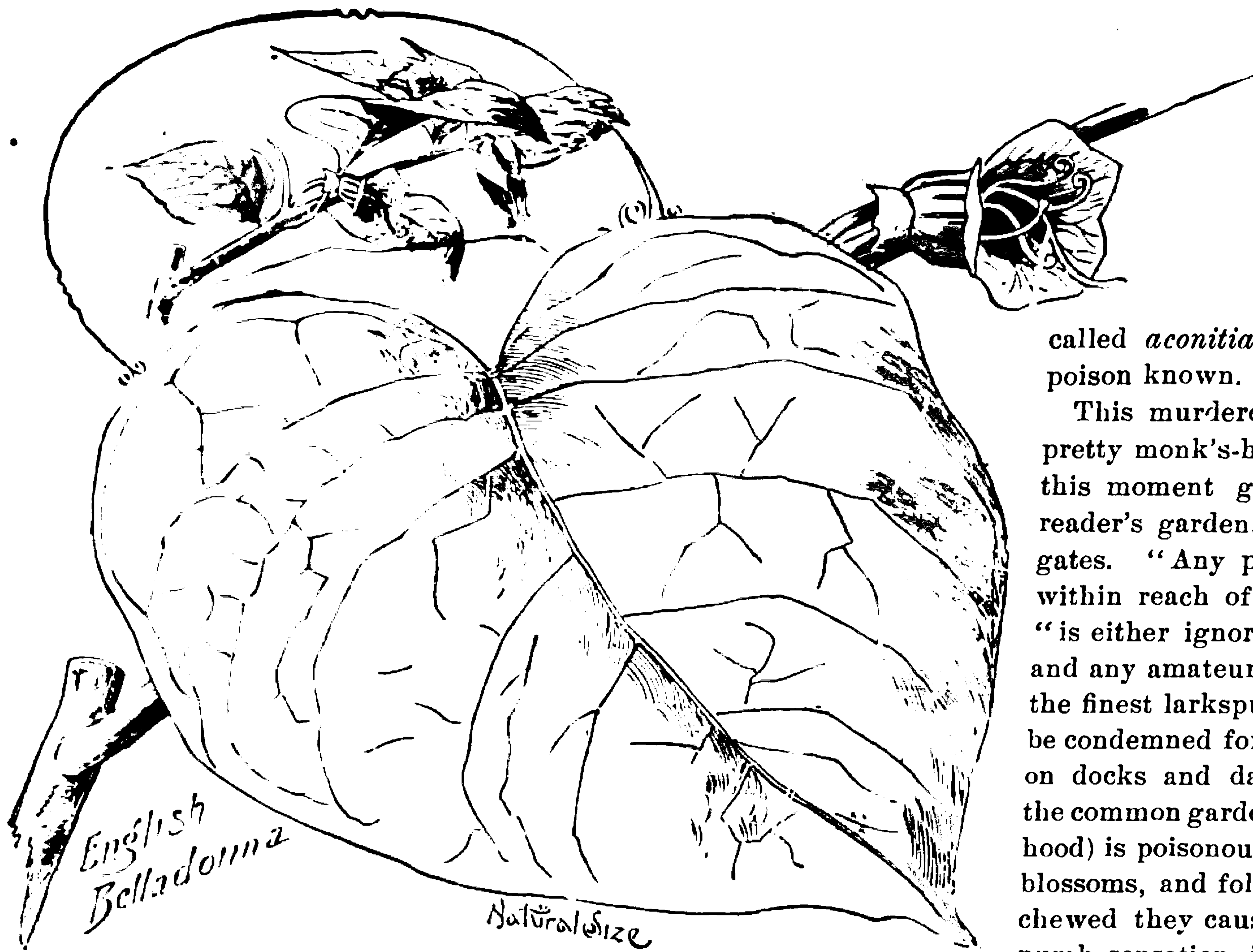


LOWERS preach to us if we will but hear," says Christina Rossetti; and there is a whole democratic sermon against family pride in the fact that no plants are better connected than the poisons.

Aconite, which contains the most death-dealing vegetable juices known, is closely related to our pretty columbine and larkspur. English belladonna and henbane, which are sometimes seen along our own waysides, possess deadly narcotic properties, but nevertheless they belong to the *solanum* family, which includes among its members the egg-plant, the tomato, and the indispensable potato. But these worthy vegetables are no worse off, in the matter of relatives, than are the carrots and parsnips growing in the next bed; those guileless attendants upon the corned beef belong to the parsley family, and are closely akin to water-parsnip, poison hemlock, and fool's parsley, all exceedingly poisonous herbs, but all, nevertheless, first cousins to celery, lovage, and the plant which yields caraway seeds.

At times, however, the disreputable members of honorable botanical families prove themselves not unworthy of their kith and kin.

"There is some soul of goodness in things evil,
Would men observingly distill it out,"



it is only in large quantities that they are mischievous, It has been proved by experiment that their expressed juice, when taken into the stomach, is highly poisonous, and a small quantity of it has been known to kill a dog. It contains a chemical

called *aconitia*, the most virulent vegetable poison known.

This murderous substance abounds in the pretty monk's-hood, or aconite, which may be this moment growing and blowing in the reader's garden. It is an enemy within the gates. "Any parent who suffers it to grow within reach of his children," says Bigelow, "is either ignorant, foolhardy, or florist-mad; and any amateur not willing to adopt some of the finest larkspur as a substitute, deserves to be condemned for a season to regale himself on docks and dandelions." Every part of the common garden *aconitum napellus* (monk's-hood) is poisonous in a green state, root, stem, blossoms, and foliage. When the leaves are chewed they cause a tingling and a curious numb sensation in the tongue and mouth. This funny feeling might induce children to

and this is especially true of things evil in the vegetable world. Some of the most valued remedies in the pharmacopœia are the expressed and concentrated juices of poisonous plants. Ordinarily these juices are the very essence of death and pain, but used at the fitting time, and with scientific knowledge, they become bestowers of life and comfort: hence plants which are poisonous if taken internally are all described and portrayed in works on medical botany in company with boneset, catnip, and camomile.

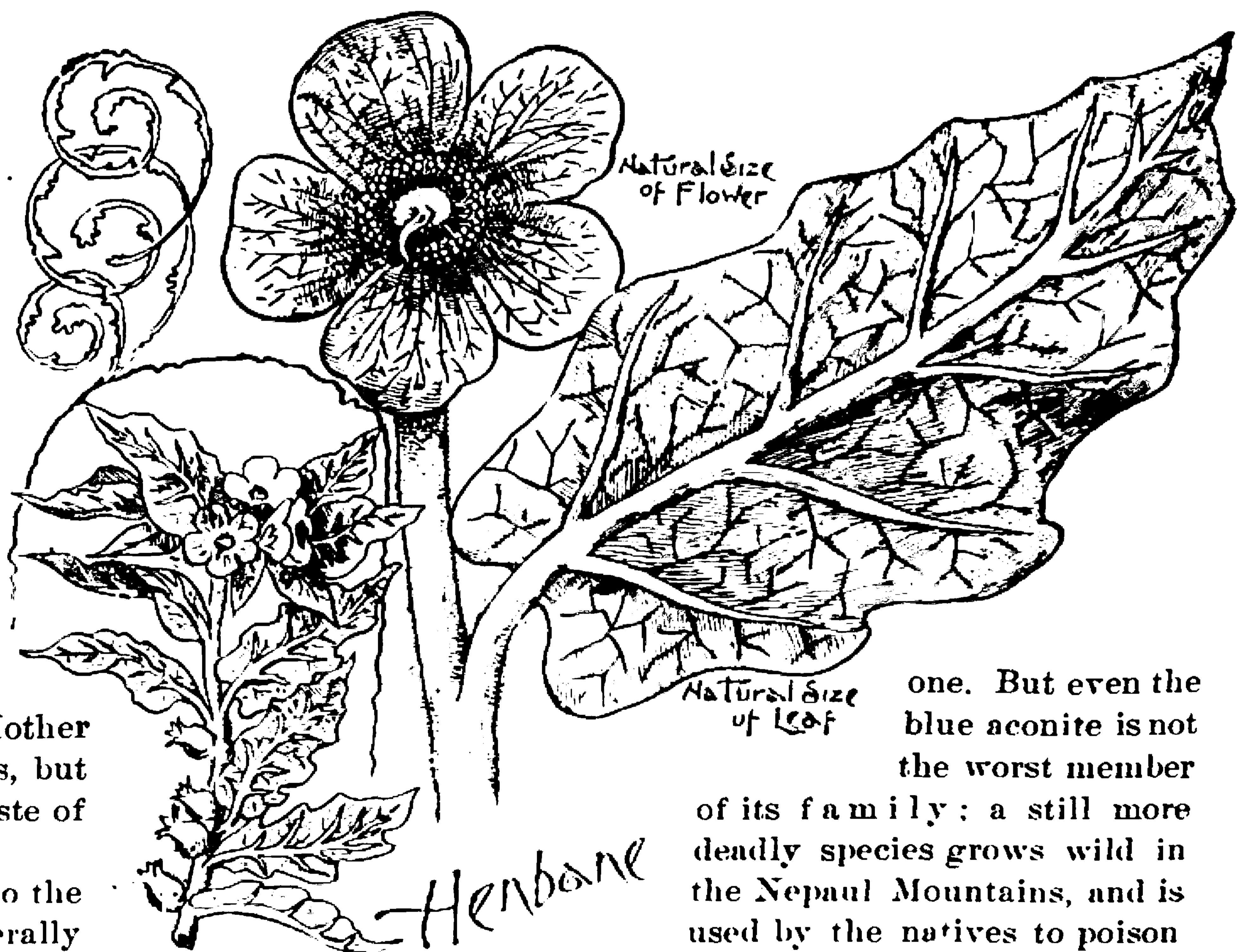
The list of our flora conveys the idea that every living thing has its dearest vegetable foe. There are bug-bane, cow-bane, dog-bane, hen-bane, and flea-bane, fly-poison, beaver-poison, and lamb-kill. Some of these names are merely memorials of old superstitions; nevertheless it is true that plants poisonous to the animal or human stomach are far more numerous than those which are poisonous to the touch. Indeed, they abound on every side; but, luckily for us, neither the children nor the cows are likely to kill themselves, though the summer fields afford them great facilities for doing so. However some old-school theologians may quarrel with the doctrine, God's creatures are so rightly, as well as wonderfully, made, that, in the main, they do like what is good for them, and dislike what is hurtful.

To our palates most poisonous plants are biting, acrid, or nauseous; and animals are even more clearly warned against evil by beneficent Mother Nature. Indian tobacco, for instance, is poisonous, but it sets one's mouth and throat on fire, and one taste of it suffices for a lifetime.

Buttercups, in quantities, would be poisonous to the cows, but they are so acrid that grazing cattle generally let them alone, even in closely cropped pastures. Their leaves, however, cannot always be avoided, and an excellent authority says: "It is far from improbable that many diseases of the digestive organs with which cattle and horses are attacked in the spring and fall are attributable to *ranunculus* (buttercup) and other injurious plants." A few buttercups mixed with the grass act as a condiment and digestive:

munch the foliage, though it is not pleasant to the taste, for boys, and girls, too, sometimes, enjoy games in which the strife is to see who can longest endure discomfort. A person who had foolishly eaten some of the leaves of aconite became maniacal. The poison excites great gastric irritation, which may be followed by stupor and death.

The monk's-hood which bears blue flowers is believed to be much more mischievous than those which get up effects in yellow or in white. This is truly discouraging to the gardener. Real blue flowers are so beautiful, and Nature offers us so few of them, that it is grievous to part with



one. But even the blue aconite is not the worst member of its family: a still more deadly species grows wild in the Nepaul Mountains, and is used by the natives to poison their arrows.

The most mischievous of poisonous plants, however, are those disreputable cousins of the carrots and parsnips, fool's parsley, poison-hemlock, water-hemlock and water-parsnip. The three latter are not refused by cattle, and are highly injurious to them. Fool's parsley is said to produce palsy in horses if they eat it in quantities, and it has also done much injury

to persons who have been deceived by its close resemblance to garden parsley. Poison hemlock has sickened and killed children who ate its roots, supposing it to be "sweet Cicely." All these herbs are exceedingly common, and, as so many crimes are proved against them, it is advisable that we should all learn to identify and detect them.

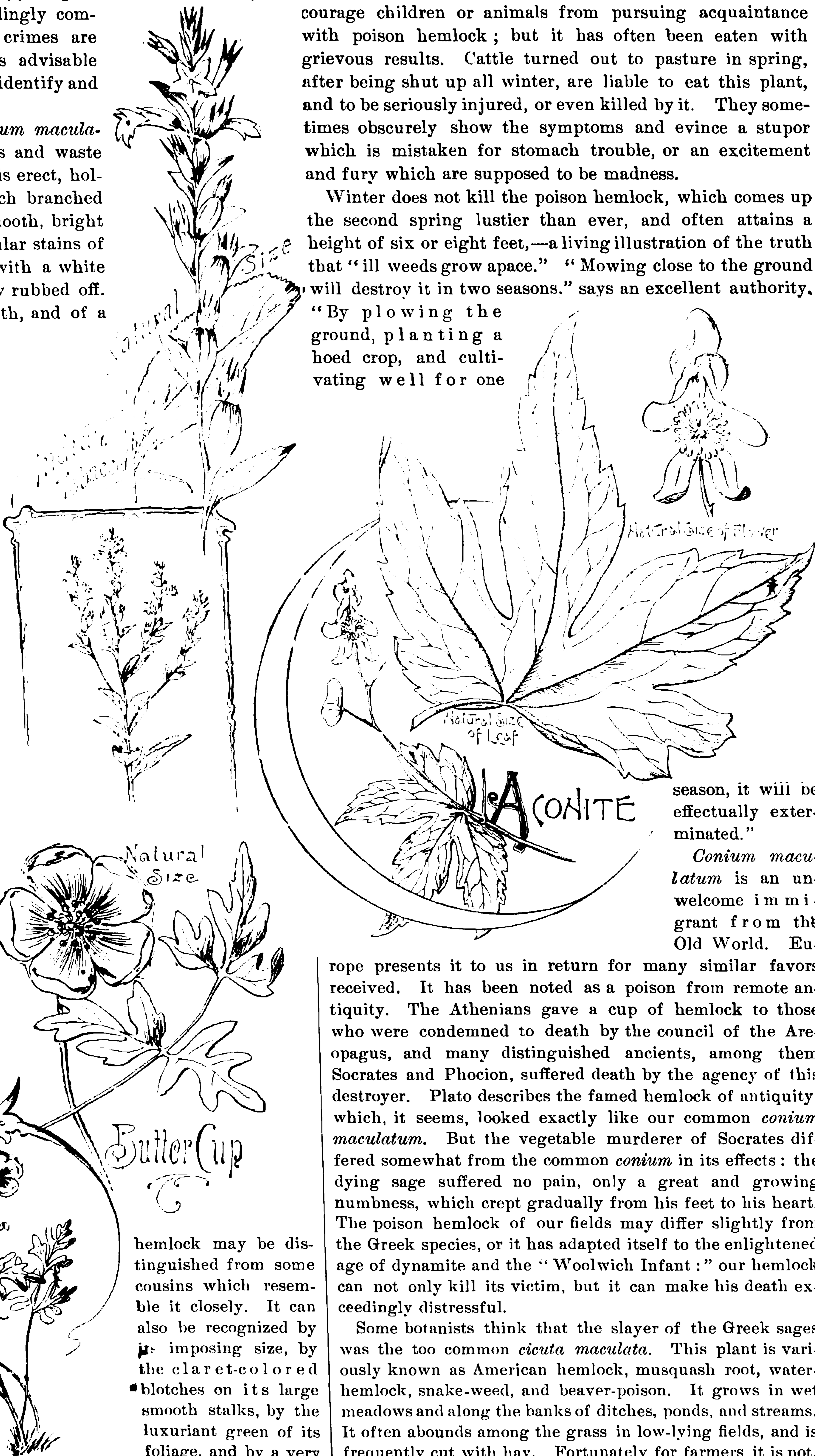
Poison hemlock, or *conium maculatum*, grows in old gardens and waste grounds. Its main stem is erect, hollow, stout below and much branched above. It is perfectly smooth, bright green, mottled with irregular stains of wine-color, and covered with a white bloom which is very easily rubbed off. The leaves are very smooth, and of a uniform deep green. The lower leaves are very large, sometimes over two feet in length, and are borne on long stalks. The upper leaves have scarcely any stalks whatever. They are broadly triangular in general outline, and are finely cut and fringed. Each scallop, or tooth, of these lace-like leaves is tipped with a little sharp, white point.

The white flowers grow like those of the wild carrot, in a flat, circular cluster which is composed of many similar, but smaller, clusters massed together. There are "wheels within a wheel" of bloom. The seeds are small, and of a dull, greenish gray, and up and down them run toothed, or wavy, ridges. By these oddly decorated seeds poison

offensive, "mousy" odor which its leaves emit when they are cut or bruised.

One would think that this last characteristic would discourage children or animals from pursuing acquaintance with poison hemlock; but it has often been eaten with grievous results. Cattle turned out to pasture in spring, after being shut up all winter, are liable to eat this plant, and to be seriously injured, or even killed by it. They sometimes obscurely show the symptoms and evince a stupor which is mistaken for stomach trouble, or an excitement and fury which are supposed to be madness.

Winter does not kill the poison hemlock, which comes up the second spring lustier than ever, and often attains a height of six or eight feet,—a living illustration of the truth that "ill weeds grow apace." "Mowing close to the ground will destroy it in two seasons," says an excellent authority. "By plowing the ground, planting a hoed crop, and cultivating well for one



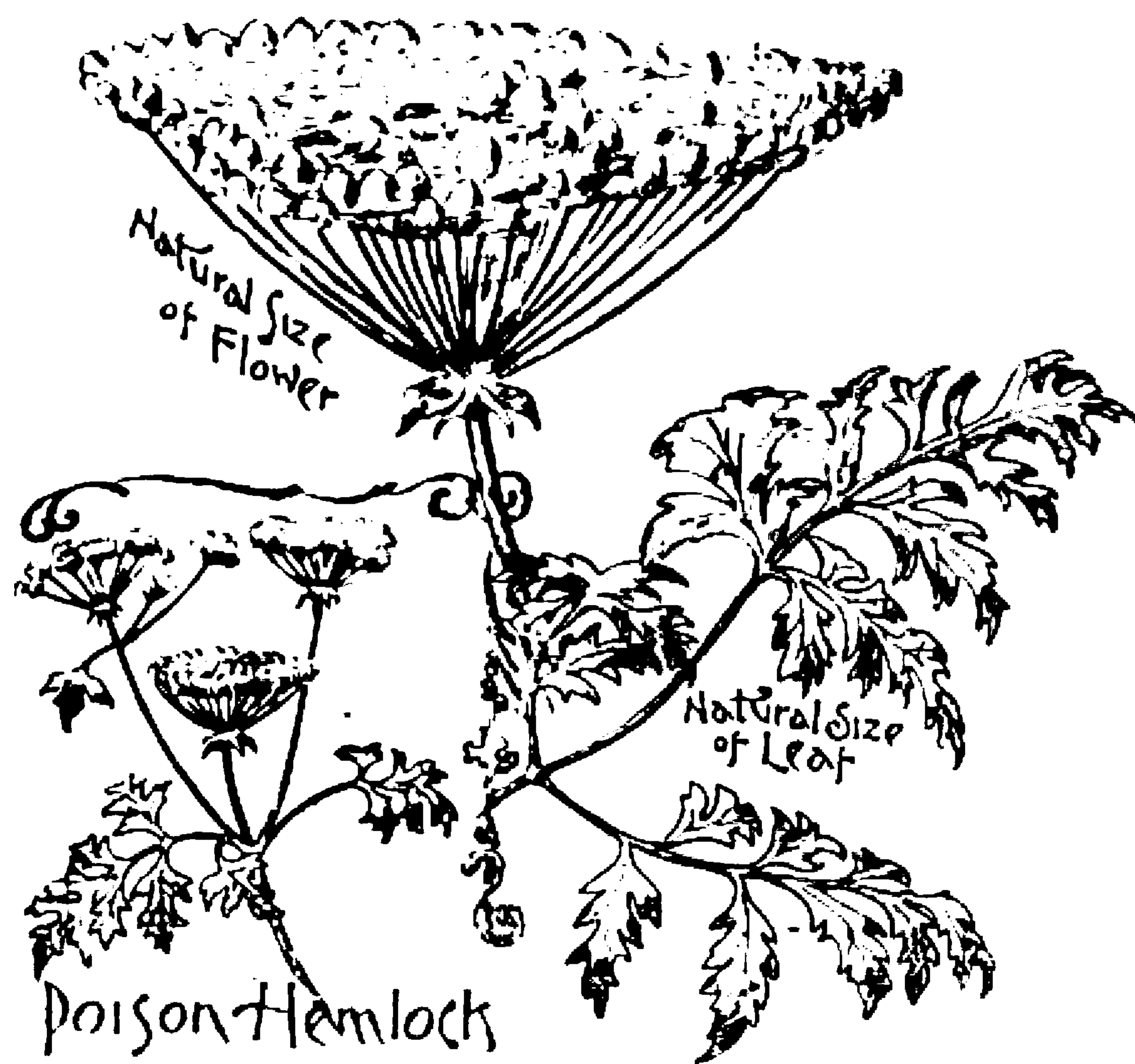
season, it will be effectually exterminated."

Conium maculatum is an unwelcome immigrant from the Old World. Eu-

rope presents it to us in return for many similar favors received. It has been noted as a poison from remote antiquity. The Athenians gave a cup of hemlock to those who were condemned to death by the council of the Areopagus, and many distinguished ancients, among them Socrates and Phocion, suffered death by the agency of this destroyer. Plato describes the famed hemlock of antiquity, which, it seems, looked exactly like our common *conium maculatum*. But the vegetable murderer of Socrates differed somewhat from the common *conium* in its effects: the dying sage suffered no pain, only a great and growing numbness, which crept gradually from his feet to his heart. The poison hemlock of our fields may differ slightly from the Greek species, or it has adapted itself to the enlightened age of dynamite and the "Woolwich Infant:" our hemlock can not only kill its victim, but it can make his death exceedingly distressful.

Some botanists think that the slayer of the Greek sages was the too common *cicuta maculata*. This plant is variously known as American hemlock, musquash root, water-hemlock, snake-weed, and beaver-poison. It grows in wet meadows and along the banks of ditches, ponds, and streams. It often abounds among the grass in low-lying fields, and is frequently cut with hay. Fortunately for farmers it is not,

hemlock may be distinguished from some cousins which resemble it closely. It can also be recognized by its imposing size, by the claret-colored blotches on its large smooth stalks, by the luxuriant green of its foliage, and by a very



in a dry state, very injurious to cattle. Its fresh leaves act upon them as a violent poison, and hence another of the plant's popular names, spotted cow-bane. Any of it within reach of a farm ought to be exterminated.

The plant may be identified by its root, which is composed of a number of fleshy tubers diverging from the base of the stem, and about as long as one's finger. It looks like a cluster of small parsnips tied together as hucksters tie them. The root has a strong, penetrating smell, and a warm, acrid taste, and when it is pressed it emits a yellowish juice with a pungent flavor.

The stem is smooth, branched at the top, hollow, and marked with little grooves and little ridges, running lengthwise. Generally it is strongly streaked with purple. Spotted cow-bane grows from three to six feet tall. Its leaves are much cut, their edges are toothed like a saw, and the leaf veins terminate in the notches, not at the points of the foliage.

The white flowers appear in July and August. They are borne in a compound wheel, or umbel, as they are in all the members of the parsley tribe. In most of the numerous parsley cousins the head of tiny, five-petalled blossoms is encircled by a full ruche, or collar, of slender leaves: these leaves grow at the bases of the little stalks which uphold the little wheels of bloom, and they form what botanists call the "general involucre." But spotted cow-bane follows a recent fashion, and goes all collarless: it has no "general involucre," and only occasionally an apology for one in the shape of a single leaf. The little circles of bloom are not numerous, and instead of crowding together, as they do in the wild carrot, each keeps at an unsocial distance from the rest.

There are many recorded cases in which children have eaten the roots of *cicuta maculata* with fatal results. In western Pennsylvania it destroyed several persons who ate the root, mistaking it for angelica. Three little boys in Dutchess County, New York, went in search of sweet flag-root, and dug up and ate roots of the spotted cow-bane by mistake. Two died in convulsions about an hour after having swallowed the poison. "Many cases like these," says Bigelow, "must have happened unrecorded. The plant is extremely common in many parts of the United States, and I believe its true character is not generally suspected. A very respectable physician informed me that it was much used in his vicinity, as a gargle, by people unsuspecting of its qualities."

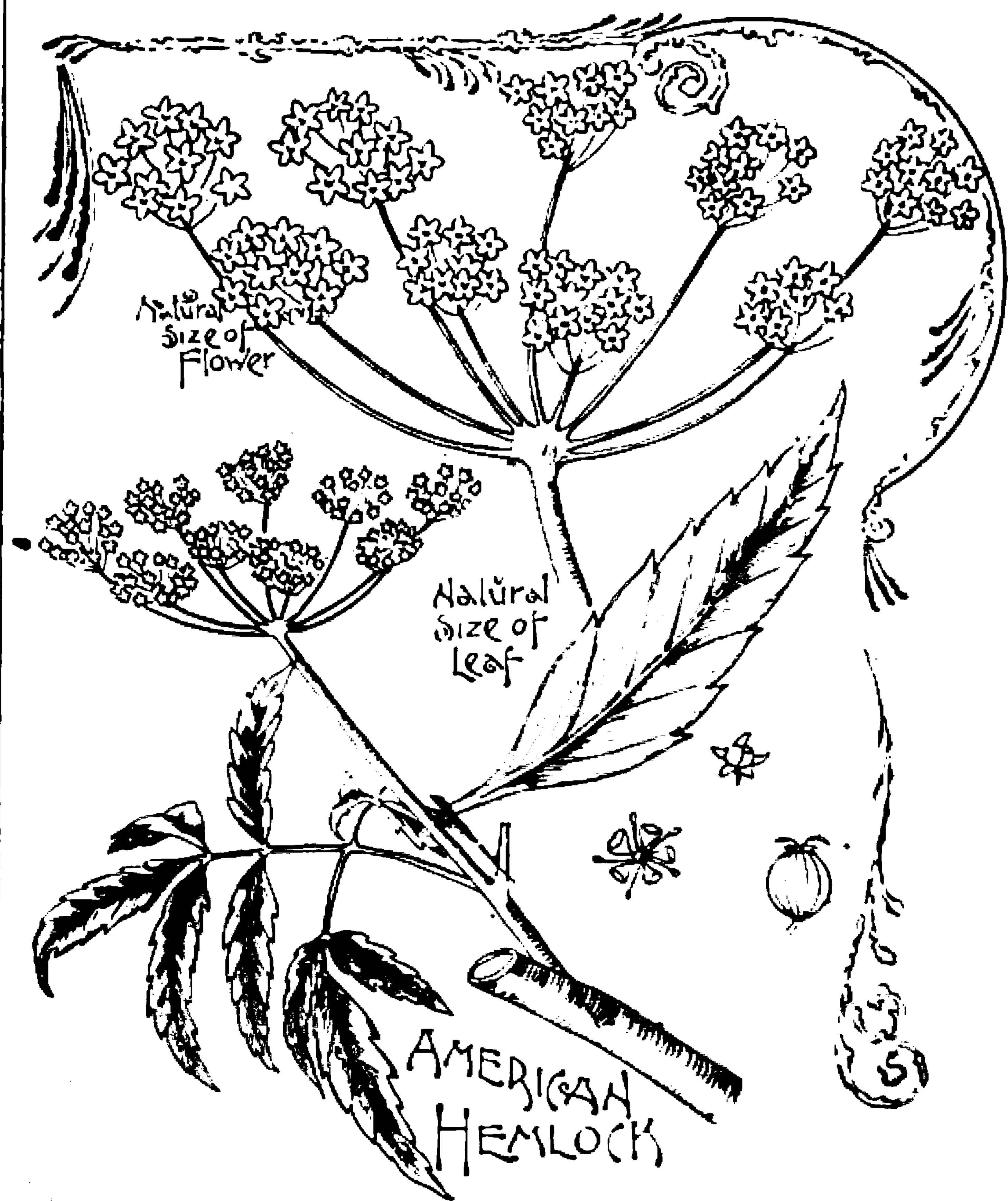
Though this plant is poisonous to cows, it is eaten with impunity by sheep and goats. It comes up year after year from the same root: mowing the ground, therefore, will not exterminate it, and only thorough plowing will rid us of it.

Mowing will, however, destroy fool's parsley (*aethusa cynapium*), for the summer is its span of life. Fool's parsley is a slender herb, with a small, branched, tapering root of a pale brownish-white color. Its erect stem is from six inches to two feet high, and has many ascending branches. It is perfectly smooth, hollow at the base, solid above, and of a bright apple-green color tinged with red. Stains and streaks of red and purple brand most of the evil-doers of the parsley tribe.

The lace-like leaves of *aethusa* are broadly triangular in general outline, very smooth on both sides, and of a rich dark green, often tinged with dull red. Except for these criminal marks the foliage of *aethusa* resembles that of the straight-leaved garden-parsley so closely that the poisonous plant has often been mistaken for the worthy vegetable, with disastrous results. Curled parsley can be at once distinguished from its disreputable relative by its crisp leaves, and it is recommended that curled parsley only should be cultivated, to avoid mistakes. No mistake could arise were the plants compared when in blossom, for the flowers of fool's parsley are white, while those of garden parsley are yellow.

The whole plant of *aethusa* has a burning taste, and when the leaves are bruised they emit a peculiar, disagreeable odor altogether different from that of garden parsley. Fool's parsley is a common weed about cultivated ground in the Northern and Eastern States, and it abounds in the vicinity of Boston. It blossoms in July. In all recorded experiments this plant has had a poisonous effect upon animals.

Water-parsnip (*sium*) also blooms in later summer. It grows in swamps and marshy meadows, and along the banks of streams and ditches. Often it is found rooted in water,



with some of its leaves submerged. This floating foliage is lace-like, and the leaves which rise into the sunshine are also delicately cut and toothed. The white flowers resemble those of *cicuta*, but they are surrounded by an involucre of several tiny leaves.

Cow-bane, another water-loving member of the parsley

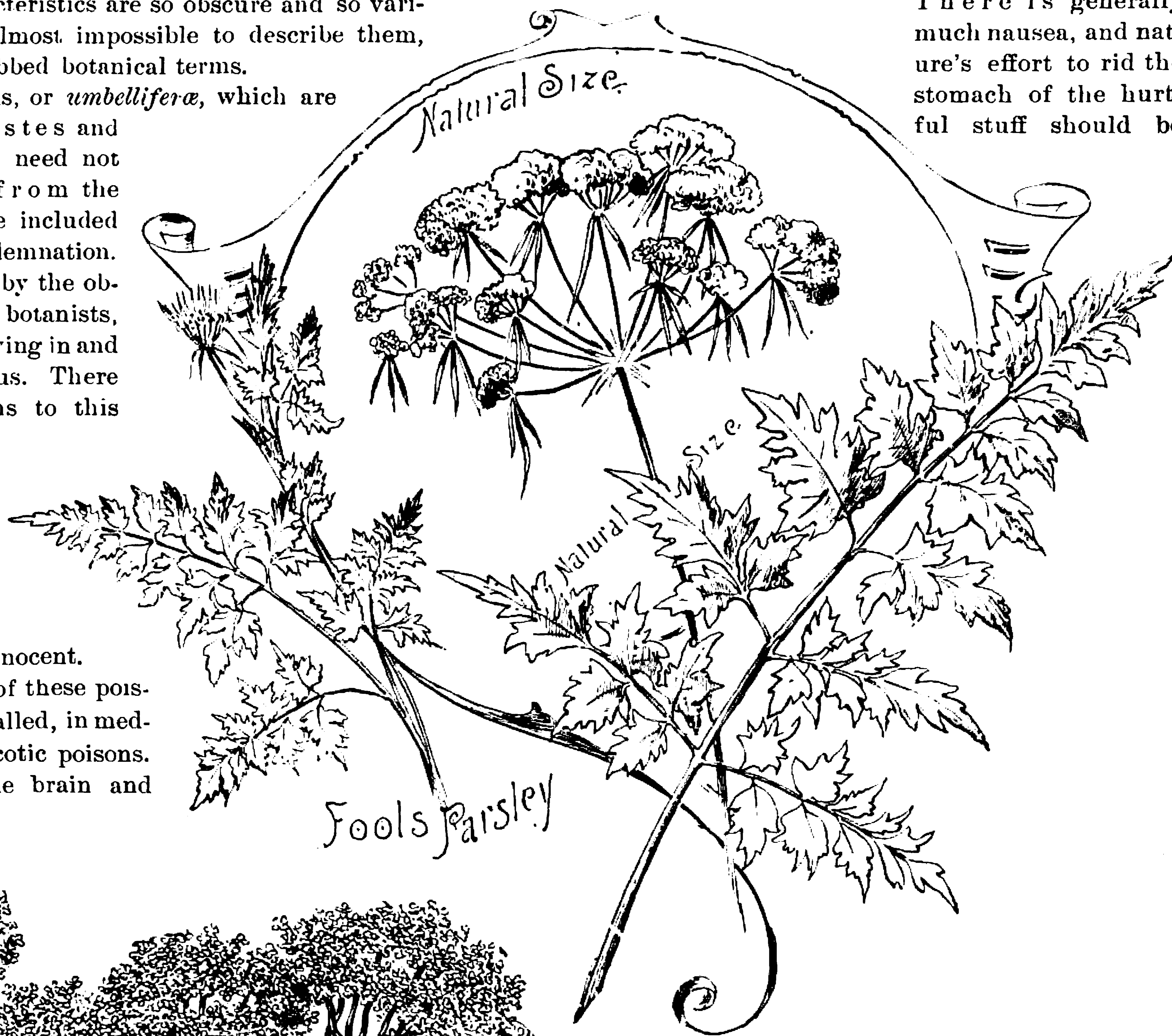
family, is also poisonous. It, too, has compound, or divided, leaves, and a wheel-shaped mass of delicate white flowers; but its individual characteristics are so obscure and so variable that it would be almost impossible to describe them, even by resorting to crabbed botanical terms.

Those parsley relations, or *umbelliferae*, which are amphibious in their tastes and aquatic in their habits, need not be distinguished one from the other. They can all be included in one sweeping condemnation. It is a rule, sanctioned by the observations of medical botanists, that all *umbelliferae* growing in and about water are poisonous. There are very few exceptions to this rule; so every plant growing in a wet place and bearing lace-like leaves and blossoms closely resembling those of the wild carrot, must be considered guilty till it is proved innocent.

The baneful juices of these poisonous *umbelliferae* are called, in medical language, acro-narcotic poisons. They act chiefly on the brain and

spinal marrow, producing dizziness and stupor, and sometimes a sort of intoxication, delirium, and convulsions.

There is generally much nausea, and nature's effort to rid the stomach of the hurtful stuff should be



assisted by a dose of sulphate of zinc or of tartar-emetic: the first is preferable on account of its speedy action. Hot lemon-juice and hot vinegar should be given, but they must on no account be administered before the poison is expelled from the stomach. Strong coffee and strong tea are the best antidotes for the stupor, which is sometimes almost overpowering. The patient must not be allowed to yield to it, but his attention must be aroused by every possible means.

But as an ounce of prevention is worth many pounds of cure, children should be earnestly cautioned against eating unfamiliar roots, seeds, and berries. "Sweet Cicely" and angelica differ but slightly in appearance from violently poisonous members of the parsley family: most disastrous mistakes have thus occurred, and hence "sweet Cicely" and angelica had better be forsworn altogether.

The plants described are injurious only when they are taken into the stomach. None of them is in the least degree poisonous to the touch, and if any one of them has made its home in our territory, we need not fear to grasp it boldly, pluck it up, and cast it out.

E. M. HARDINGE.

HAVE the courage to be ignorant of a great number of things in order to avoid the calamity of being ignorant of everything.—SYDNEY SMITH.

How to Read Character by the Handwriting.

“CAN the character be read from the handwriting?”

This question has been answered pro and con by men of equal judgment, ever since the invention of letters. After having given more than twenty years to the study of this and kindred subjects, I am forced to the conclusion that the handwriting, in itself, does not afford sufficient evidence or data from which to draw invariably exact deductions as to the character of the writer; but if I were asked “Is handwriting an *indication* of character?” I should, unhesitatingly, answer “Yes.”

It will be generally conceded that a man's face, voice, manner of movement, dress, and address afford pretty sure clues to his character; but, be that as it may, it is very certain that every man, woman, and child of us—and even the higher of the inferior animals, like the dog and horse—is impressed by these physical manifestations of mental and moral disposition. People particularly susceptible are apt to form estimates of character at first sight, and, in the main, these instinctive impressions are found to be correct.

There is only one way in which character can possibly manifest itself, and that is in some form of physical action. If asked the form of action in which mind and body are most intimately associated, I should say, “In the writing of an original composition;” for here, to use a familiar figure of speech, the hand and the brain work in double harness. It will not be disputed that the treatment shown in an original composition is an evidence of mental character, and it is equally evident that the handwriting is not the result of chance, but must be the outcome of certain mental characteristics, which in their turn are the outcome of certain physical characteristics. It is a fact that handwriting varies as much as do the faces and voices of the writers; and this is not a matter of chance, but the result of a law, which, rightly understood, gives a clue to the character that is quite as accurate as physiognomy.

There are people who profess to tell the character from a few meaningless words of writing, but it is safe to set them down as superficial or dishonest. A few words indicate something, exactly as a finger seen through a rent in a curtain will tell of a human being on the other side; but each is equally useless as data for character analysis. During the past year I have examined hundreds of specimens of writing submitted to me by people of all ranks and degrees of culture, from housemaids to judges, and the accuracy of my estimates has been praised in every instance heard from. But in every case I have insisted on the following data: First, not less than a page of the usual writing, in the form of a letter to a friend; second, the exact age, and the name signed in full, that is, without initials, and in the case of married ladies, I require the maiden name.

The foregoing does not imply a great deal of data, yet the name gives a clue to the race, at least on one side; the age, in connection with the writing, gives a key to the temperament; and the writing in itself suggests a hundred conditions difficult of comprehension to the uninitiated, but which are entirely clear to the student in this department of ethnology. Character is the manifestation of habit; and so long as we have the power to drop an old habit or take on a new one, so long is the character in our own control, and to that extent we are responsible for it.

Where the character is fixed, the writing does not vary, unless it be in the case of sickness. In all my experience I have not met with an exception to this rule; and, curiously enough, the signature does not vary greatly after adult age, even where the writing has been radically changed.

“Chirography,” or “Graphology,” as the art—it is a mistake to call it a “science”—of reading the character from the handwriting is called, was studied by the ancients, and before the invention of printing it meant much more than it does to-day. It is impossible in the limits of a short article like the present to treat the subject in even an elementary way, and perhaps, on the whole, it will be better to illustrate my method by actual examples than to hint at a theory of high average readers. The thing though even the most unobservant is impressed favorably or the reverse by the handwriting of a stranger, while the handwriting of a friend is as welcome, familiar, and characteristic as his face.

No. 1 is the writing of a girl of seventeen. It tells of the writing-master's training, as certainly as the soldier's erect

No. 1
 Hoping to hear from you
 soon I remain,
 Yours truly,

NO. 1.

form and measured walk tell of the drill-sergeant, and in itself it is as lacking in individuality as the product of the type-writer. It is machine work, and yet it tells of patience, an eye for form, and obedience to discipline; and with the name and age, in the body of the letter from which this is taken, I obtained the data for a good generalization, summed up in two words, “obedience” and “mediocrity.”

No. 2 is a strong, bold hand, though it would be as much of a mistake to measure the boldness of writing by its size,

No. 2
 I have written
 the Secretary and shall greatly
 appreciate your looking over
 my reply

NO. 2.

as to judge of the valor of a man from his height and weight. The writer is a New York merchant, aged thirty-four, of a sanguine-nervous temperament, forceful rather than persistent, frank without being rude or aggressive, and generous so long as his own interests are not at stake. The cast of mind is artistic rather than

I am Twenty-seven years of age, unmarried, and with every intention of remaining so, not that I am a woman-hater, in fact I am constantly with the girls, but I think that they are all about the same.

NO. 3.

the disposition is impulsive, hasty, and generous. The mind is not of an intellectual cast, yet it is shrewd, and it indicates that rarest of possessions, good common sense. Loyalty to friends, and an adherence to once-formed convictions are distinguishing traits of this character.

As each race has a distinct physiognomy, so the writing of the different nations, even where they use the same letters, is characteristic; and where the early training was not in the use of Roman letters it is manifest, no matter how well they may understand English.

No. 5 is the writing of a bright young Norwegian. Knowing the nationality, which the writing tells me at a glance, it is easy to draw an accurate picture of the man. I can tell him that his complexion is light, that he has a sturdy

form, and the vital-motive temperament. He is forceful, headstrong, quick-tempered, selfish, and persevering. He will never be found at the tail of the procession; and while his animal impulses are powerful, he will never permit them to interfere with his material advancement. That one letter affords ample matter for a long article.

I have never permitted myself to analyze the writing of children, for their characters are unformed. No. 6 is the writing of a school-girl of sev-

enteen, and it will change greatly in the next few years; yet it is full of promise, and indicates a marked individuality. At

mathematical, and anxiety about little things is apt to blind him to the greater things that lie beyond. This of course is only a hint of the many points revealed by the writing of a gentleman who has been kind enough to say that my analysis impresses himself and his friends as being "supernatural."

No. 3 is an extract from a very long letter; and while the writing is weak for a man, it is a good illustration of my point, that the matter is quite as valuable a datum as the penmanship. This indicates a nervous, sensitive, self-conceited, and narrow

Hoping to receive an early reply and thanking you for the same I remain,

NO. 4.

Please tell me all you can concerning me

NO. 5.

person, with possibilities in him of a nobler manhood than his own uncertain will and utter lack of purpose can ever develop. Every reader who examines this scrap, no matter how ignorant of the chirographer's art, will at once form an estimate of the writer's character, and it will not be favorable.

No. 4 is a specimen of the handwriting of a lady of twenty-one. It is a good type of the New England girl's hand. The want of punctuation shows carelessness, yet every letter is clear and distinct as a new-minted coin. The temperament is the mental-motive, and

present, haste, impatience, and impulse control her; but the purpose is always good, and the basic elements of the character are excellent.

No. 7 shows plainly that the writer is another pupil of the writing-master. This is from a young lady of twenty-two, naturally refined and amiable, with a love for music and

a passion for the stage. The character is conscientious and lovable, but it is lacking in the force that wins in the face of obstacles. As a wife she will be a blessing to some man; but as an artist her best efforts would be failures.

Please describe my temper and tell me what country I came from.

NO. 6.

There is a certain art haunting me and if convinced of a taste for it would follow it at

NO. 7.

No. 8 is the writing of a young lady of great natural refinement of character. She is sensitive, imaginative, and has the artistic temperament. There is a want of decision and an uncertainty of judgment that will qualify her to fight the battle of life.

I was thoroughly pleased
with it. and do not know
when I have enjoyed my-
self so much

NO. 8.

single-handed, but under proper guidance she is capable of great things.

No. 9 is a sample of her sister's writing, and I need not point out the fact that there is not the slightest family

I am revealing my character.
For how enclosed please tell
me what best print would
be for use to follow.

NO. 9.

I am twenty years old and people tell me I should
be very lucky because I was born on Christmas eve.

NO. 10.

I am 36 years of age and unmarried.

NO. 11.

resemblance. Her style of writing is decidedly eccentric, and I have advised the young lady to get rid of it—for the sake of her friends—as soon as possible; still it tells of originality, a love for music, and an intense desire to have her own way, which in this case is sure to be an honest way.

No. 10 is the writing of a young lady of Celtic ancestry, and the humor that distinguishes her race is shown in these few lines. Warm-hearted, impulsive, generous to a

I also enclose stamped
envelope, kindly answer
me at your earliest con-
venience.

NO. 12.

fault, either up in the clouds with hope, or down in the depths with despair, these things and many more I see in this writing.

The great Lavater, who was a physiognomist, yet relied greatly on the handwriting, was of the opinion that the writing of women had less individuality than that of men. This certainly is true in Europe, where individuality in women is not so much encouraged as it is here; but my own experience is the reverse. There is a mechan-

ical hand that tells of the boarding-school, which is my despair.

No. 11 is the writing of a man in years, but a big boy in feelings. Kind-hearted, without a fixed purpose, lacking in perseverance, never confident of his own judgment, and always controlled by a stronger will, this man can never win,—unless he gets a wife who loves and will control him.

The penmanship shown by No. 12 has a certain attractive, familiar look, yet it is by no means commonplace. There is vigor and dignity in every line; and while selfishness is not wanting, the lady who wrote the above has a high sense of duty, and is capable of great effort and self-denial when

moved by love or her fine sense of right.

In No. 13 we have the writing of another young lady. This chirography was never acquired in school. It is labored and affected, yet it tells of patience of the plodding kind, and a force that might be made available if properly

directed. It is not necessary to point out the want of culture, nor the fact that the writer is affected by appearances, and is of a sensuous nature.

No. 14 is the writing of a young gentleman of eighteen, who is acting on my advice to study law. This indicates a fine intelli-

I have read with interest your analysis of the different writings sent you. You tell a new word

NO. 13.

gence, care in detail, and good powers of analysis; but it also shows a lack of force and an inclination to act from impulse.

In the group shown an exact picture may be had

NO. 14.

Often the hurried glimpse we catch of a stranger's face on the street gives us an impression of his character; so the merest fragment of writing—like a fragment of bone

I hope to hear

NO. 15.

to the comparative anatomist—enables us to draw a fair inference by reasoning from a part to the whole. Do not even the few words shown in No. 15 indicate originality, refinement, and a bright mentality? It is not an ordinary hand, nor is the writer an ordinary person.

No. 16 indicates frankness, a hearty impatience, but a lack

a decided blonde

NO. 16.

of force and decision; yet the character is the more lovable for this defect.

The three words shown in No 17 indicate a highly nervous temperament, great sensitiveness, and much refinement.

I was born

NO. 17.

No. 18 denotes neatness and much anxiety as to appearances, and dread of what the world will say; yet there is undoubted conscientiousness, and an eye for detail.

have spared no pains

NO. 18.

In No. 19 we have force, mental brightness, impatience, and a corresponding generosity and loyalty to friends.

No. 20 shows excessive caution, timidity, and a want of self-reliance, yet strict honesty and conscientiousness.

to know what the

NO. 19.

I write to you in order

NO. 20.

The writer of the specimen shown in No. 21 is frank and energetic, with abundant self-esteem, and a strong desire to occupy a place at the head of life's procession.

The writer of No. 22 is imitative, wanting in originality, yet possesses a strong sense of duty and is inclined to the plodding methods that win.

hope you have

NO. 21.

No 23 shows clearly that the writer is decidedly weak and uncertain, very shallow, and swayed entirely by stronger natures. The penmanship of No. 24 makes a striking contrast to this.

Gephis with Aurora

NO. 22.

Quings always read

NO. 23.

No. 24 indicates that the writer is forceful, abounding in self-reliance and self-esteem, angered by opposition, but not discouraged. The writer will win success, but will never make warm friends.

I thought I told

NO. 24.

The writer of No. 25 is plain to the verge of bluntness, enjoying life through the senses, but will never rise above the dead level of mediocrity.

I wish to enlist

NO. 25.

No. 26 shows much delicacy and natural refinement of character. The temperament is artistic, but there is a lack of patience.

Will you kindly inform

NO. 26.

No. 27 denotes that the writer is undecided, inclined to be petulant, and never satisfied with her own work, yet lacking the power of self-drill that makes for perfection.

*Dear Sir, -
I have just.*

NO. 27.

The writer of No. 28 is ambitious, but uncultured, capable

was born in Paris

NO. 28.

of a high development along art-lines, but impulsive and illogical.

No 29 indicates that the writer is very cautious, fearful of

Please answer by letter

NO. 29.

what the world will say, easily swayed by others, yet doing right where the natural impulse is obeyed.

The writer of No. 30 is kind-hearted, irritable, outspoken,

& enclose herein

NO. 30.

and inclined to have her own way. A true friend and an open enemy.

The most cursory examination of the specimens of writing submitted in this article will show that each has a distinct individuality; and the most skeptical must agree that the difference is a difference of character. Whether my deductions are right is, of course, another matter; but it is due myself to say that if I were treating one letter I should do so in detail, when the power to analyze correctly would be more evident. The subject is full of interest, and a little study and care would place its comprehension within the reach of the average intelligence.

*Faithfully Yours
Nelson Thayer.*

Betty's Beauty.

HERE is just this much about it," Arnold was saying, as he settled himself more comfortably upon the sofa, and ran his fingers through his thick locks. "A beautiful girl has the advantage of her homelier sister, in that she attracts the sooner, but then there is also this drawback: if she is loved for her beauty alone,—and she very often is,—when that beauty is gone, what has her husband left? Nothing! And the empty shell is worthless to him. He tires of it—neglects it; for you see the old attraction can no longer bind him. To me, woman's beauty is like a good many of those pictorial advertising cards one sees: they invite you to examine the goods within the store, but upon investigation one generally finds that all the actual value of the goods lies in the gaudy advertisement on the outside. It's a pity girls don't understand this more, and cultivate a beautiful character."

Betty bent over her work. She was darning stockings: a very homely occupation, to be sure, but a very necessary one in the doctor's shabby family. Her brother's words found an echo in her own heart, but she was waiting to hear what her mother would say, before venturing to express her own opinions.

Arnold had come home from college two days previous, and was trying, as he said, to renew his acquaintance with his family, but found some few changes in them he had not

anticipated. He was lying indolently upon the sofa in the sewing-room, his curly head buried in the old brown pillows, and his feet crossed upon the arm at one end. He looked the very picture of laziness as he lay there, but beneath his jesting tone was a strain of earnestness that neither mother nor sister realized. His eyes, under their sleepy lids, rested half-mischievously, half-curiously, upon his sister's averted face.

He had not been home for so long a time that little Betty had changed almost beyond his expectations: she had grown actually beautiful, and he had not yet overcome his astonishment at her attractiveness. He was extremely proud of her, but, brother-like, refused to allow her to guess at his admiration, teasing her at every available moment, in the endeavor to quench any sparks of vanity she might emit. He wondered, as he watched her, whether she really knew how lovely she was. He thought not, her face was so sensitive and gentle.

But by this time Mrs. Leigh had come to the end of her seam, and the sewing-machine stopped. She turned smilingly to her lazy young Solomon and said with a laugh:

"Pray, my boy, how long have you made my sex a study, and where have you learned such wisdom? Do you not know that it has taken some wise men years to find all this out?—and here a college fledgeling has coolly discovered a well-kept secret!"

The others laughed; then Betty looked up, flushing in her earnestness. "Mother," she said, "mother, do you know I so often wish I knew what it is to be loved for something that is *in* me, and that all the years of my life will never wear away. It must be beautiful to be loved in that way. It must make the hardest trial in life easy to bear."

She paused, as though ashamed of her temerity; and Arnold decided that, after all, she did realize the extent of her beauty, and he was disappointed. But he was mistaken; however, he thought he would "squelch her a little."

"Betty," he said gravely, "I *do* love you for something that is in you: I love you for your ability to make such apple turnovers as we had for luncheon. Be encouraged, my child, and try again."

At his good-humored ridicule the girl's face drooped again over her work, a burning flush suffusing it. She felt that Noll was laughing at her; he had not understood, and of course he must think her horribly vain: she was very sorry she had spoken at all, and her sensitive face showed it plainly. Seeing her discomfiture, Mrs. Leigh said quietly:

"Never mind Arnold, my daughter, it is all his college nonsense. He is as proud of you as we are, and that is saying a great deal. We know our Betty's worth, sweetheart, and beyond the pleasure it gives us, your looks weigh lightly against the heart within."

Betty looked up gratefully, but only changed the subject by saying,

"What time does Mr. Reese arrive, mamma? Did papa say?"

"Yes, at six, in time for dinner; but everything is ready, and if I were you I would put on my wraps and run out for some exercise. You have been working too hard to-day, dear."

After the door had closed behind her, mother and son sat in silence for some moments: Noll's eyes were staring soberly out of the window, his hands clasped behind his head; Mrs. Leigh was busy finishing off the seam.

"Mother," Noll began thoughtfully, "Betty certainly is beautiful, but I hope to goodness she is not growing into a vain woman! I detest, above all things, that weakness in a woman, even though she has some cause for it. It shows such shallow brains."

"Arnold," his mother said gravely, "you have been away

from home for two years, and it is but two days since your return. Are you not judging your sister somewhat abruptly?"

"Well," admitted the young man, moving uneasily, "perhaps I am; but I'm sure that remark of hers was conceited enough to cause even a hasty judgment. To insinuate that it was her beauty alone that was winning her love!—I think that was utterly silly!"

"You don't understand Betty," Mrs. Leigh said. "To one who knows her position here in Daron, the (to you) offensive remark would be appreciated; but I think that she forgot you would not understand, and spoke impulsively before you. The actual fact is that Betty is admired from one end of the town to the other, and, I regret to say, there are scores of young fellows who would be only too glad for the slightest encouragement from her; but our Betty is as cold as a little icicle to them all,—why, I do not know. She is known and spoken of as the 'Doctor's beautiful young daughter,' and, deary me! how they do flatter the old people in the effort to reach the child! Rob says that his father's practice has flourished amazingly since Betty's beauty has bloomed out, but that's all the boy's nonsense, of course. However, Betty is very unlike other girls, and instead of being spoiled by this adoration it has made her very retiring and, quite unwittingly, more attractive than ever. I think she is keenly sensitive about the affection she wins, and longs to be loved for herself alone. I remember when young Dr. Allen begged her to marry him—you know he went out West afterward—she laid her head in my lap and cried, 'O mother! mother! he is so fond of beauty. It's only my hateful looks he cares about, and not me at all.' My poor little girl! I believe it's a heavy cross for her to carry: she so craves a lasting love, and is constantly finding out, by the flattery she receives, that she is to be disappointed."

Arnold was listening eagerly, gravely. This was a revelation to him, and in his heart of hearts he repented bitterly having wounded her, for he knew now that she would never again speak openly before him. He sat up and turned round, facing his mother.

"I'm sorry I laughed at her," he said. "I wish I'd known all this before. She's a dear little girl, and no mistake."

"Yes, I'm sorry, too," said his mother gently. "Betty is so sensitive that she shrinks from the slightest attempt at ridicule. Try to remember this, dear, when you are tempted to tease her, for I want the home life of the sister and brothers to be of the very sweetest."

Noll got up and kissed her remorsefully. Perhaps the remorse was not all for Betty; but a something shadowing his face made his voice tender, even to sadness, as he said:

"It always will be, darling, with such a love of a mammy in it." Then he sat down with his arm around her and talked over the financial prospects of the Leigh household.

That they were very poor indeed, not all Mrs. Leigh's cheerful economies nor Betty's graceful taste could hide from even a casual observer. The dear, clever doctor could never lay aside for that certain stormy day so often predicted, nor lose his trust in human nature. Anxiety was drawing the fine lines of care upon the little mother's brow, and sowing white threads of anxiety in the soft lustre of her dark hairs. Arnold raved over it with fierce impatience, but the doctor was allowed to go his own way, after all, and they "managed."

Mrs. Leigh had finally decided to take into their home this stranger whose weekly board would add so much to their slender income. This decision had caused her many wakeful nights and grave thoughts, for the sacredness of

her home life was very precious in her sight; but then it had seemed almost providentially thrust upon her, at a most anxious period, and she had accepted it at once. Then, too, he was to have a large back room with a smaller one adjoining, and perhaps, after all was said and done, he might not be so very much among them. She had understood that he was very much of a recluse, living almost entirely a life separated from others. Alas, poor man! he was totally blind. It was that fact, together with her need, that induced Mrs. Leigh also to agree to the presence of the other stranger, half-servant, half-companion to his strong young master.

Miss Ann Covert, across the way, watching from under the fringe of her front-parlor shades, saw the carriage drive up and the doctor and two young men alight. One was tall, square-shouldered, and good-looking; the other, well-knit, short of stature, with light brown hair and a heavy dark mustache, and an odd, helpless way of standing just where he had been led. Miss Ann decided that the servant was the more striking looking of the two, and moved away to tell "Sister Mary" that "Mrs. Leigh's blind boarder" had come. But Betty, who was waiting in the library with her mother and the boys, thought the gentleman shaking hands with Mrs. Leigh and speaking in that refined voice, one of nature's high-bred men.

"Mr. Reese, my daughter;" and as Betty laid her small fingers in his grasp for a moment, she felt instinctively that he was true to the heart's core.

It was so odd, at first, to have a stranger in their home. Noll resented it, and chafed over it in secret, but wisely said nothing that could possibly make it harder for the little mother to endure. In fact, despite the unobtrusiveness of the stranger and his companion, they all felt that the freedom of the home circle was gone; and each in his and her own way mourned over it in silence. Perhaps the doctor and Bob cared less than the others: the former because he found in Mr. Reese a delightful, intellectual companion, the latter, because there was no end to the thrilling stories and bits of historical interest that Reese had gleaned in his travels all over, at home and abroad, and could narrate by the hour.

Betty was so quiet at first that Mr. Reese did not know what to make of her. He wondered if she were stupid or shy, and speculated a good deal as to her appearance and the quality of her mind; but now and then she would surprise him by the depth of a thought timidly expressed, or the clear, forcible way in which she would fight out an argument on some scientific subject, with her father or Noll, and, once or twice, with himself. By and by they two fell into the habit of reading together when Paul was out or had gone away for a day in the city, and Mr. Reese grew very much interested in the possessor of the gentle, refined voice, longing ardently, as he listened to her reading, to be able to see her face, if but for a moment. But he soon found that she could seldom be spared from her home duties, and little by little he learned the position she held in the family, and her sweet, womanly patience became a very pleasant thought to him. With Paul he never permitted discussions of any kind in regard to the people with whom he (Reese) associated; there was at all times that haughty reserve about Mr. Reese that forbade any familiarity between master and servant, and Paul never encroached upon it.

"Betty," said Noll, looking up as she passed through the dining-room where he sat reading the morning's paper, "I have come to the conclusion, after careful personal observation, that you need have no fear whatever, if Mr. Reese likes you at all, that it will be for your—ahem! beauty, shall we

say? It will all be due to the peculiar qualities of your mind, my child."

This was all apropos of a discussion they had had the previous evening. Betty stopped and laughed. She looked very attractive just then, in spite of the great kitchen-apron and her rolled-up sleeves.

"Perhaps," she said, demurely, "if you were not so taken up with studying the 'advertising card' on the outside, you might possibly find some goods within worth buying, yourself." Then she closed the door hurriedly and slipped away. But of course Noll was not willing to let her have the last word; so he poked his head into the kitchen, where she was getting the dish-pan ready, preparatory to washing the Monday morning dishes.

"Betty," he said, whiningly, with an exaggerated attempt at imitating her voice, "don't you think, dear, that you could *possibly* love me for something that is in me, and not only for my pale, personal perfections?"

Old Maggie was there, and looked up with a broad grin on her red face.

"Shure," she said, pausing with a basket of wet clothes on her way to the yard, "shure I'm after thinkin', Mister Arnold, that yer pasonal pefections are not after bein' wisible to a mortal eye,—axin' yer pardon for the same."

Betty laughed outright, but Arnold retired with a disgusted look on his face. Betty went on with her work, thinking of many things, but chiefly of their boarder. Two months had rolled by since his first coming among them, and the days had been pleasant and instructive to her. It gave her a strangely sweet sensation to see his face light up and his sightless eyes turn quickly in her direction when she addressed him. Then those hours by the fire in the library together, the intercourse, the rich tones of his voice when speaking to her, the shadow of sadness on his face that some wishful thought had brought there,—yes, she was beginning to realize what it all was to her, and what it would be to her to lose him altogether. Besides that, Noll was getting ready to go back to college, and there had been some talk about Mr. Reese going abroad soon. Betty sighed. There were always these comings and goings; but *this* coming had made the thought of parting very bitter. Would the possible return be very sweet?

So engrossed was she in her thoughts that she did not hear the door open behind her, and started violently when Mr. Reese said quietly:

"I beg pardon, but I have come to the wrong door, I am afraid. Paul is out, and I thought I would venture to come down to the library alone; but I missed my way, and hearing someone busy in here, I thought I might ask to be set straight again, if it would not trouble you too much. Is this Miss Betty?" he added, feeling instinctively that it was.

"Yes," said Betty, hurriedly drying her hands, "yes, it is; and I will lead you back again."

She put her hand frankly in his, and his fingers closed over her moist little palm with a firm strength in their pressure.

There was something very lovable to him in the girl's utter lack of affectation, and, strangely enough, the frankness with which she treated him caused that deep interest he had always taken in her to shape itself in its right form; and he knew that his little, unseen guide had crept into his heart, filling his whole soul with the joy of her presence there. She led him to a chair drawn near the grate, and he sat down, but did not relinquish his clasp of her hand. She stood there quietly beside him, the color coming and going in her sweet face, and her heart beating nervously in the waiting. At last he spoke:

"I am going away on Thursday," he began, slowly. "I

have been conversing with your mother. I am going abroad."

"'Going abroad'?"

Then the parting was nearer than she had expected. The color died out of her face.

"Yes," he said, putting up his other hand to cover the one he held. "Are you sorry at all, Betty?"

She tried to draw her hand away, but he held it tightly, his arm trembling a little.

"We all will be sorry," she said shyly; "we shall miss you very much."

"But you,—*you*, Betty,—will it make any difference to you? Tell me truly, my child, for it means much to me."

The entreaty in his voice forced her to speak.

"Yes," she said in a low tone; but even then he would not let her go.

"Thank God!" he said, and lifted her hand reverently to his lips. "My darling, that is very sweet to hear. Can it then be that I am worth caring for? Ah, Betty, this hope you have given me is the first real happiness that I have ever known. Since my blindness I have lived in a hopelessness that seems even more appalling now that I have had this first brightness to show me what it actually is. But listen, my darling," he added, trying to banish the gloom that had fallen upon him again, "I am going abroad, to a celebrated oculist of whom I have heard, with the faint hope of having my sight restored; and, sweetheart, if the operation proves successful, may I return and claim my little girl?"

Her answer was so low that to catch it he drew her down till her soft cheek touched his own. He felt tears upon it, but said nothing, perhaps guessing the cause; then he released her, lingeringly, that shadow of pain crossing his face again.

"Ah, Betty, Betty," he said with a yearning sadness in his voice, "what would I not give for one glance into your face!"

He covered his eyes with his hand, and sat in silence for a time. Never had the bitterness of that cross been as hard to endure as at that supreme moment of his life, and the future, with its faint possibilities, seemed doubly hopeless to him in his despondency.

"Well," said the little wretch beside him, "I believe, after all, that I am rather glad you can't see it."

Mr. Reese raised his head, smiling at the childishness of the tone.

"Why, you hard-hearted little girl, are you then such a Medusa?"

"No, not quite," said Betty, "but—"

But Arnold opened the door across the hall just then, and she stopped abruptly. He was singing, with much feeling, but little music, the words, "What makes the lamb love Mary so?" etc., to an original tune; but his most bitter foe would never have accused him of any malicious insinuations, for he thought his late victim safely sheltered in the domains of the fair Maggie, and was not a little surprised to see her standing composedly beside their blind boarder, with her sleeves still turned back, and the kitchen-apron covering the shabby brown dress. At his entrance she went quietly away.

The "partings" came. Master and servant went away from the old house, and then Noll went away also. The night before he left, Noll entered Betty's room, where she was seated under the light mending her father's dressing-gown. He sat down beside her, thinking how pale and tired she looked with those dark circles under the patient eyes.

"Must this be done to-night?" he asked, frowning to keep the sympathy out of his eyes. "It's eleven o'clock, Betty."

"Yes, I know it," she said hastily; "but night is the

only time I can sew for father : he won't let me touch it in the daytime."

"It's a shame!" Noll said, and then began gravely : "Sis, I don't want you to think, because I have laughed at you all these weeks, I have not appreciated you, for I certainly have. The fact is, I've been thinking a good deal lately, that a fellow has got to find his ideal of a woman some time in life, sooner or later (the sooner the better), and Betty, I've learned more of the inward purity and beauty of a woman's character, through you, dear, than I'll ever learn anywhere else. When I came home I did not understand you, and I little knew that I should find my ideal of a woman in my Sister Bet ; but so it has proved. I believe I'll be kept straight and upright all my life, through the memory of my pure-minded little sister. Do you know I have often thought that a man needs the actual belief in one true woman linked with the fear of God in his heart, to make him strong and noble."

Betty let her sewing fall into her lap ; her eyes were bright with happy tears.

"O Noll!" she said in a choked voice, "I have longed and hoped and struggled all my life to be an 'ideal woman' to you and Bob, but I had given up the hope, because I felt that it would be impossible, I was so full of faults. And just to think that it has come true, after all! O Noll, this has made me so happy!"

Noll bent and kissed her beautiful radiant face.

"Betty," he said huskily, "don't tell mother, but I got into a terrible scrape at college, and that's the reason I'm home on this 'vacation' now. Dad knows all about it, but he is going to keep 'mum,' and now that the trouble has blown over I'm going back cleared up. Don't lose your grip on me, Betty, whatever you do, for my feet get terribly shaky in temptation, sometimes, and I have needed a prop, I think. You must write to me every week, and give me your photograph so that I shall always be reminded of my 'Betty's beauty.'"

Before she could say a word he had bolted from the room. To one of his proud, reticent nature, that confession had been bitterly hard ; but the next morning he went off as gay as a lark, keeping them all in roars of laughter up to the last moment. Only Betty, as she locked her arms about his neck at parting, saw that quivering of his sensitive lip, and laid her sweet head on his shoulder a moment.

"My Noll will never forget his 'Betty's beauty,'" she whispered, "he will remember that she is keeping herself 'beautiful' for his sake."

"Yes, God helping me," he said, holding her tightly ; and then he was gone.

The year went swiftly by. Good news came from across the ocean : their blind boarder had recovered his sight. His first letter was directed to Betty, and then the child went to her mother and told her all the story,—just as though the wise little mother had not known it all along. Rollicking letters, hopeful letters, came from the college, and strong sisterly ones went back. Betty's beauty grew and softened into womanly graces ; but with the happiness coming to her in the summer, from across the sea, hearts nearer home, craving its possession, were turned adrift.

It was one day late in July, the Leigh family all happened to be out save Betty, and she sat reading in the cool of the sewing-room. She wore a pretty calico gown, lilac in hue, that fitted closely to her figure and was finished off with a tiny edge of white at throat and wrist. The locusts were humming drowsily in the garden, and the odor of flowers drooping in the heat came in through the open window.

Betty heard the door-bell ring, and Maggie's heavy tread going along the hall to answer it. There was a murmur of

voices,—one a man's,—and she heard, "in the sittin'-room," in Maggie's pure brogue. A second later the door of the room in which she was sitting was pushed eagerly open, and Betty rose, a thrill of hope or fear, she knew not which, shooting through her heart.

"Mr. Reese!"

"Betty!"

And then he paused and looked at her. What he saw in that quick glance was a pair of dusky eyes, beautiful in their startled gladness ; dark hair curling in soft rings about the low forehead ; an oval face, faultless in outline, pale in coloring ; and the sweetest, purest mouth that ever graced a woman's face. As he gazed at her he was absolutely amazed at the perfect beauty of her face ; but recovering himself at once, with a stride he reached her and caught both her hands in his.

"Betty! Why, Betty! how perfectly beautiful you are! My love—my dear love—how glad I am to see you!"

It was a fact. He was so glad to see her that he did not know what to say next. But in all his gladness he had not failed to notice that expression of pain crossing her face, and her head drooping to hide the tears filling her eyes. He grew white to the lips, loosening his clasp of her, but not letting her go altogether. What was it? Was she disappointed in him? Was he not the same man to her with his recovered sight? He turned her abruptly to the light, frightened at the tear that splashed down on his hand.

"Speak," he said, trying to steady his voice. "Betty, you do not love me. You have let me live in a false hope all these months. O child, child, why did you not tell me before this?"

But she laid her head on his breast, saying mournfully :

"It's not that—not that : but oh ! try to love me for myself, not what you see in my face,—*don't* say you think I am beautiful. I have lived so long in the hope that your love was for me alone, that I cannot bear to think that you care at all for my looks."

For a moment he was appalled ; then a light broke in upon his mind and he smiled, tightening his arms about her.

"Why, my foolish love," he said, pressing his lips to the head lying upon his breast, "why Betty, child, I loved you for months; and I never even knew how you looked. I longed often and often to know, but I never dared to ask, and no one thought of telling me. Why! have you not realized that I never knew how my little wife would look, until the moment I entered this room?"

At that she raised her head eagerly, a smile breaking through the tears.

"Oh, is that so?" she said joyously. "I am so happy—so very happy! for now I know there must be something in me worth caring about, and that will last always."

And I think that he, too, was satisfied ; for as he looked down into her eyes he saw a certain something shining in their brown depths, that he felt would be there long after the girlish freshness of Betty's beauty had passed from her.

LOUISE D. MITCHELL.

Mens Sibi Conscia.

SHE'S fair, indeed, most fair, and yet I fear,

As to her charm, that something overthrows it ;
Since from her clear, proud eyes 'tis always clear

She always knows it.

HENRY W. AUSTIN.

What Does the Thermometer Say?

HOW frequently does one hear one person complaining of the excessive heat of a room, and another saying, "Do you think so? I do not find it uncomfortably warm." How often do they refer to a little instrument hung up perhaps on one of the walls, which tells them at once whether the heat of the room is greater than it should be or not.

Yet few are aware of the physical laws which enable this little instrument to impart such valuable and trustworthy information to them, and fewer still know how it has been constructed. It is an everyday commonplace thing, useful, cheap, and to them uninteresting. Attention may, perhaps, be drawn to the artistic carved frame in which it lies; but the workaday plain little thermometer comes in only for so much attention as is compelled by occasional discomfort or curiosity. Yet how essential 'is this little thing in one's daily life! By a little attention to this instrument we can contribute to the comforts of our life and prevent illness when well; and how much more is it necessary to have our little friend at hand when ill!

Let us go into a hospital ward and see to what use the instrument is put. The ward, with its lines of clean beds, looks charming, and one feels neither too hot nor too cold. Perhaps there are several cases of typhoid fever in the ward: the little thermometer tells the house physician on his arrival many important facts about his cases, and every one well knows that when the senior physician comes round, one of his first questions in these cases will be, "What is the temperature?" One of the cases is worse, and must have a bath. The bath is ordered, in the language of the thermometer, to be of so many degrees. So you see that the little thermometer, like a good minister or doctor, does its work with equal truth and conscientiousness in whatever circumstances or conditions of life it may happen to be placed; therefore it behooves us all to have some intelligent idea, however slight, of the working ways of things like the thermometer, so useful, so liable to be overlooked.

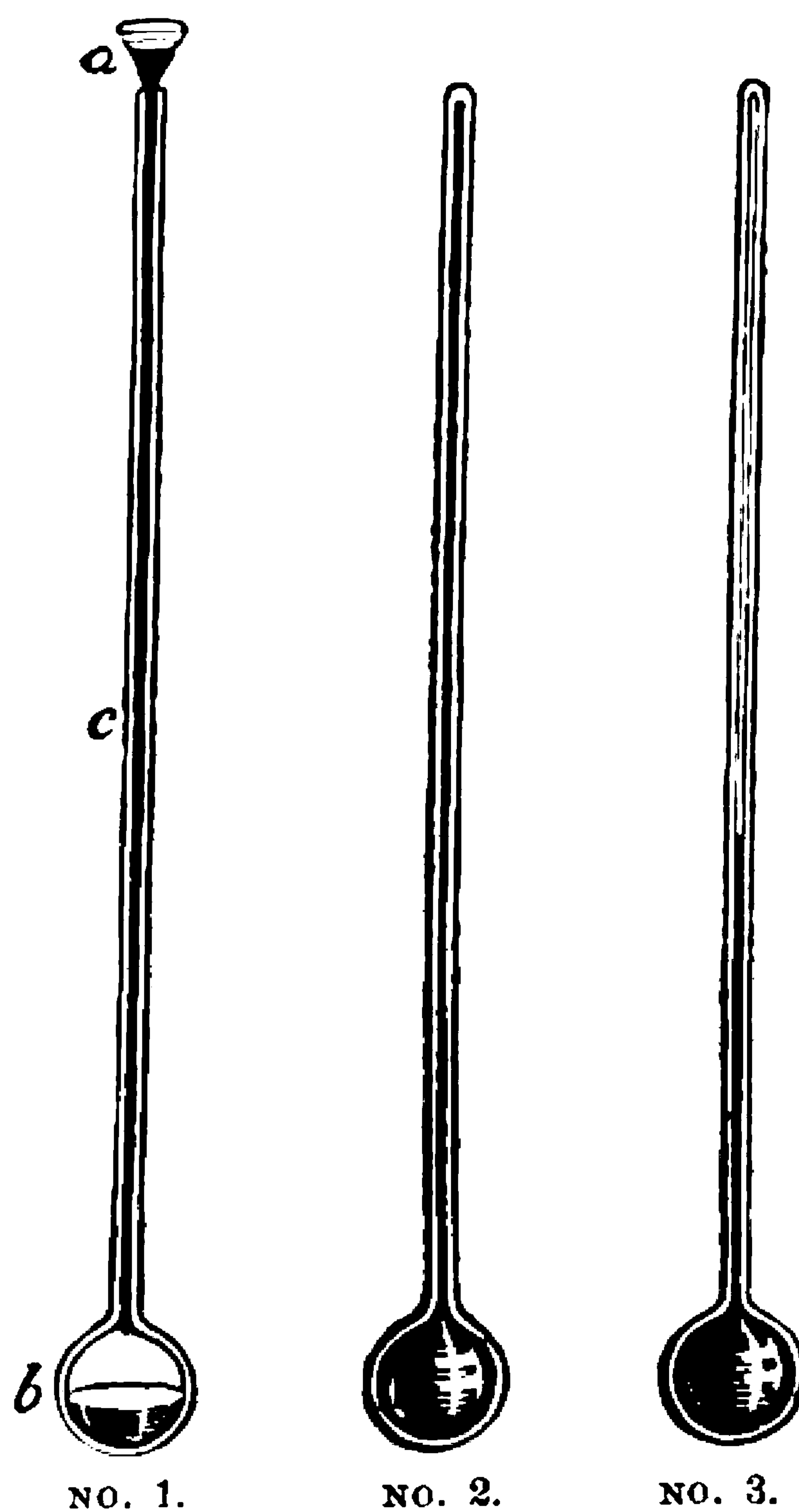
You may say, "Oh, but one can always tell whether a thing is hot or cold by feeling it!" True; but to what degree can you determine it? Let us give you an example. Supposing you took three basins: one having very hot water in it; the second, ice-water; and the third, moderately tepid water. If you placed your right hand in the cold water, and your left hand in the hottest water, and after holding them there some time put both your hands in the tepid water, to the right hand it would feel warm, to your left hand it would feel cold. Which hand are you to believe? Assuredly there is a failing somewhere; and it lies in the fact that you cannot be sure of the previous temperature of your hand before feeling a body. Now the thermometer is not to be deceived in any way by sensation: it will always give the same record for the same degree of heat. And you must not confuse "degree" with "amount" of heat. If you had a large basin full of boiling water and took a cupful away, the cup would contain water of the same "degree" of heat; but there would be very much less heat in the cup as regards "amount."

Inanimate objects are divided into "solids," "liquids," and "gases." The effects of heat on solids are twofold. Bodies are said to be made up of elementary particles called atoms, and roughly these atoms are in the closest proximity in solids, less in liquids, and least of all in gases. The first effect of the application of heat to a solid, such as iron, is to separate its atoms further from one another, and so make it larger. In other words, it expands. If heating be carried

on to a greater degree, the solid becomes liquid, *i. e.*, adopts the shape of any vessel it may be in, having no shape of its own; and lastly, if the heating be carried on still further, the liquid becomes a gas. The *rationale* of the thermometer depends on the expansion of bodies exposed to the varying conditions of heat. You know that when a thermometer encounters a high temperature, the mercury rises in the tube and occupies more space. I dare say that many of you have noticed thermometers which had in them a reddish fluid instead of mercury. This is colored alcohol, and we shall consider the comparative merits of this kind of thermometer with the ordinary mercury one, later on.

I shall now tell you how these thermometers are made. It occurred to scientific men that as certain things expanded under the influence of heat, the amount of expansion might be made to represent the degree of heat applied. Solids change in too slight a degree to lend themselves to purposes of measurement of fine gradations of temperature; gases, on the other hand, are too much affected by variations of temperature to be useful for practical purposes; liquids, however, present the happy mean, and of these mercury is the liquid metal which expands most constantly equally for

equal degrees of heat. How, then, are these little instruments made? I will tell you. A tube, having a fine bore known as a capillary bore, from the Latin *capillus*, a hair, is taken, and at one end of this a small bulb is made by means of a very hot flame; at the other end a funnel is made (No. 1), into this funnel mercury is placed, and the bulb is heated. Some of the heated air rushes out through the mercury, and on cooling, some mercury is forced into the tube to take the place of the air which has escaped. This mercury finds its way into the bulb and is in its turn



heated: it becomes volatile, and the whole tube being full of mercury and mercury vapor, all the air is driven out, and, on cooling, the tube fills with mercury from the funnel. The whole thing is again heated, and whilst hot the funnel is removed, and the upper end of the tube is sealed, presenting the appearance seen in No. 2. On cooling, of course the mercury contracts and leaves above it a perfect vacuum, the tube presenting now the appearance seen in No. 3.

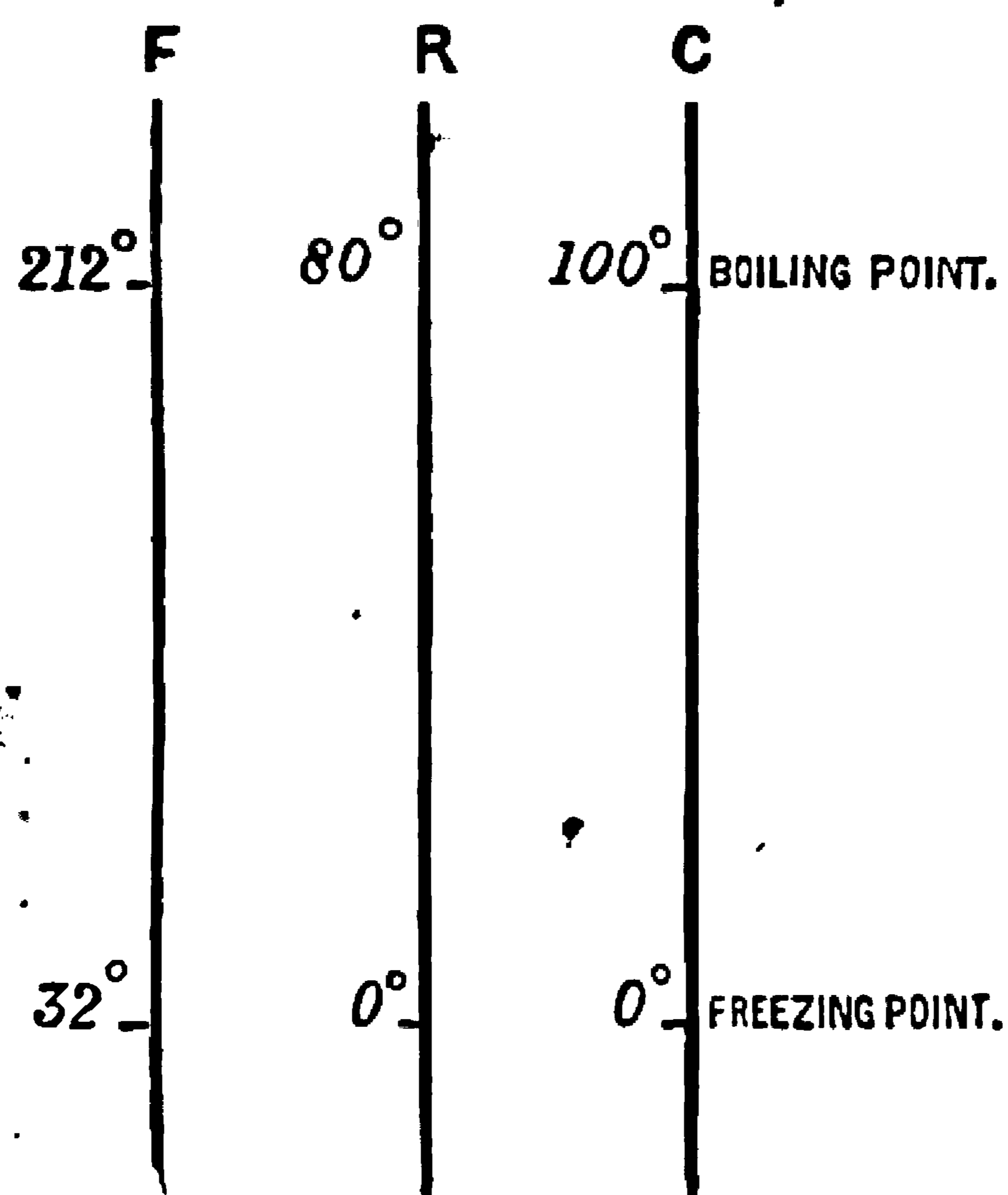
Our thermometer is now made, but we have to graduate it. It has been discovered that the temperature of melting ice is a constant one, that is to say, it is always the same. This temperature is known technically as the "freezing-point." The first thing to be done with our thermometer is to see at what level its freezing-point stands, *i. e.*, how high the mercury rises when the bulb of the thermometer is plunged into melting ice. This point is scratched on the glass with a diamond; but this fact is not enough to have ascertained. It has also been demonstrated that, at a certain pressure of the air, steam given off from boiling water is always of a constant temperature: it is necessary to obtain these conditions to ascertain what is called the "boiling-point" of our thermometer. A special apparatus

is used, which is so devised that the whole of the thermometer as well as the bulb, is enveloped in steam. Of course the mercury rises to a certain height, and this level also is recorded on the glass tube in the same way as the "freezing-point."

Thus we have two fixed points from which to take a start in making our thermometer; but our own sensations are acute enough to distinguish between freezing and boiling in the general acceptance of those terms, so we must subdivide the distance between the freezing and boiling points in our thermometer, and we may do so in various ways.

Many of you may have noticed, on the thermometer at home, that the scale, as it is called, is printed on the frame of the thermometer, and the letter F. is placed at the top or bottom of the scale. This letter F. is distinctive: it is the first letter of the name of the chemist who invented the particular scale to which it is appended. His name was Fahrenheit. Fahrenheit found that he could artificially produce a much greater cold than that of melting ice, by means of a mixture of salt and snow. He therefore called the temperature of melting ice 32° , and that of snow and salt 0° , or zero. Boiling point on Fahrenheit's scale is 212° , so that between freezing-point and boiling-point on Fahrenheit's scale there are 180 degrees, or as it is written, 180° . This measurement of temperature is the one most in vogue in our own country; but amongst scientific men, and in most European countries, another scale is in use: this is the scale of Celsius, and is generally known as the "Centigrade" scale, from the following facts. Boiling-point and freezing-point are ascertained as already described, and freezing-point is called 0° , or zero, and boiling-point 100° ; and the distance between 0° and 100° is equally divided into a hundred parts, each of which is called a degree centigrade.

Although these two scales of measurement are best known, there is another which you will see in those little ornamental thermometers which the German-Swiss make, and which is the scale used in Russia and Sweden; this is the scale of Réaumur. In this, as in the centigrade, or Celsius, scale, the freezing-point is 0° , but the distance from freezing to boiling-point is only divided into eighty equal parts, so that boiling-point Réaumur is 80° . A glance at No. 4 will show at once the relation of the three scales to each other.



NO. 4.

The thermometers which are made with a red fluid instead of metallic mercury, are made with alcohol instead of mercury, and the alcohol is colored with cochineal or carmine, sometimes with Prussian blue. The method of making these thermometers is similar to that employed in those prepared with mercury, but they have a rather different character, which it is worth while for me to mention. Mercury at certain very low temperatures freezes, and therefore ceases to be of any service in recording low temperatures; alcohol has never been frozen yet, and therefore is of use in this way. Alcohol, however, boils at a lower temperature than water, and becomes a vapor; it cannot, therefore, be used for such high temperatures as mercury.

The old-fashioned thermometers were made with a small

spherical bulb; these, however, are not the best in shape, and the bulbs are made larger and thinner, thus giving a larger surface of exposure. Of such shape are the clinical thermometers used by physicians, which register from about 95° Fahrenheit to 113° Fahrenheit.

One often sees in a room the thermometer hung up against a wall. To do this is, strictly speaking, wrong; for if the wall communicates with the outside, and it be a northern wall, the temperature on that wall will be lower than the temperature in the rest of the room. The proper way is to suspend the thermometer in the middle of the room, where it is free of any object likely to affect its temperature.

Similarly, a thermometer intended to take the temperature of the outer air is often placed outside a window, with the hot sun shining on it. The thermometer, of course, registers much too high a temperature: it should be suspended in the open air, and in the shade.

And now I hope that many of you know more about thermometers than you did, and can feel when you see one, "I know how you are made," "I know how you act." The little friend is, I hope, no longer a mystery to you, but a thing of familiar interest.

W. LAWRENCE LISTON.

An Uninvited Guest.

MISS BETTY PERKINS took a long but rather unsatisfactory look out between the immovable slats of her kitchen blinds.

"Deary me!" she exclaimed, after a vain attempt to extend her field of vision, "I should think anybody with a mite of sense would know better than to make blinds this way. You might as well try to see through the side of the house!"—which was an exaggeration, but some allowance must be made for Miss Betty's mental state.

She had by nature an inquiring mind, and took, at all times, a kind and friendly interest in her neighbors' doings; but on this particular morning her opposite neighbor, Mrs. Blake, had had her parlor windows open at a very early hour, and had been plainly visible shaking rugs in the back yard before breakfast. When Miss Betty shook the crumbs from her tablecloth she had seen a black silk duster waving vigorously from one of the same parlor windows, and now, in the middle of a warm July morning, smoke was coming from Mrs. Blake's kitchen chimney. Truly, Miss Betty might say with the Mikado, "Here's a state of things!"

"You needn't tell me," said Miss Betty, apostrophizing her sitting-room lamp as she examined its wick, "that Melissy Blake's dishes ain't washed at this time of day and that's what the fire's for. No, it's comp'ny, that's what it is; and I wonder who they be. I was in there yesterday afternoon and she never breathed a breath about it; but then Melissy allers was close-mouthed. If 'tisn't own folks, and I believe hers all live up Worcester way, it's pretty funny I wasn't asked, near neighbor as I be. Well, folks is queer."

Her first plan was to go over to Mrs. Blake's and find out what she could about the expected guests. She could at least see what preparations were in progress for their entertainment, which would be something. "I'm 'most out of yeast and could borrow a cupful," she thought, searching her mind for an errand. But on reflection this course hardly seemed advisable, for Mrs. Blake was noted for her skill in keeping her affairs to herself. "Likely's not I shouldn't know a bit more when I come home than I do

now," was Miss Perkins' second thought. "No, I won't go. I'll have an early dinner and see who comes."

Accordingly, at half-past eleven she brought out her tiny teapot and sliced her potatoes for frying, and two hours later, dressed in her second-best black dress, and with her knitting ready, she seated herself at her sitting-room window. The sun had traveled away from that side of the house now, so Miss Betty was screened from the public gaze by one half-blind, while the other was comfortably fastened back out of the way. Capt. Blake on his return from one of his long foreign voyages had found time to plant a row of young maples across the front of his place, and they were now vigorous young trees; but Miss Betty's window was so far in the angle that she could see the front walk and door and one of the parlor windows.

Dalton hours were early, and before three o'clock the first guest came in sight. "Miss Cap'n Swain," announced Miss Betty, half-aloud. "Straight as a ramrod, as usual. I believe she's grown an inch or two taller since Cap'n Swain left off whaling and began to go foreign voyages; but law! what have we poor, perishing creatures to be proud of? I wonder if that's a new dress, now." She unconsciously leaned so far forward in the attempt to settle this important point that Mrs. Swain saw her and bowed, which caused Miss Perkins to retire in great confusion; but she came to the front again in time to scrutinize the next arrivals.

"Dr. Kennedy's wife," said she, "and smiling, of course. I never saw her sober, even at a funeral. For my part, I think it makes folks look simple to be always a-laughing. Who's that with her? I never saw her before. Now I shouldn't wonder if it was Mis' Kennedy's sister, the missionary woman. I heard she was coming. How sin'gler 'tis that women want to go gadding about in that way."

There was such a long interval before any other guest appeared that Miss Betty had just made up her mind that the party numbered three, when Mrs. Randall, the minister's wife, hurried in at the opposite gate. Miss Betty's hard face softened a little at the sight of her, and for once she had no sharp or unkind word to say. Little Mrs. Randall was hardly ever quite in time: she was apt to come in flushed and breathless, but so sorry for her tardiness, and so sweet and lovable withal, that every one made excuses for her.

Mrs. Blake's parlor was full of pleasant talk that bright summer afternoon. "I saw Miss Perkins at her window, as I came in," said Mrs. Swain.

"I don't doubt it," answered her hostess. "Poor soul! It seems hard not to ask her, too; but I thought you might not care to tell how much your dresses cost, how much Dr. Kennedy's fees amounted to last month, and what the minister is going to preach to us about next Sunday."

The ladies laughed, and the conversation turned on Miss Plummer's work and adventures. She had been in Mexico and in the northwest, and had so much to tell that when the great hall clock struck five Mrs. Blake was quite surprised, and she went out in a hurry to begin her preparations for supper. The house was an old-fashioned one, with the side door opening directly into the kitchen, and the only means of access to the cellar by a trap-door in the kitchen floor, and the steepest possible stairs.

Mrs. Blake started a crackling wood fire, opened the outer door for coolness, and swung back the door of the trap, which was of such generous proportions that the corner of the tea-table was on the verge, and the doorway in close proximity; but Mrs. Blake was used to her house, and she made up her biscuits and ran up and down the break-neck stairs, without even a sigh for modern conveniences.

She was justly proud of her table when it was ready. The cloth had been brought by her husband from what the neighbors called "foreign parts," and the china had been her

mother's. The egg-shell cups and delicate plates were very pretty, and how nice the thin slices of ham looked, and the great dish of red and white currants! The fruit-cake was as dark and rich and indigestible as need be, and the pound-cake!—nobody but Mrs. Blake knew the secret of that. She went back into the parlor for five minutes while the biscuits got their last touch of brown and the tea one more simmer, leaving the trap-door open to remind her that the cream and the butter were yet in the cool depths of the cellar.

Meanwhile it had been a long afternoon to Miss Betty. She could catch the sound of voices from across the way occasionally, and the desire to know what they were so merry over grew stronger every minute, till at last a brilliant idea came into her head. There was that yeast that she,—yes, really needed: she would go now and borrow it. She would go in at the side-door, and if Mrs. Blake had company, how should she know it when she was not invited?

So she put on her bonnet and mitts, took her green silk parasol, for the sun was still high, and carrying a cup for the yeast, crossed the street valiantly. Mrs. Randall had left the gate open, so she entered without any click of announcement, and, as it happened, all the ladies were looking at some pictures and did not see Miss Betty at all.

She glanced in at the open side-door, but the kitchen was dark, and looking in from the outside she could see nothing. She stepped on the door-sill and struggled with her parasol, which declined to shut. Setting her cup down she pushed harder, but still it did not yield. To bring her muscles into better play she stepped back a pace or two,—and went down the open trap! In falling she clutched wildly at the nearest object, which happened to be the corner of the tablecloth. There was not much staying power about the damask, and it went down with her,—with all its load.

Mrs. Blake was just expressing polite regrets about the absent husbands, when a sudden and awful crash drowned her voice and drew them all to the kitchen. What a sight was there, my countrymen! The table, which had been such a thing of beauty a few minutes before, now stood bare and desolate: the cloth draped the cellar stairs, currants had rolled to the farthest corners, and bits of cake were still hopping from stair to stair, and in the center of the cellar floor was Miss Betty Perkins, with her parasol still spread over her head, standing erect in a tub of soft soap, unhurt, but considerably crestfallen, and a prey to such varied emotions that her face was void of expression as a blank wall.

The amazed spectators looked at this scene and at each other, and then broke into a laugh in which even Mrs. Blake joined, although her supper and her cherished china lay in a common ruin, and the air was full of the aroma of burning biscuits and boiling tea. Miss Betty looked up and smiled feebly.

"How—how do you do?" she stammered. "I came to borrow a cupful of comp'ny. I'd no idee you had any yeast, or I'd have come to-morrer."

At this added touch of absurdity the laughter was so prolonged that Miss Betty looked up at last, in some indignation. But whom did she see among the laughers! The minister himself, who, having knocked unheard, had admitted himself and joined the group in the kitchen, and was now laughing with the rest. This was the proverbial last straw, and Miss Perkins sank under it. One wild struggle to free herself from the clinging soap, a consequent loss of equilibrium, and she sat down in the tub and was completely extinguished by her green umbrella.

"Now, Mrs. Randall," said Mrs. Kennedy, as soon as speech was possible, "you and Mr. Randall and Mrs. Swain just go into the parlor for a little while, and Anna and I will help clear up here; but, Melissa," she added, "do ask the town next time, and not leave anybody to come borrowing company."

ANNIE I. HANDY.

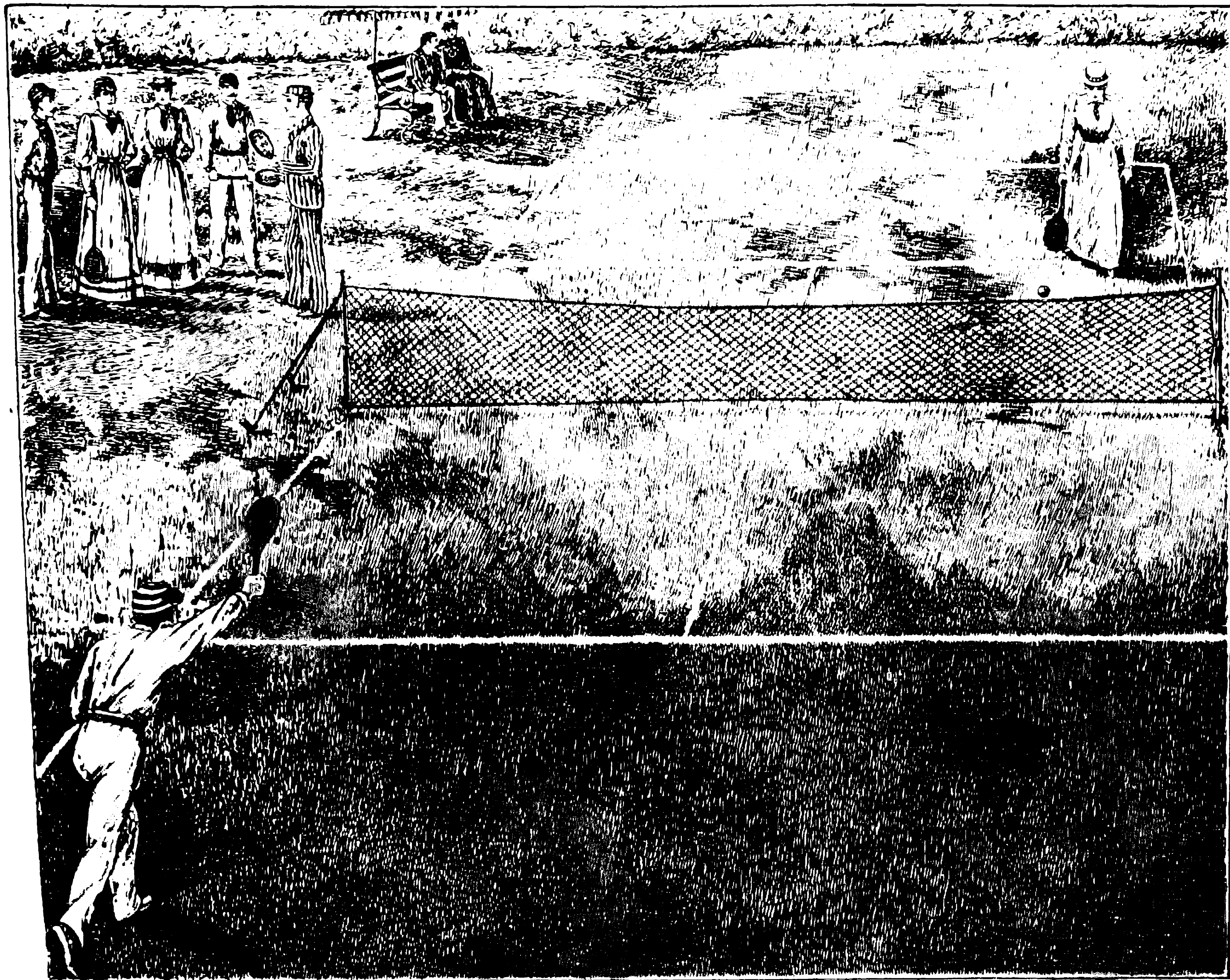
Summer Outdoor Games.

LAWN TENNIS, BADMINTON, COLORS.

LAWN tennis, as a game, has the great advantage of being free from gambling and rough professionalism; as a sport, it affords, to an almost incomparable extent, all that an ideal recreation calls for, that is, fine physical exercise, and sufficient interest and excitement to divert the mind entirely from its usual channels of thought without taxing the brain power.

The present great popularity of lawn tennis is no doubt owing to its simplicity, inexpensiveness, and the excellent exercise it affords for all parts of the body. The original

It is not easy to predict the future of lawn tennis, but it is likely that any changes will be in the manner of playing, rather than in the material, which is of the simplest, as tennis is merely a ball game played with rackets. To an uninitiated observer the game of tennis looks like an aimless tossing of the ball back and forth over the net; but the real object of the game is to strike the ball in such a way that it will fall into an opponent's court so that it cannot be returned. As a game for women it is unequalled, as it differs from other athletic games in that it may be played violently or gently, quite at the option of the contestants; and while it is not a "ladies' game," as some sarcastic people have said, it is a splendid game in all respects for ladies.



LAWN TENNIS. THE START IN A TWO-HANDED GAME.

game of tennis was the pastime of royalty; and although the modern game is simple and fascinating, it still retains a flavor of aristocratic elegance.

Lawn tennis has been greatly developed and improved since it was first played in the summer of 1875 at Newport, which has since been the scene of many memorable tournaments. Lawn-tennis clubs have sprung up all over the country since then, and in 1881 the "United States National Lawn-Tennis Association" was organized at the Fifth Avenue Hotel in New York City, an organization whose power and authority are recognized throughout the country wherever the game is played. The association makes, revises, and interprets the rules for playing, following the English rules except in a few instances where it is evident that a change will improve the game.

Lawn tennis is easy to play, yet the skilled player never reaches a point beyond which accomplishment cannot increase: there is always a possibility of improvement in one's play.

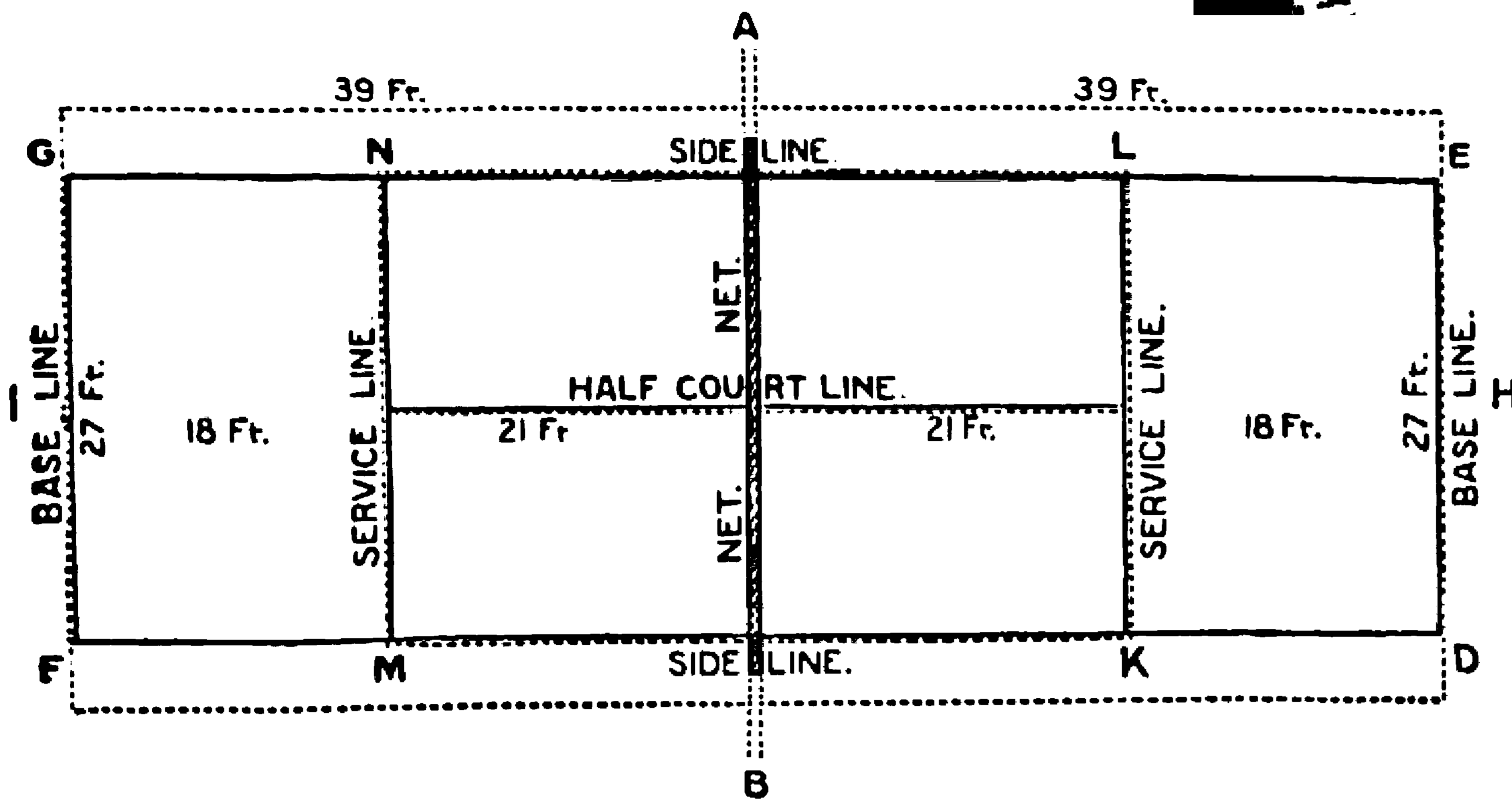
But we are supposing that you have no knowledge of the game or its equipments. These, as well as the rules for playing, are all specified below.

LAWS OF LAWN TENNIS,

As adopted, revised, and amended by the United States National Lawn-Tennis Association, at Annual Conventions, 1881-91.

THE COURT.

1. The court is 78 feet long and 27 feet wide. It is divided across the middle by a net, the ends of which are attached to two posts, A and B, standing 3 feet outside of the court on either side.



SINGLE AND DOUBLE LAWN-TENNIS COURTS.

The height of the net is 3 feet 7 inches at the posts, and 3 feet at the middle. At each end of the court, parallel with the net, and 39 feet from it, are drawn the base lines DE and FG, the ends of which are connected by the side lines DF and EG. Half-way between the side lines, and parallel with them, is drawn the half-court line IH, dividing the space on each side of the net into two equal parts, the right and left courts. On each side of the net, at a distance of 21 feet from it, and parallel with it, are drawn the service lines KL and MN.

THE BALLS.

2. The balls shall measure not less than $2\frac{1}{2}$ inches, nor more than $2\frac{1}{4}$ inches in diameter; and shall weigh not less than $1\frac{1}{2}$ ounces, nor more than two ounces.

THE GAME.

3. The choice of sides and the right to serve in the first game shall be decided by toss; provided that if the winner of the toss choose the right to serve, the other player shall have choice of sides, and *vice versa*. If one player choose the court, the other may elect not to serve.

4. The players shall stand on opposite sides of the net; the player who first delivers the ball shall be called the server, and the other the striker-out.

5. At the end of the first game the striker-out shall become server, and the server shall become striker-out; and so on alternately in all the subsequent games of the set, or series of sets.

6. The server shall serve with one foot on the base line or perpendicularly above said line, and with the other foot behind said line, but not necessarily upon the ground. He shall deliver the service from the right to left courts, alternately, beginning from the right.

7. The ball served must drop between the service line, half-court line, and side line of the court, diagonally opposite to that from which it was served.

8. It is a fault if the server fails to strike the ball, or if the ball served drops in the net, or beyond the service line, or out of court, or in the wrong court; or if the server does not stand as directed by law 6.

9. A fault cannot be taken. (That is, the ball cannot be returned.)

10. After a fault the server shall serve again from the same court from which he served that fault, unless it was a fault because he served from the wrong court.

11. A fault cannot be claimed after the next service is delivered.

12. The server shall not serve till the striker-out is ready. If the latter attempts to return the service he shall be deemed ready.

13. A service or fault delivered when the striker-out is not ready, counts for nothing.

14. The service shall not be volleyed, *i. e.*, taken, before it has touched the ground.

15. A ball is in play on leaving the server's racket, except as provided for in law 8.

16. It is a good return, although the ball touches the net; but a service, otherwise good, which touches the net, shall count for nothing.

17. The server wins a stroke if the striker-out volleys the ser-

vice, or if he fails to return the service or the ball in play; or if he returns the service or the ball in play so that it drops outside of his opponent's court; or if he otherwise loses a stroke, as provided by law 20.

18. The striker-out wins a stroke if the server serves two consecutive faults; or if he fails to return the ball in play; or if he returns the ball in play so that it drops outside of his opponent's court; or if he otherwise loses a stroke, as provided by law 20.

19. A ball falling on a line is regarded as falling in the court bounded by that line.

20. Either player loses a stroke if the ball touches him, or anything that he wears or carries, except his racket in the act of striking; or if he touches the ball with his racket more than once; or if he touches the net or any of its supports while the ball is in play; or if he volleys the ball before it has passed the net.

21. In case a player is obstructed by any accident not within his control, the ball shall be considered a "let." But where a permanent fixture of the court is the cause of the accident the point shall be counted. The benches and chairs placed around the court shall be considered permanent fixtures. If, however, a ball in play strikes a permanent fixture of the court (other than the net or posts) before it touches the ground, the point is lost; if after it has touched the ground, the point shall be counted.

22. On either player winning his first stroke, the score is called 15 for that player; on either player winning his second stroke, the score is called 30 for that player; on either player winning his third stroke, the score is called 40 for that player; and the fourth stroke won by either player is scored game for that player, except as below: If both players have won three strokes, the score is called "deuce;" and the next stroke won by either player is scored "advantage" for that player. If the same player wins the next stroke, he wins the game; if he loses the next stroke, the score returns to deuce; and so on until one player wins the two strokes immediately following the score of deuce, when game is scored for that player.

23. The player who first wins six games, wins the set, except as below: If both players win five games, the score is called "games all;" and the next game won by either player is scored "advantage game" for that player. If the same player wins the next game, he wins the set; if he loses the next game, the score returns to games all; and so on until either player wins the two games immediately following the score of games all, when he wins the set. But the committee having charge of any tournament may, in their discretion, modify this rule by the omission of advantage sets.

24. The players shall change sides at the end of every set, but the umpire, on appeal from either player before the toss for choice, shall direct the players to change sides at the first, third, fifth, and every succeeding alternate game of each set, if, in his opinion, either side have a distinct advantage, owing to the sun, wind, or other cause; but if the appeal be made after the toss for choice, the umpire can only direct the players to change sides at the end of the first, third, fifth, and every succeeding alternate game of the odd or deciding set. If the players change courts in the alternate games throughout the match, as above, they shall play in the first game of each set after the first in the corner in which they respectively did not play in the first game of the set immediately preceding.

25. When a series of sets is played, the player who served in the last game of one set shall be striker-out in the first game of the next.

26. Relates only to tournaments.

27. The above laws shall apply to the three-handed and four-handed games, except as below:

THE THREE-HANDED AND FOUR-HANDED GAMES.

28. For the three-handed and four-handed games the court shall be 36 feet in width, 4 feet inside the side lines, and parallel with them are drawn the service side-lines KM and LN. The service lines are not drawn beyond the point at which they meet the service side-lines, as shown in the diagram.

29. In the three-handed game, the single player shall serve in every alternate game.

30. In the four-handed game, the pair who have the right to serve in the first game shall decide which partner shall do so; and the opposing pair shall decide in like manner for the second game. The partner of the player who served in the first game shall serve in the third, and the partner of the player who served in the second game shall serve in the fourth, and the same order shall be maintained in all the subsequent games of the set.

31. At the beginning of the next set, either partner of the pair which struck out in the last game of the last set may serve; and the same privilege is given to their opponents in second game of the new set.

32. The players shall take the service alternately throughout the game; a player cannot receive a service delivered to his partner; and the order of service and striking-out, once established, shall not be altered, nor shall the striker-out change courts to receive the service, till the end of the set.

33. If a player serve out of his turn, the umpire, as soon as the mistake is discovered, shall direct the player to serve who ought to have served. But all strokes scored before such discovery shall be counted. If a game shall have been completed before such discovery, then the service in the next alternate game shall be delivered by the player who did not serve out of his turn, and so on in regular rotation.

34. It is a fault if the ball served does not drop between the service line, half-court line, and service side-line of the court, diagonally opposite to that from which it was served.

35. It is a fault if the ball served does not drop as provided in law 34, or if it touches the server's partner or anything he wears or carries.

There are a number of other rules relating to tournaments and odds given in handicap games (besides those embodied in some of the foregoing laws), which are not necessary for a knowledge of the game, as at present we are only interested in learning how to play.

The first thing needful is the court. Turf and earth courts are usually liked better than asphalt or wooden courts, which are sometimes built. In the country a well-kept level piece of lawn is the ideal tennis-ground; but a level ground court, well rolled, will do. In laying out the court try to have it run north and south, if possible, with a margin of at least fifteen feet at the ends, and ten at the sides. In making the court measure it out with strings and pegs, and then go over the lines with white paint, slaked lime, whiting, or marble-dust. In using lime or whiting it can be mixed with water to a thin paste, and poured along the lines out of a watering-pot from which the rose has been removed. A simple marker can be made by laying two thin boards, about three feet long, parallel and an inch apart, and nailing across them two narrow strips of wood to hold the boards in position. Lay this on the line, and paint, or sift the white powder between the boards; or if the whiting paste be used pour it between, to make the white lines even. It is customary to lay double and single court lines, and then you are ready for both games.

The net, balls, and rackets can be purchased in a "set" or separately. If economy be an object, the net can be made at home from directions given for the purpose in the department of "Home Art and Home Comfort" in this number of the Magazine. The net may be 27, 36, or 42 feet long. The latter lengths are suitable both for single and double playing. A back or "stop" net, to catch the balls, is sometimes placed at each end of the court, and is a convenience. Two balls are needed; more are desirable. There are plenty of expensive contrivances for tennis, including elaborate court-markers and inlaid rackets; but a neat, symmetrical, and serviceable racket can be had at a moderate price. Curved rackets are all out of date. The average weights for rackets, for men, range from thirteen to fourteen and a half ounces. For women, the range is from eleven and a half to thirteen ounces; twelve is a safe weight.

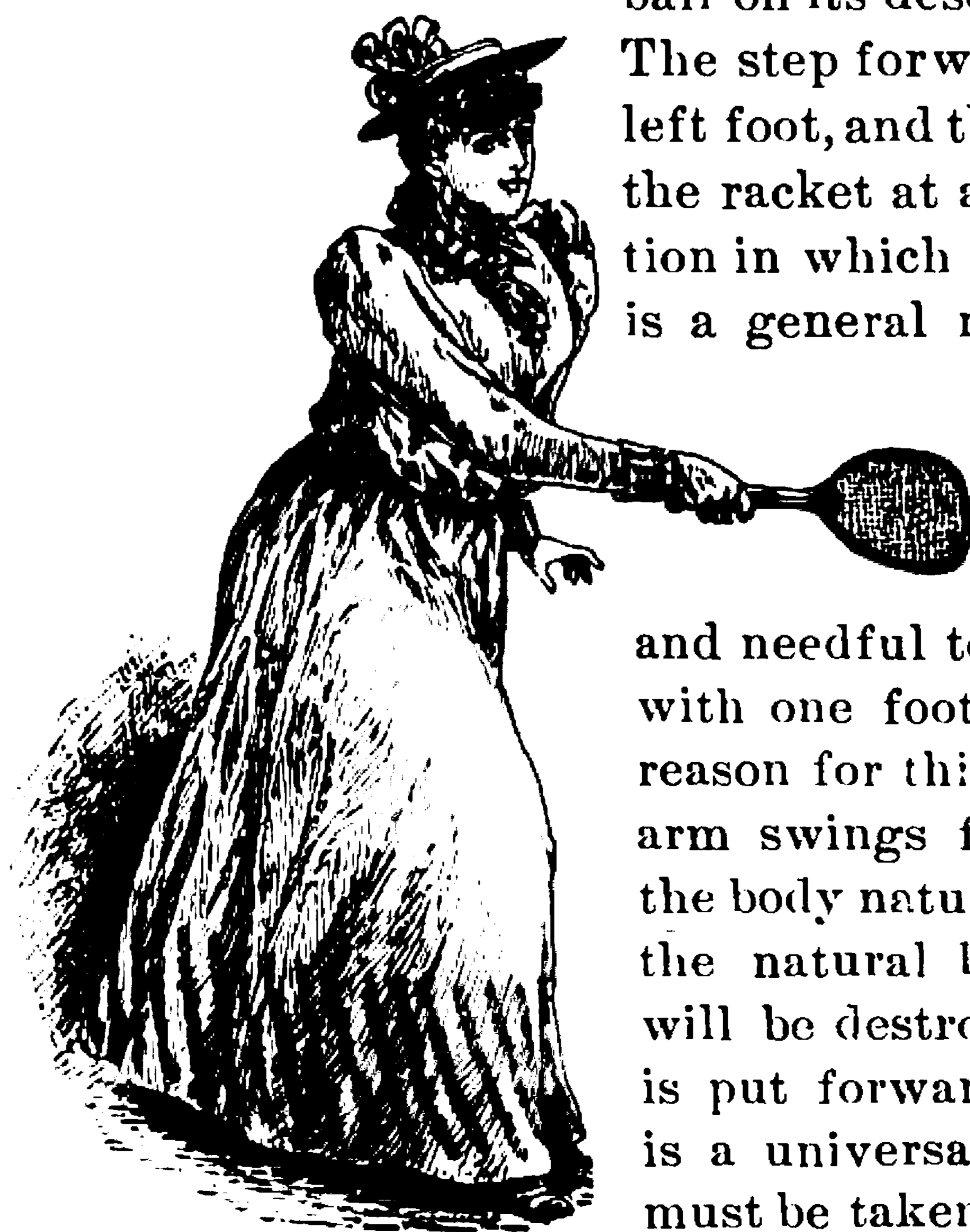
Having selected the racket and conned the laws of the game we can begin to play. The server, standing as directed in rule 6, begins hostilities by the service. There are several methods of service; but the overhand service, as illustrated in the gentleman's figure, is the one most commonly used. Assuming that the player is right-handed, he will use the racket with that hand, standing with the right foot on the base line and the other back of it. The ball then should be thrown from the left hand, into the air, in the direction of the net, but only to a distance from the body about the length of the fore-arm and hand. At the same time that the ball is thrown, the racket must be raised in the right hand and swung back until the head of the racket is about opposite the middle of the back. Immediately the racket must be swung upward, describing an arc, until it meets the ball. As the ball is struck and the racket descends in a swift service, such as illustrated, the body will almost surely fall unless the left foot is carried forward to save it, as shown in the illustration which gives the player's position after the ball has left the racket and sped over the net into the service-court diagonally opposite to the server.

There are other methods of service which are liked and can be practiced, the object in all cases being to get the ball over the net and so as to drop into the adversary's service-court. In the overhand service, every inch higher that you reach greatly increases your chance of putting the ball into the proper court. If your adversary cannot return the ball, you have made a point. But the chances are that, if you have made a good service, the ball will be returned, and if you cannot send it back again over the net, your adversary will have scored a point and you must serve again. The motion of the racket used in the ordinary fore-hand stroke can be used in serving, and frequently is; but fine players seldom make use of it.

The stroke made by all players after the service-ball has been returned by the "striker-out," while the ball is in play (that is, before it finally drops in one court, without being returned, and has to be served again), may be either a "ground stroke" or a "volley." The volley is a return of the ball "on the fly," or before it touches the ground; and the ground stroke is any return from one bound of the ball. No volleying is allowed on the service-ball. The lady player who is illustrated in the view of the game is in a position to make the ground stroke: she has run up from the back court and is about to make a fore-hand stroke. To make this stroke (which is the most ordinary stroke) the player should be at such a distance back from the point where the ball strikes the ground that the racket will meet the

ball on its descent from the bound. The step forward is made with the left foot, and the illustration shows the racket at about the exact position in which it meets the ball. It is a general rule that no stroke should be made with both feet close together: in every case it is usual

and needful to take a step forward with one foot or the other. The reason for this is obvious: As the arm swings forward in a stroke, the body naturally accompanies it; the natural balance of the body will be destroyed unless one foot is put forward to save it, and it is a universal rule that the step must be taken with the foot which is furthest from the racket.



BACK-HAND STROKE.

The racket should be grasped at the end of the handle, the arm swinging easily and freely from the shoulder, if possible. Some ladies cannot manage the shoulder movement and must exert more wrist-power. A back-hand stroke is any stroke in which the racket meets the ball with the back of the hand turned forward. A "cut" is when the racket meets the ball at a greater angle than the right angle. The ball can also be "lobbed," which is simply hitting it lightly from below with a fore-hand stroke, and is the easiest and most graceful way for a novice to manage it. The service and return can both be made in this way, remembering the

BADMINTON.

The game of badminton is a charming sport, somewhat resembling tennis, although the materials used are different. It is so called because the first game as now seen was played at the Duke of Beaufort's country-seat, Badminton. The game can be played outdoors or indoors, the dimensions of the court being governed by the amount of space at disposal, and marked off into right and left service-court, as for tennis. A court twenty-eight feet long and twenty feet broad does nicely ; but one-third the size of a



BADMINTON.

object of the game, which is simply to drop the ball over the net into the opponent's court so that it cannot be returned. In the choice of courts and service a racket is tossed up, one party choosing "rough," the other "smooth," referring to the stringing of the gut : whichever side of the racket comes uppermost determines the choice.

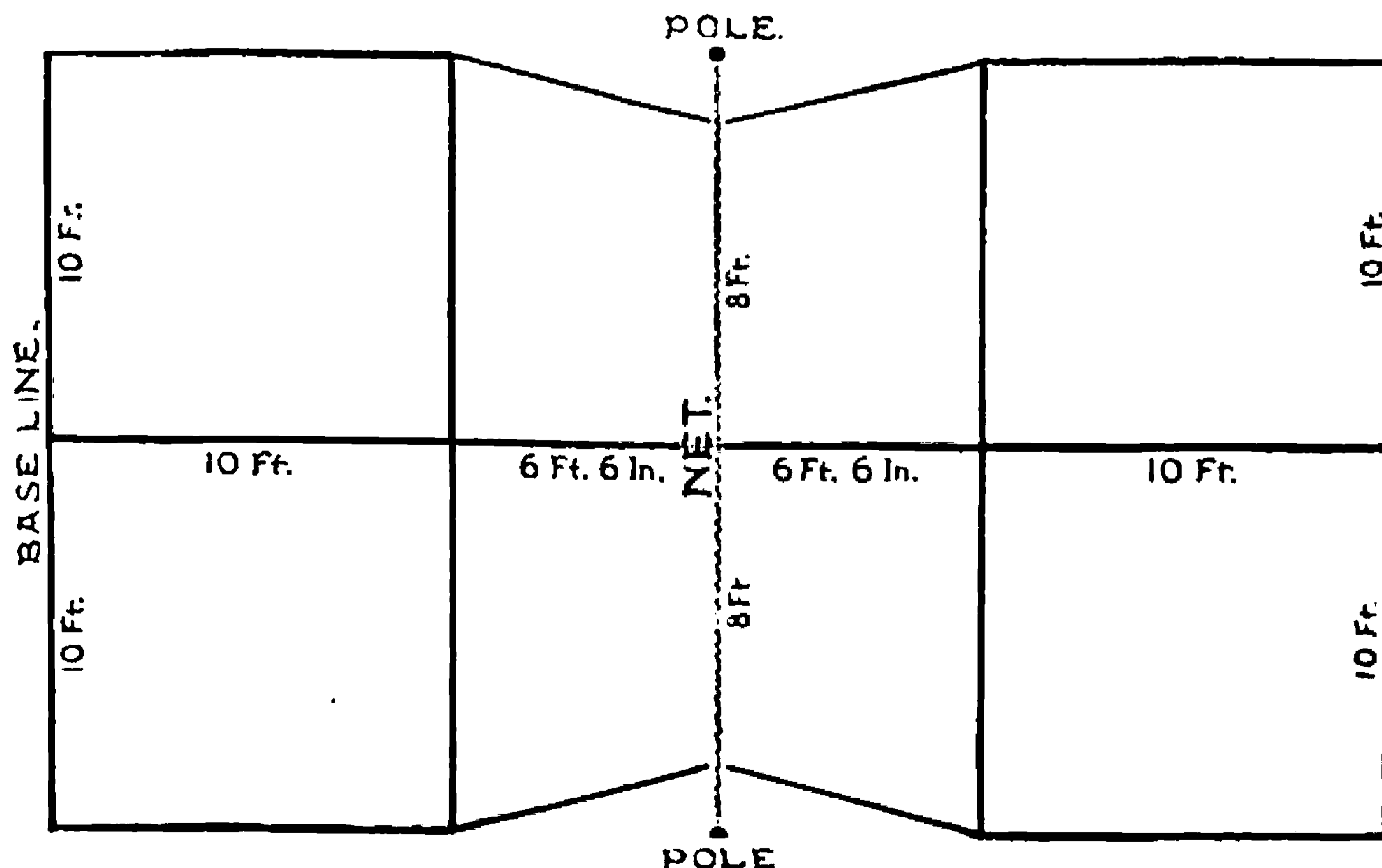
In calling the score the server's score is always mentioned first ; as, "fifteen-thirty," which means that the server has won "fifteen" (one point), and his opponent "thirty" (two points). "Love" means "nothing ;" as, "forty love" signifies server forty, opponent nothing ; "love thirty" means server nothing, opponent thirty.

"Vantage-in" means advantage to the server ; "vantage-out" means that the striker-out has scored advantage. An ace is a point won. In ordinary playing it is the scorer's duty to call the score. "All" means that the score is equal ; as, "fifteen all" means both sides have scored fifteen. In playing a four-handed game both partners should play as a unit, one covering whatever part of the court the other leaves exposed.

double tennis-court will do. As for tennis, lines must be used in marking the court lines.

The rackets used are of a very light tennis pattern, and the net should be from two feet to two feet six inches deep, hung from a distance of six feet above the surface of the ground, on long poles. Instead of balls, shuttlecocks, or "birds," as they are technically called, are used. For outdoor playing the "bird" is loaded to weigh an ounce and three-quarters, and the cork body is covered with rubber. If shuttlecocks cannot readily be obtained, they can be made at home. Procure large corks,—about an inch and a half in

diameter and two inches long,—and for each shuttlecock cut a half-oval about the size of the larger part of an egg. Load with small leaden weights, for which a well will have to be cut in the wide end of the cork. Cover the end with a flat piece of cork, and tie securely with fine twine. Then insert from seventeen to twenty-four goose-feathers around the larger end of the cork, in small grooves which must be cut in regularly, and tie them fast

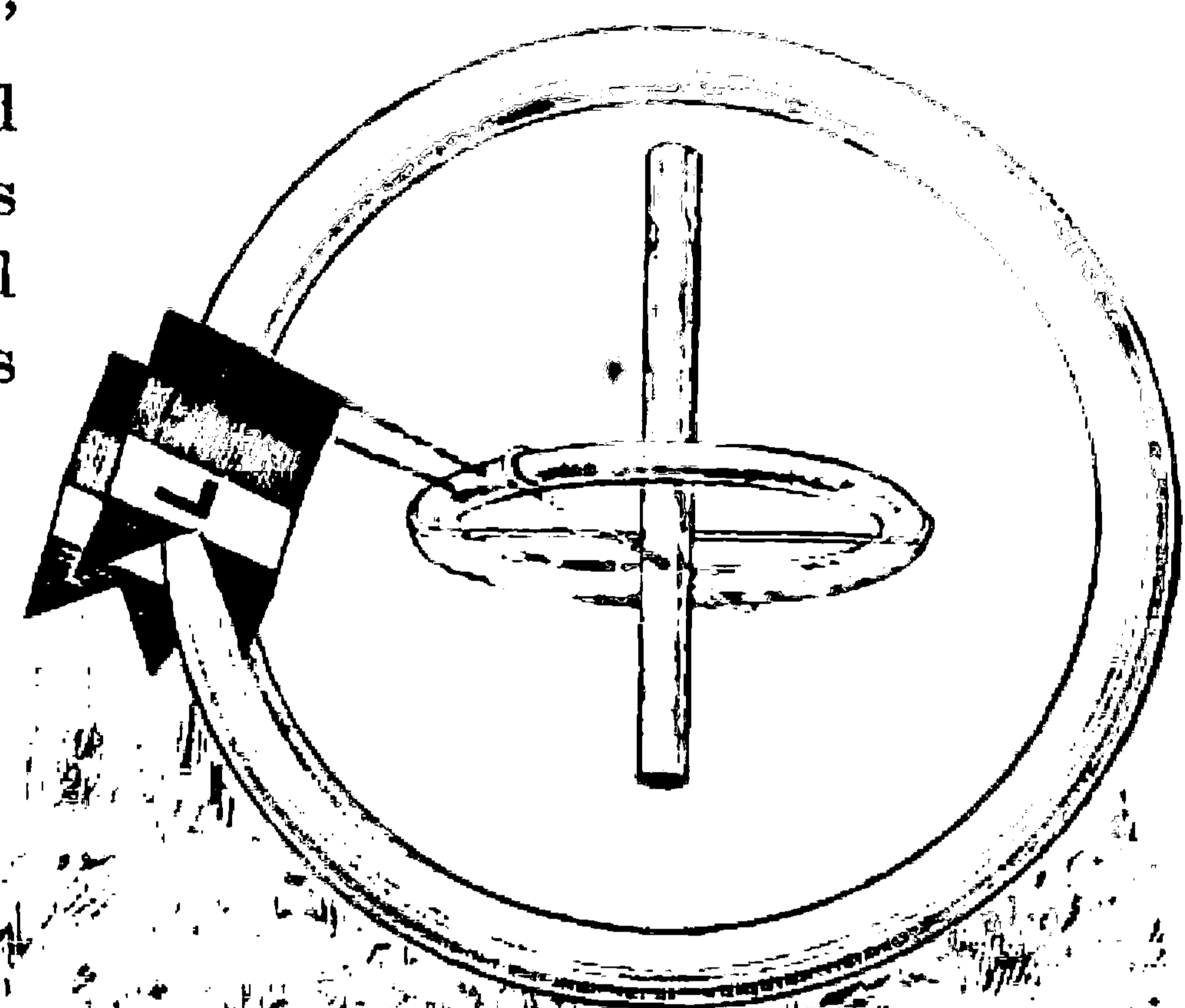


BADMINTON COURT.

with sewing-silk, winding it around tightly a great many times. To cover the shuttlecock with rubber, a hollow rubber ball can have a portion cut off so that it will fit on over the loaded cork and "draw" around the top sufficiently to keep it in place. The shuttlecock may be large or small, as the players desire.

The game is played like lawn-tennis, with the exception that from one to four players may play on a side, and that the

vice, and the shuttlecock falls over, the stroke is considered as a "let," and does not count "a fault" against the persons serving. In play, however, the touching of the net, so long as the "bird" falls over, is counted a stroke. If the net is touched or reached over by the player's



"COLORS."

shuttlecock must be returned on the volley, or without touching the ground. The "bird" is served and returned under the same provisions, except that if it falls to the ground it is counted a miss to that player and to the side on which it falls. The service must be from the "service corner," *i. e.*, the back corner of the service court, either at the right or left hand, as the server is serving from right or left, and

not, as in tennis, at the base line of the back court: and both server and receiver must stand in diagonally opposite courts, until the shuttlecock has been struck. The divisions of the respective courts are only observed in the serve, or first hit; and after it the players can stand where they please on their own sides. The "bird" must be served to clear the net and fall, without touching ropes or posts, into the court diagonally opposite the server, beyond the service line. If the net is touched in ser-

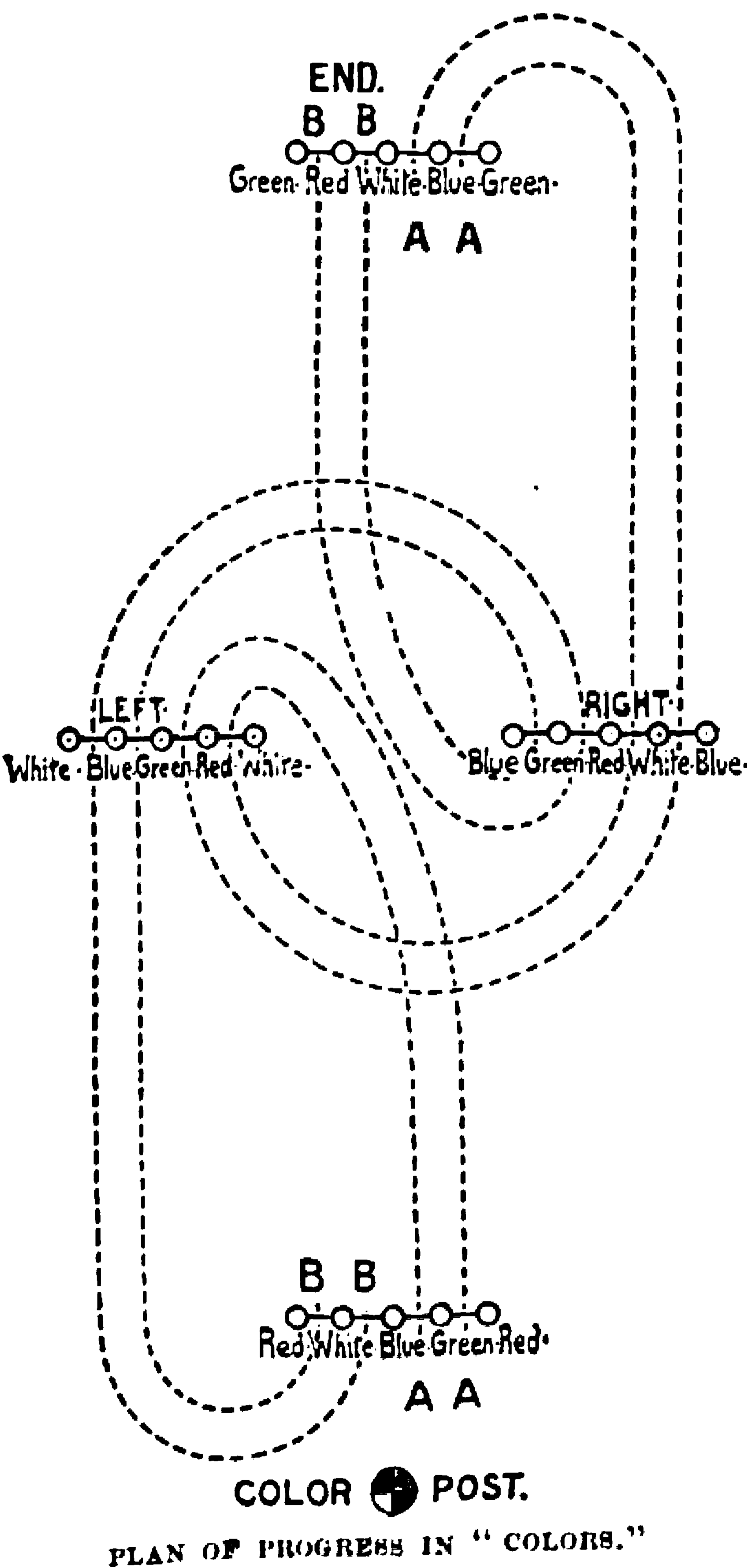
racket, the stroke counts against him. Two "faults" put the hand "out." In all cases a shuttlecock falling on any of the boundary lines is held to have fallen in the court of which such line is a boundary, both in service and play. Fifteen points constitute the game, and in service no overhand stroke is permitted. The shuttlecock is judged by where it strikes, and not by where it is after rolling or bounding.

Badminton can also be played with a soft ball, as well as a shuttlecock, and it is perhaps better in windy weather, as the feathers of the shuttlecock are easily caught by the wind. Of course many modifications can at pleasure be introduced in order to improve the game.

COLORS.

A game especially suited for garden parties and outdoor gatherings is the new game of "Colors," invented by Mrs. Constance Amelia Hartshorne, of England, and introduced by her. It is certain that lawn parties and similar entertainments owe a great portion of their success to croquet and lawn tennis; but croquet no longer possesses the uncertain charm of novelty for some, and lawn tennis constitutes an exercise, more or less violent, which is not adapted to all ages and temperaments. The new game of colors, however, is adapted to the amusement of everyone, whether able to take violent exercise or not. It is easy enough to be played without practice or acquired dexterity, and requires very little more than presence of mind and a quick eye, yet affords a sufficient variety of incidents to be amusing and interesting.

It can be played on any outdoor space, lawn or court, level or sloping, and is a delightful amusement for a hostess to offer to guests whom she has invited to a garden party. The dimensions of the space on which the game is to be played are not material, the most convenient size for the game being sixty feet long by thirty-six feet wide; but a much smaller ground does not affect the game.



PLAN OF PROGRESS IN "COLORS."

The apparatus of the game is simple, and anyone living where it cannot be procured can have it made, or make it, if so desiring, at an inconsiderable expense.

For the game, in which four or eight persons may take part, the following articles will be necessary: Four sets of five posts, each three feet and six inches high above the ground, with a platform, or ring, eight inches from the top, to receive the rings with which the game is played; the posts are painted, respectively, red, white, blue, and green, and each set begins and ends with a post of the same color; each post has a small hole at the top for flags; all the posts have a hole at the side, four inches from the top (between the top and stationary ring or platform), for holding the black flag half-mast high. Four hand-racks (as shown in the small illustration) to hold twelve rings and two flags. One starting-post, four feet six inches high, with a disk set vertically on the post, and the four colors painted on it as a guide. Eight flags, of ribbon in the four colors,—red, white, blue, green,—with a black "R" for right, and "L" for left, painted on them. Twelve black flags, for "miss." Four boxes for holding black flags. Forty-eight rings, twelve of each color. For eight players, four additional hand-racks, with rings and flags, will be needed. A box to hold the entire set will also be needed.

In making the set oneself, poles such as are used for tying up annuals, usually called dahlia-stakes, can be used, and ordinary wooden curtain-rings can be used for the rings. These can be purchased cheaply by the dozen. To make the posts so they will hold the rings, a ring must be wired on each to serve as a support. The small illustration of the hand-rack (which is to be made in the same way) will show how this can be done. Pierce the post with an auger so that two heavy wires can be run through, and when this is done twist the ends of both wires up over a ring, as shown in the illustration. Very heavy inflexible wire will be needed. The ring-platform of each hand-rack will need to have two holes pierced in it to allow of the flag-handles being inserted. The posts and racks can be painted with ordinary house-paint or with enamel paint. Make the flags of strips of ribbon sewed together, with the letters painted on the white stripes; or a single piece of ribbon will do.

The grounds can be of any convenient size, sixty by thirty-six feet, with the starting-post at one end nine feet beyond, being a very satisfactory size. The posts should be set two feet six inches apart.

The diagram shows the plan of progress, and the order of the posts follows (reading from left to right): "Post set," red, white, blue, green, red; "left set," white, blue, green, red, white; "right set," blue, green, red, white, blue; "end set," green, red, white, blue, green.

The rules of play are very simple. The players begin by tossing for "right" and "left" sides, such sides being right and left of the "chance," or middle post, in each set standing with the back to the starting-post; and every two partners toss for starting from the outside or inside post on their side, the inside players having the most varied play. The extreme right and extreme left of the "post set" become the inside opponents at the "left" and "end" sets, as shown in the diagram of progress. The colors must always be played in the following order: Red, white, blue, green. For instance, the blue post takes a green ring, then a red ring, then a white ring, which will complete it. Colors cannot be mixed upon the post, but must always be in the same order, beginning with the post color.

Each set comprises five posts. Each player has a post to play on. The middle post is called the "chance post," and it is gained by one of the inside players who first sees that he has the right colored ring to place on it.

The four players stand in pairs on opposite sides of the

"post set," each player holding a rack (with twelve rings and two flags on it) in the left hand. The players walk to the set and try for their posts, the inside opponents also having the chance of the "chance" post (which is the middle one of each set), and try to place their rings, respecting the order of colors. Any player can place a ring upon his post, "double" it (that is, put another ring over it, if he can follow the sequence of colors correctly), and "double" his partner's ring. He thus uses three rings. The inside player is, in certain cases, more favored; for he can take possession of the "chance" post by a first ring, "double" it instantly by a second, place a ring upon his own post, double it instantly, and finally double the ring his partner has placed, which uses a maximum of five rings upon a single set of posts. No player can place more than two rings on his own or the "chance" post at one time; but when the four colors are complete on any post (counting the post as one color), the players cannot place any more rings on it. The four sets are called "post set," "left set," "right set," and "end set."

The game starts from the "post set" to "left set," across to "right set," and through "end set." The players then return and recommence at the "post set," starting together at the word "play." In case of eight players, the second battalion from each camp starts at the "post set" as the first battalion are leaving the "left set," completing, if possible, the posts left unfilled.

Whichever side gains the "chance" post keeps it for the game, and it is "vantage."

To mark the side to which the "chance" post belongs, flag "L" or "R" is put into the hole at the top. The twelve rings (three of each of the four colors) must be well mixed or shuffled on each rack by non-players.

If a player can place the first ring on a post, and cannot "double" it, he may "double" his partner's post; or if a player cannot place a first ring, he may "double" his partner's post. No player can place a first ring on his partner's post; he can only double his partner's play while at that set of posts. The "extreme right" and "extreme left" cannot cross over and "double" their partner's "chance" post. If a player place the wrong colored ring it is a "fault," and the post is "killed" and cannot be used further in that game, and is to be marked by a black flag put in the hole between the top and platform of the post, "half-mast" high. If a player places a ring by mistake upon the "chance" post flagged by the adversary's camp, the ring must be taken back by that player, who loses his turn at that set of posts. If after a post is completed rings are placed on it by mistake, the ring must be taken back by the player, who loses his turn at that set of posts.

Three times around the court makes the game, unless one player announces that he is out, *i. e.*, has no more rings, the other players having played their turns at that set of posts, the game is declared finished. It may occasionally happen that one side is stopped by being unable to place further rings on any set. In this case the sides count the remaining rings on their racks, and the side that has the smallest number is declared the winner of the game. The object of the game is to get the largest number of completed posts, and thus win. A set consists of three games.

It will be seen from these rules that the game of colors is, in reality, only a simple promenade, following a given cycle, always the same until the provision of rings is exhausted. It is a game of chance in which presence of mind and method play a certain part. It also serves as a pretext for an almost continuous interview between partners.

Prizes of colored scarfs or ribbons made up in various fanciful ways can be given to the winners, and will add considerably to the vivacity and interest of the game.

Home Art and Home Comfort.

China Painting for Beginners.

II.

THE USE OF MATT COLORS.

WHAT can be accomplished with *matt* colors may be seen in the art-pieces of the Royal Worcester porcelain works, where they are used in connection with gold outlining and raised gold-work. For a long time amateurs found it impossible to obtain information relative to the process used in decorating the much-admired Worcester, Derby, and Doulton wares, the peculiarity of whose rich coloring, a soft, velvety, unpolished surface, accords so admirably with the gold outlining and gold raised-work that set off and heighten the effect as a whole.

In ordinary china-painting, the colors are used in transparent washes, in the manner in which water-colors are used, turpentine taking the place of water, and the china, of paper. The result, however, is a colored glazed surface. In *matt* painting we find an analogy to *gouache*, or distemper, painting, the colors being opaque, mixed with white (instead of being used in thinner washes for the lighter parts), and drying out with a dead, unglazed surface.

The same kind of china, new French china, white, and free from defects, as is used in ordinary china-painting, is to be selected. So-called "opaque" china, earthenware, or white stoneware can be used, but French china is the best for really good work.

BRUSHES, ETC.

The amateur *matt* painter needs much the same materials as are employed for ordinary china-painting, and, in addition, a separate glass or porcelain slab for bronze and gold.

Several brushes will be required: four red sable water-color brushes, assorted sizes, for painting; two lining-brushes, for outlining; two very small lining-brushes, for laying on relief-paste and gold; and two flat sable-brushes for laying on grounds. It is preferable to use only the best quality of sable brushes, but many decorators manage to make the cheaper camels'-hair brushes answer. It is best to have a number of brushes, as it is not always convenient to have a clean one every time there is occasion to use a different color. Have the brushes, if they are in quills, fitted into rather long wooden handles. Never allow a brush to dry after it has been dipped into turpentine, until it has been thoroughly cleansed with alcohol and Castile soap and water; or after using it in turpentine dip it into fat oil and wipe it on a soft cotton rag. Nothing will so effectually ruin a brush, make the hair brittle, stiff, and unelastic, as turpentine, when allowed to dry upon it. As old artists say, "It takes the life out of it."

THE COLORS, OILS USED, ETC.

The colors for this style of china-painting all come in the form of powders, and can be bought in vials at any artists' supply-store.

The oils used are fat oil, clove oil, and copaiva oil, of each of which a supply will be required, the clove oil being useful in cases where tints have to be blended, as in skies, etc., copaiva oil in colors for grounding, and the fat oil for general use. You will also need turpentine and alcohol. These should be kept in small open cups conveniently at hand, ready for use.

Tar paste is another requisite. It is used to clean off the grounding color painted over the design. These, with the dabbers, tracing-paper, clean rags, etc., will about complete your "outfit."

HOW TO BEGIN WORK.

First wash your china carefully and thoroughly, and when it is perfectly dry rub the surface with a soft cloth wet in turpentine, and allow it to dry. Transfer the design as instructed in Article I in the June number, or trace the design on the tracing-paper, and turning it over go over the lines seen through it, with a lithographic crayon. This will transfer very nicely upon the surface of the china.

Find the exact center of the space to be decorated, by measuring across at the greatest height and breadth, and where the lines intersect will be the center. Through this center draw lines across, one vertical and the other horizontal; draw the same lines on your tracing, and fit it upon the plaque so that the corresponding lines on the plaque and paper will match. Fasten it securely in place with gum, and using a very sharp H H H H H H (or six H) pencil, go over the lines with a firm and steady hand, being very careful not to neglect going over every line, for, unless great care be taken, some may be omitted. Take away the paper, and you will, if you have followed directions implicitly, see your design nicely transferred to the china. Now with your finest striping or tracing brush, or with a fine pen, go over all the lines of the design with India ink, and allow it to dry.

HOW TO PAINT "SUMMER" WITH MATT COLORS.

The design on page 554, "Summer," is the second of the four to be given with these articles, typical of the seasons. Any portion of any of these designs can be omitted, according to individual taste, and if smaller pieces are to be painted, parts of the designs can be used; as, for example, a butterfly, or a single rose or bud, or a branch from the accompanying design would be very effective on small articles, or either might be repeated, with regular or irregular intervals, on quite large pieces.

To decorate a plaque or plate with the design here given, which is at once simple and yet capable of rich and brilliant treatment, mix enough *matt* ivory vellum with copaiva oil (in the proportion of about four parts of vellum to three parts of oil) to cover the entire plaque. Use a palette-knife made of horn, and rub the paint into a smooth paste, adding turpentine by drops until it is about the consistency of cream. Have a spare bit of china or white stoneware of some sort by your side, and try it upon this. When it will cover the surface as it flows from your brush, without spreading, and is yet not too stiff to work freely, it is in good condition. If too stiff, add more turpentine; if too thin, add more paint. Always mix *thoroughly*: you cannot easily do too much mixing. Indeed, the color should be mixed every time the brush goes into it, adding a drop or two of turpentine if it grows too stiff, and using your horn knife.

Take your broad flat brush, charge it well with the ivory vellum, and go over the entire surface of the plaque with short strokes, as rapidly as is consistent with care, and be very careful that you do not go over any part of the surface twice. It is a good plan to rest the piece of china obliquely against a firm support, and beginning at the top carry the color across its entire width as you descend. If the surface is smooth, uniform in tint, and evenly covered, you may call the grounding process finished. Generally, however, it is better to let it dry in a place free from dust until it becomes "tacky" when touched by the finger-tip, and then to go over it lightly, as in the case of china-painting with transparent colors (described in the June number), with a dabber. Be careful not to do too much dabbing, as it may thin the color in spots and produce an unsatisfactory result.



DESIGN FOR A PLATTER.—"SUMMER."

If properly done, your china will have the color and texture of old ivory. The design traced and inked upon it will appear in softened lines, and after the grounding has thoroughly dried you will be ready to go on and finish your work.

Now rub a bit of your tar paste upon a clean slab until it works smoothly, using your palette-knife. With the smallest brush, not a striping-brush, paint over all the objects in the design, leaving the grounding color as a background: thus you must cover with the tar paste the roses, the leaves, the branches, and the shield. Be careful in doing this, for if you anywhere trespass on the space outside the outlines, you will spoil just so much of your work; for the grounding tint cannot be matched or patched with fresh color. The tar paste is applied to soften the grounding tint, which it does immediately. Use rags wrapped about brush-handles, or small cotton wads, prepared in advance (never use the same wad twice), and wipe away all color inside the outlines or where you have covered the surface with your tar paste, which, wherever applied, will loosen the paint and allow it to be easily removed.

This delicate part of the work may be avoided by covering your design with stopping-out mixture, or "stencil," before laying on the grounding tint. If by any chance the stopping-out mixture is not to be had at the artists' supply emporium to which you have access, it can readily be prepared. Mix a little water-color carmine, in dry powder (five cents' worth is amply sufficient), with syrup and water, until it works freely. Do not cover the design with it too thickly, but cover it completely, and let it dry thoroughly. *Never use artificial heat for drying, and beware of dust.* After it has dried, the grounding tint is to be laid on as directed and carried over the whole design, stencil and all, and allowed to dry and harden. Have ready a dish of clean water, and when the grounding tint is perfectly dry, put the china into the water, face upward. In a short time the stencil will dissolve, and it and the grounding tint over it can be wiped away with bits of cotton. Be very careful not to rub outside the outline or touch the paint.

Use *matt* purple for the dark part of the shield. Mix the *matt* purple with fat oil and turpentine (about the same proportions as given for the grounding tint), using your horn palette-knife, and working them together to the same consistency as was required for the grounding color. These directions will serve for all other colors employed, all of which should be prepared or mixed separately, and with a clean horn palette-knife. Never use a metal knife with *matt* colors.

For the roses, use *matt* pink mixed with a little *matt* white. Carry a flat wash over the whole flower, leaving out the center, which is to be painted with *matt* lemon yellow. Paint in the outlines of the flowers with dark brown; the leaves, with *matt* light yellow green, outlines brown; stems, *matt* light yellow green; branch, *matt* yellow brown.

Paint the lowest butterfly with *matt* lemon yellow, and the shaded portions of the wings with *matt* neutral grey mixed with a little white, so as to give sufficient contrast to the background of purple; the upper left-hand butterfly, with light blue mixed with white, the shaded portions of wings with *matt* bronze orange, and the body with neutral grey mixed with white; and the upper right-hand butterfly, with neutral grey mixed with white, and the shaded portions with *matt* pink, full strength.

HOW TO APPLY MIXING RELIEF-PASTE FOR RAISED GOLD.

When your design is all colored to your mind it is ready to embellish with relief-paste and gold. Mix your *matt* relief, or relief-paste, with turpentine and fat oil, as stiff as it can be used. First mix the turpentine and fat oil, in

equal parts, mix them thoroughly, then add the relief-paste, and mix again.

Take your smallest lining-brush, charge it with the paste, and try it on your spare bit of ware: if the paste follows the brush smoothly in a line that does not break or spread, it is right for use. If the paste is too thin, add a bit more of it to the turpentine and oil; if too stiff, add a drop or two of turpentine. Go over all the outlines of the stems, leaves, flowers, shield, and butterflies, and touch in the spots in the shaded portion of the wings of the lowest butterfly, with the paste. Then send the piece to be fired. When it returns, cover the relief with *matt* gold, using a fine brush not too heavily loaded with the gold, which is to be prepared for use the same as the colors.

When it is again fired and returned, all that remains is to polish the gold. This is most easily done with a brush made of spun glass wound in twine, which can be purchased with your other materials. It is better to wear gloves while doing this, as the little splinters of glass broken from the ends of the brush are sometimes troublesome. The result, if you have been careful, and have had "neat and nimble fashioning fingers," will amply repay the trouble and expense attending your efforts.

You have used eight colors and *matt* gold. For general work you will probably require:

- Matt White: mixes with all light colors.
- Matt Black: mixes with blues, browns, greens, and purples.
- Matt Neutral Grey: mixes with all colors except yellows and reds.
- Matt Warm Grey: mixes with all colors except yellows and reds.
- Matt Pink: mixes with all greens and blues.
- Matt Flesh Red: mixes with all colors.
- Matt Brick Red: mixes with all colors.
- Matt Dark Red: mixes with reds only.
- Matt Purple: mixes with blues, browns, greys, and greens.
- Matt Light Blue: mixes with pinks, purples, deep blue, brown, and black.
- Matt Deep Blue: mixes with pinks, purples, deep blue, brown, and black.
- Matt Olive Green: mixes with purples, browns, and greys.
- Matt Blue Green: mixes with purples, browns, and greys.
- Matt Dark Green: mixes with all the browns.
- Matt Light Yellow-green: mixes with lemon yellow and yellow brown.
- Matt Yellow Brown: mixes with pinks, greys, greens, and purples.
- Matt Brown: mixes with all colors except dark green and black.
- Matt Lemon Yellow: mixes with light green.
- Matt Gold Yellow: used for shading, and will not mix with other colors.

MATT BRONZE COLORS.

These exhibit a semi-glaze, and are very beautiful when used in connection with other *matt* colors.

- Matt Bronze Pink: mixes with greens and blues.
- Matt Bronze Lavender: mixes with pink and light blue.
- Matt Bronze Green, 1 and 2: mixes with all greens.
- Matt Bronze Orange: mixes with pinks, greys, and greens.

GROUNDING COLORS.

- Worcester Cream.
- Worcester Ivory Vellum.

Besides these there are a number of colors called relief enamel colors, which when mixed in fat oil and turpentine and added in touches and dots, or drops, to the work, give the effect of jewels.

This extended list, not now even the most extended, has been given that amateur china-painters may from time to time increase their stock of materials as their skill in using them increases.

HOW TO COLOR THE SAME DESIGN IN ORDINARY OVER-GLAZE CHINA-COLORS.

Matt colors can only be properly used for vases, plaques, bouquet-holders, and purely decorative articles, as grease or vegetable stains are difficult to remove from the absorbent surface. It is better, therefore, to use only mineral colors

for the decoration of this and the other designs that accompany these articles, if they are to be used as dessert dishes or for similar practical purposes.

For the background of the shield upon which are the butterflies, a special treatment is needed. Instead of putting on the grounding color as directed in the June number, which will be difficult in view of the intense dark color needed, the following method may be tried: First paint over the butterflies with stencil, or stopping-out mixture. Then take copaiva oil with a little turpentine and mix them thoroughly on your slab, using your horn palette-knife for the purpose. Do not have the mixture so thin that it will spread or run, or so thick it will not work easily. Apply it with a flat brush to all the background inside the shield (the part colored black in the illustration), and do it as quickly as you can consistently with the care you must take not to run over the outer edges. Lay the oil on in an even coat over all the space it is to cover, butterflies and all, and if you do not at first succeed, wipe it off and try again. As it is hard to see, in some cases, where the oil is or is not on the china, it will be well, when you mix it, to add a little powdered carmine (not china paint), which will enable you to see where the oil goes. The carmine, which is the ordinary sort, will disappear on firing. Let the dish stand until the oil you have applied feels "tacky" when touched with the end of the finger.

It will be necessary to have on hand a small supply of matt bronze brown, in powder. Into this powdered color rub a wad of cotton until it is thoroughly charged with the color. Take up as much of the powder paint as will cover the end of your palette-knife, put it thickly in one place on the plaque, push it gently over the entire surface with the cotton, and add more color as is needed, until the whole is covered. Now let it dry thoroughly, and then remove the stencil, or stopping-out mixture, painted over the butterflies, as directed above for the matt painting. Paint the rim of the shield (outside the dark portion) with ultra-marine, and when dry paint over the outline of the shield in black, using a fine lining-brush. The lowest butterfly is to be painted in the light parts with mixing yellow; in the shaded portions, with not too dark a wash of neutral grey; the three upper spots on the lower wing, with a medium wash of ultra-marine blue; the fourth, or lowest spot, with light carmine; and the spots on the upper wing, with mixing yellow. The upper butterfly to the left is to be light blue, for which use a light wash of ultra-marine; and for the shaded portions use jonquil yellow mixed with a little light carmine. For the remaining small butterfly use a light wash of neutral grey, with deep carmine border and spots (the shaded portions). Go over the outlines with dark brown.

The roses outside the shield are to be painted with a flat wash of light carmine, and the centers with mixing yellow; for the stems use chrome green, and for the branch, light brown; and for the bud and leaves, grass green. Go over all the outlines very carefully with dark brown.

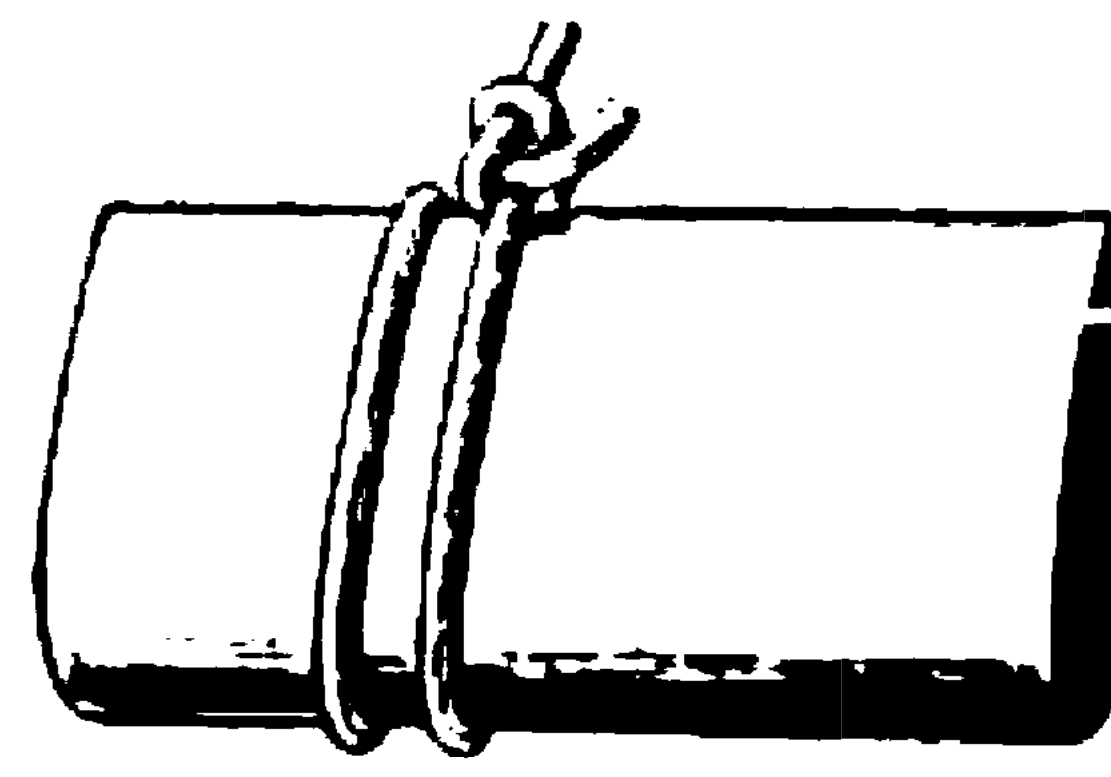
J. CARTER BEARD.

Home-Made Tennis-Net.

TO make a tennis-net is not a very great undertaking, although so much netting must be made. It must be remembered that the interstices of the netting are very large, and consequently the work progresses rapidly, notwithstanding the length of the net must be from twenty-seven to forty-two feet, according to the size you wish to have it, and three feet seven inches in width.

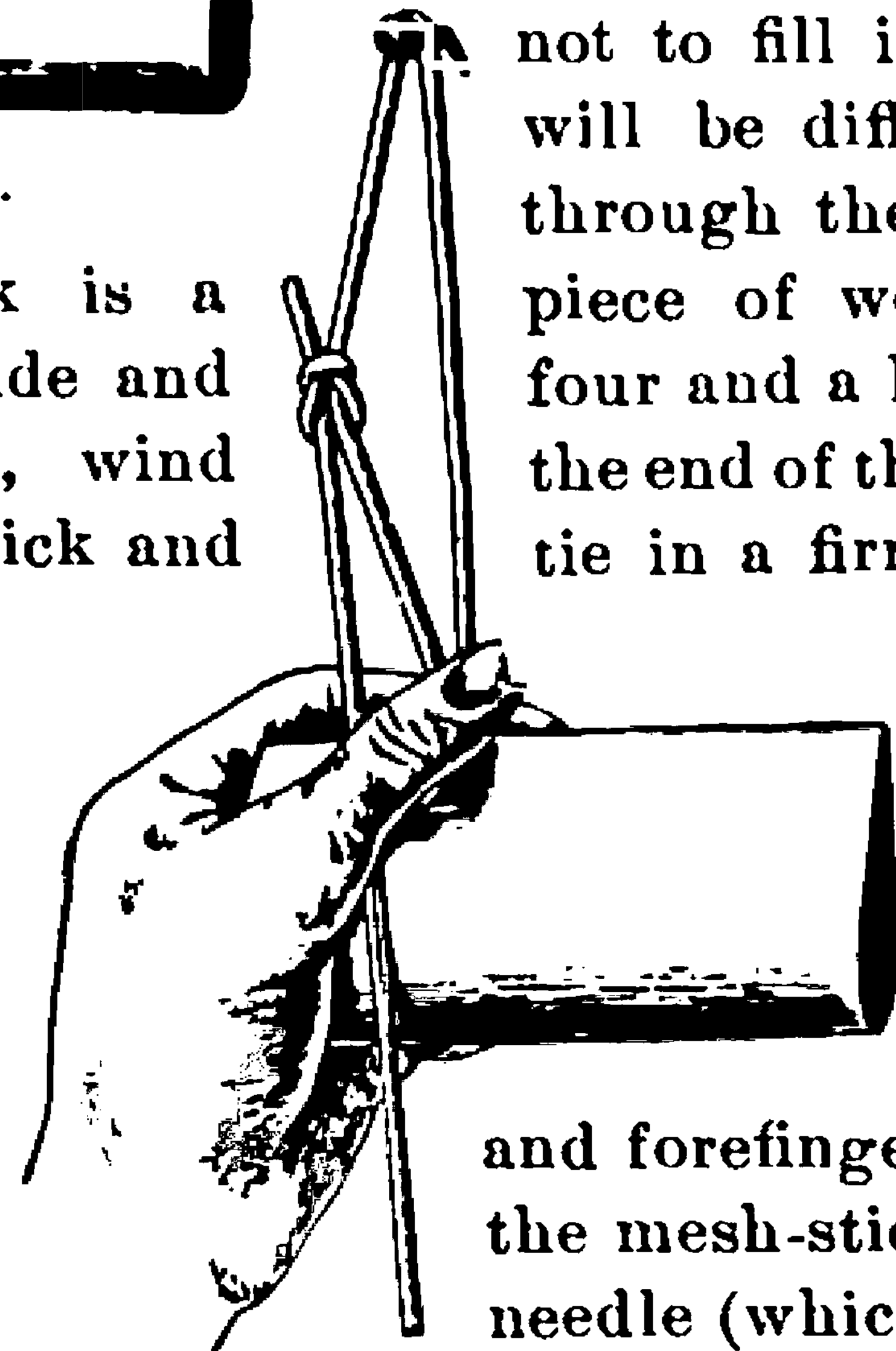
The materials needed are stout white twine or cord,—wrapping-twine is easiest to work with,—a mesh-stick of suitable size, and a wooden or bone netting-needle. The

latter should be of the shape shown in the illustration, and about nine inches long and an inch wide. On this the twine is to be wound; but be careful not to fill it so full that there will be difficulty in passing it through the stitches. The piece of wooden molding two four and a half inches long.



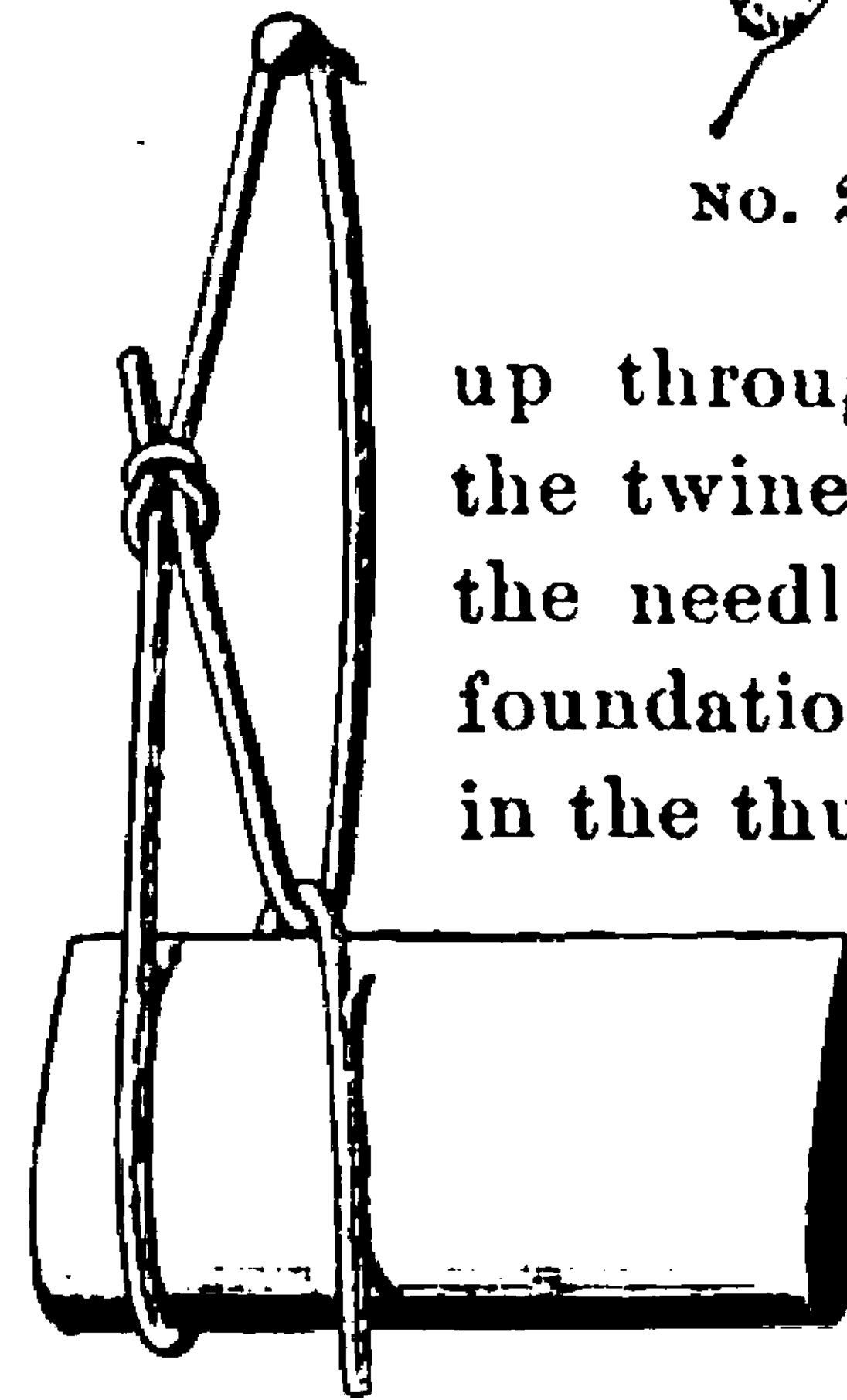
NO. 1.

mesh-stick is a inches wide and To begin, wind the mesh-stick and No.1. Then mesh-stick a nail as Bring the the mesh-end of the the thumb the top of



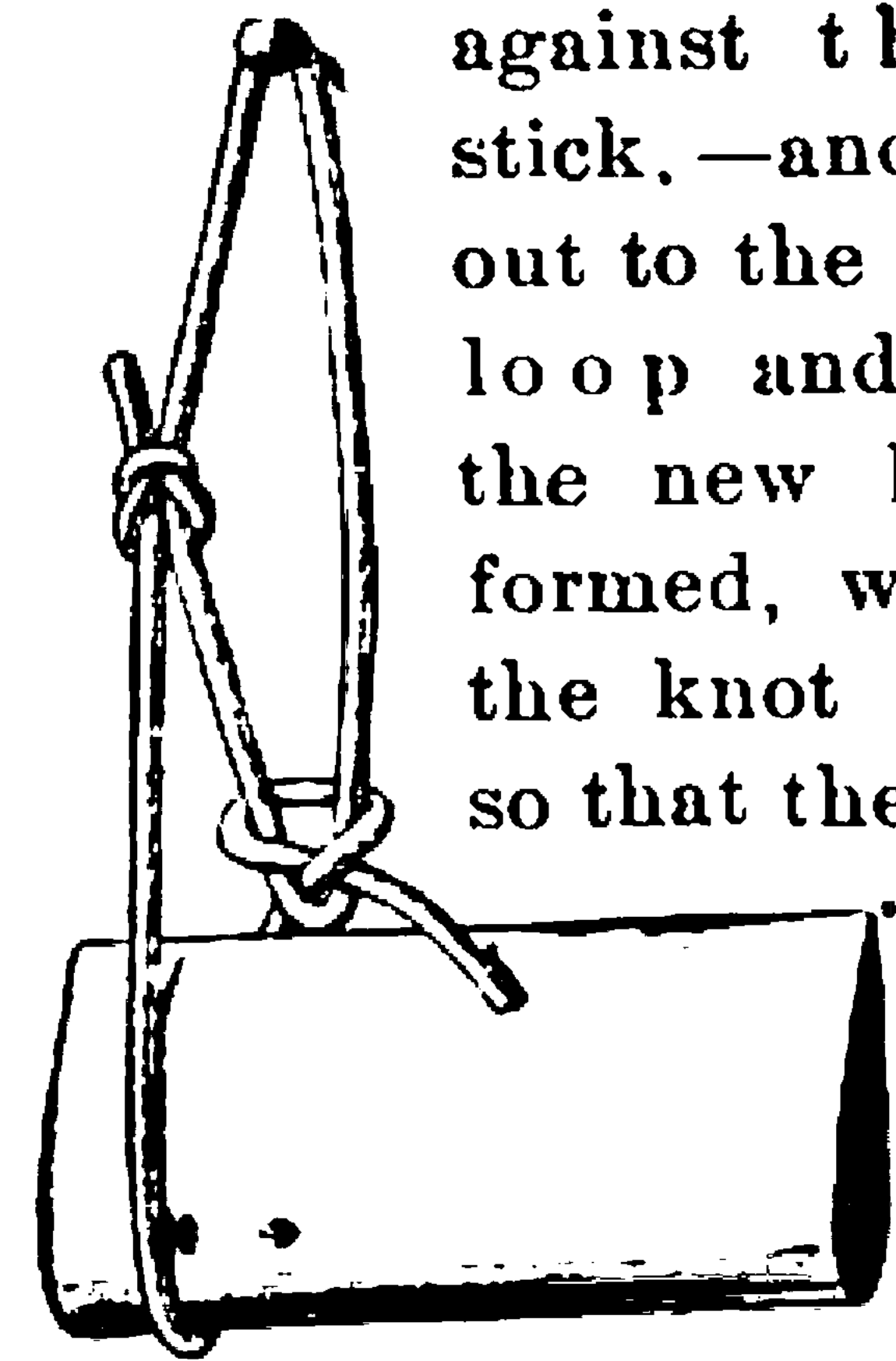
NO. 2.

tie in a firm knot, as shown in slip the loop off the and suspend from shown in No. 2. twine forward of stick, holding the first loop between and forefinger of the left hand, at the mesh-stick. Take the netting-needle (which is attached to the loose end) in the right hand, bring it back under the mesh-stick, and



NO. 3.

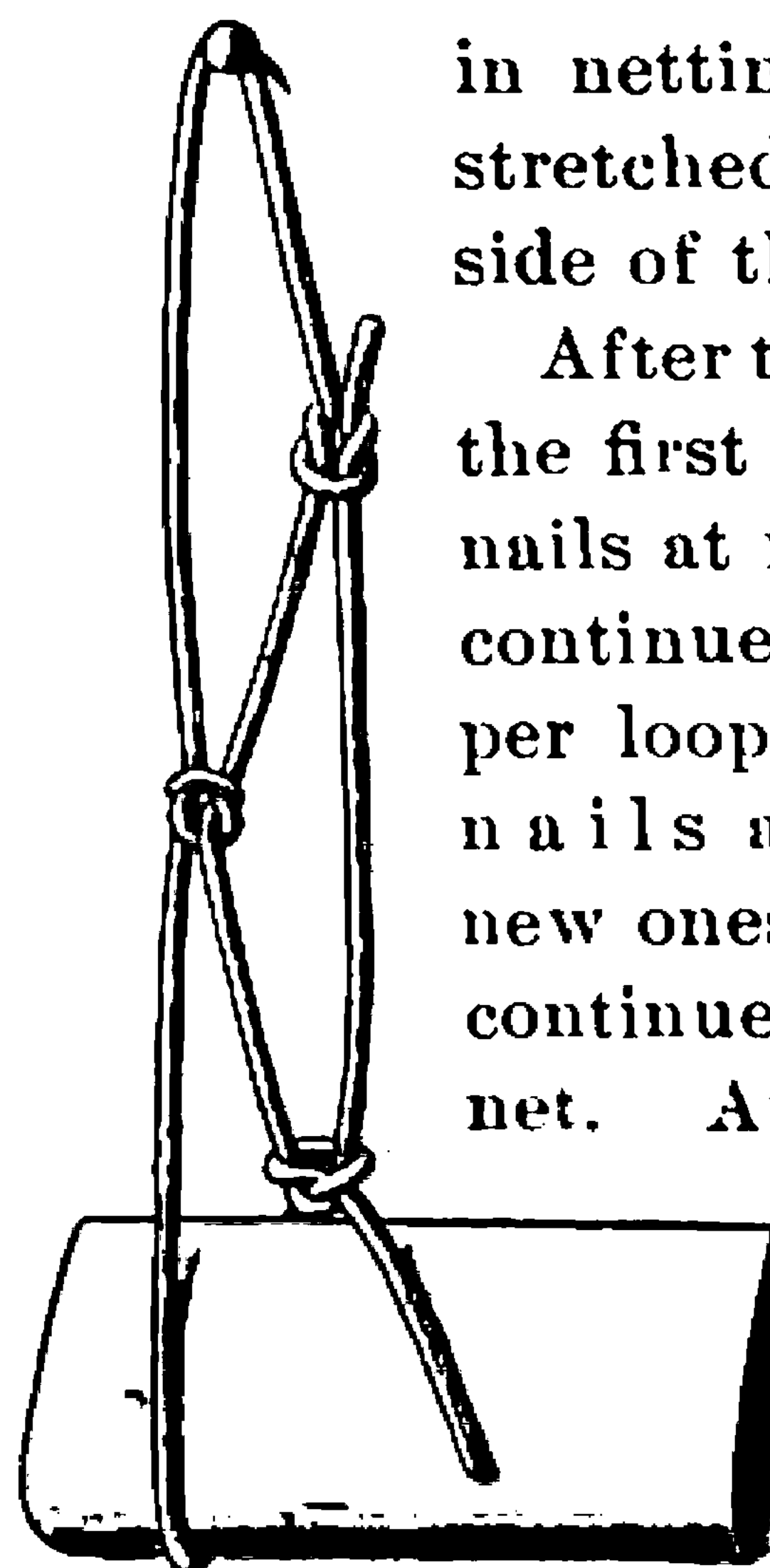
bring the twine into Pull the twine tight, All the knots are way. Slip the mesh-after turning the to right work an-low, as shown in tinue working one



NO. 4.

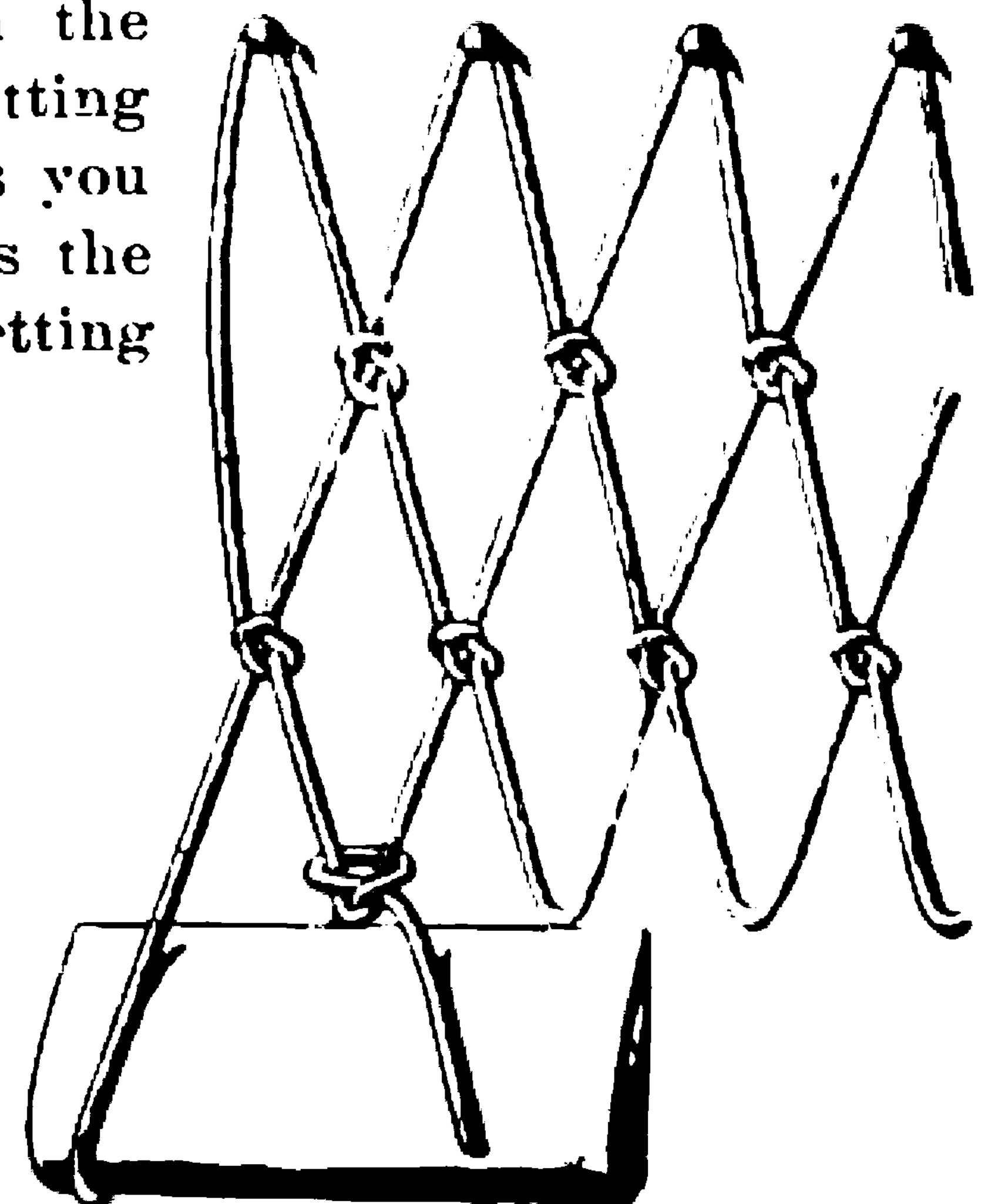
other until the edge of the netting measures about sixty-four inches, as this is for the end of the tennis-net, which must be three feet and seven inches, or forty-three inches in all, and will require to be made that much longer in netting, as it will take up one-third when stretched out and fastened to the poles at either side of the court.

After the required length for the end is made, the first few of the end loops must be hung on nails at regular distances apart, and the netting continued as shown in No. 6, removing the upper loops from the nails and putting new ones on as you continue across the net. After getting



NO. 5.

once across, turn the whole thing around and work another row, always from left to right. After two rows are thus made the nails will be unnecessary,



NO. 6.



NETTING NEEDLE.

as the end loops may all be strung on one rope and tied up securely so as to allow you to put good force on pulling the knots up tight. An assistant's fingers make very good supports instead of the nails, until you have finished the first rows as specified.

When the net is finished, it will need to be strung on a light clothes-line at top and bottom, and each loop tied on the rope separately, so it will not slip.

To set up the net, two stout sticks, four or five feet high, will serve for poles. Cut grooves at top and bottom so that the ropes which hold the net will not slip either up or down. The poles must be held taut (as shown in the illustration in the article on "Summer Outdoor Games") by guy-ropes attached to stout pegs driven into the ground. The net should sag down in the center to make it seven inches lower there than at the poles. The top of the net must be three feet seven inches from the ground at the poles, and three feet in the center.

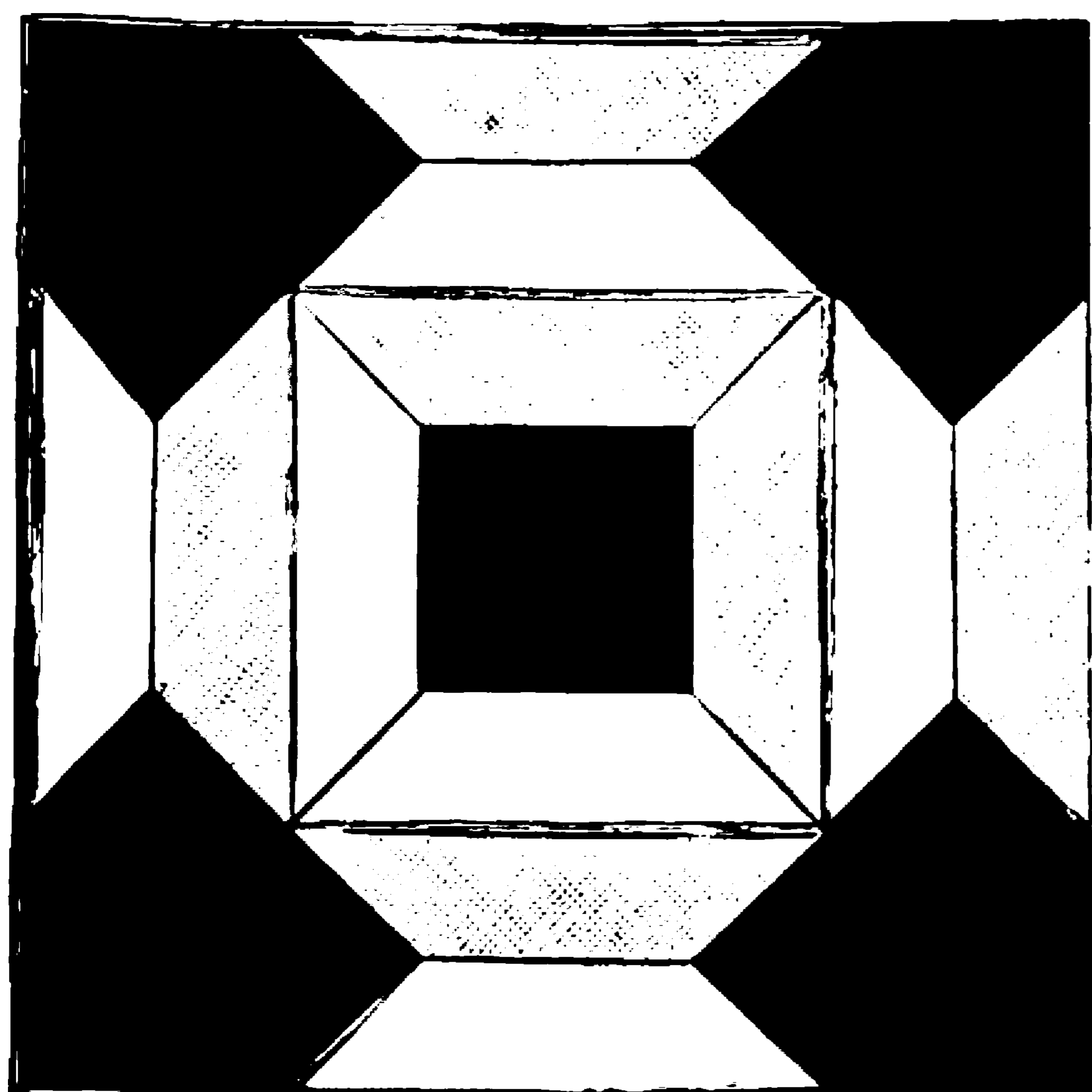
Kindergarten Work and Play for the Home.

XVII.

PAPER-FOLDING—(Concluded.)

SOME "life forms" made from the four-inch square of paper were given in chapter IX., in the Magazine for November, 1890, and in Chapter XI., in the January, 1891, Magazine, both on folding.

No work is better calculated to cultivate habits of care and exactness, than is this folding. The result of neatness



NO. 1. GROUP OF BOAT TRAPEZOID.

and accuracy or the natural consequences of haste and ignorance are seen at once. A mistake in the first folds is exaggerated at every succeeding step. A wrong crease in the paper can never be erased; there is no possibility of making a crooked fold better as you go on; the work must needs all be

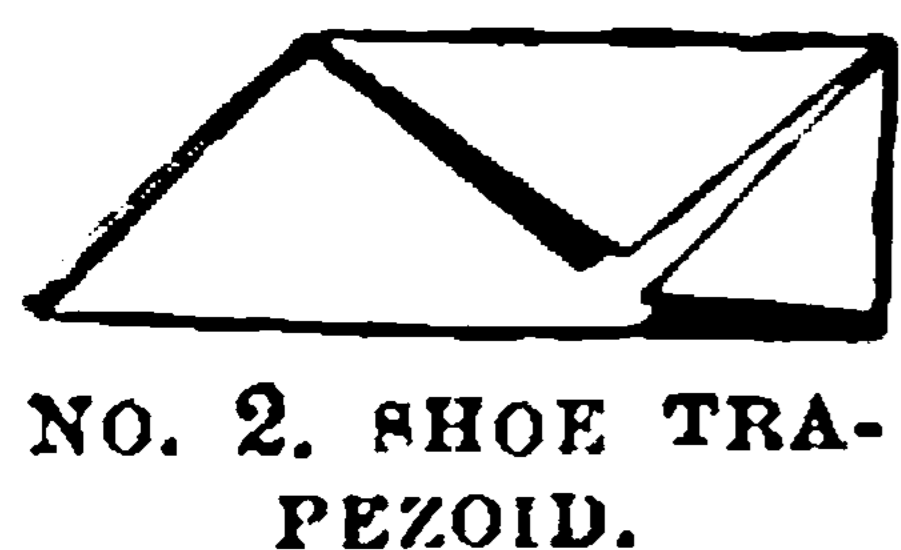
done over, and even that is only a partial cure: it can never be perfect.

Paper of two kinds, the glazed (white on one side) and the "engine-colored" (alike on both sides), is kept in kindergarten stocks, already prepared for this use. Squares, oblongs, hexagons, triangles, and circles are all used in the course of the work, but

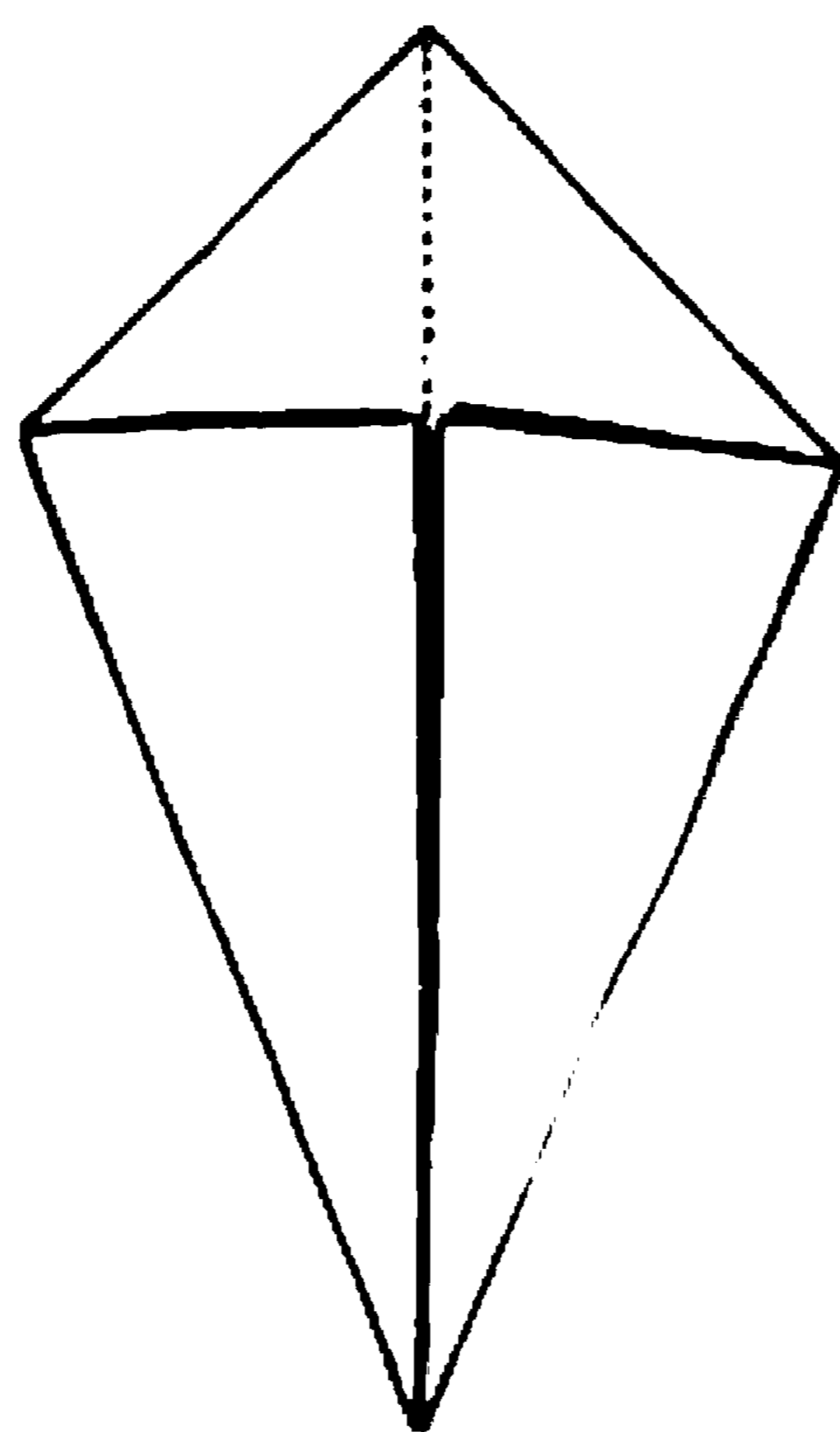
we shall at present use only the four-inch square. It is best to buy these papers, because

they must be exactly true and square if good results are to be obtained.

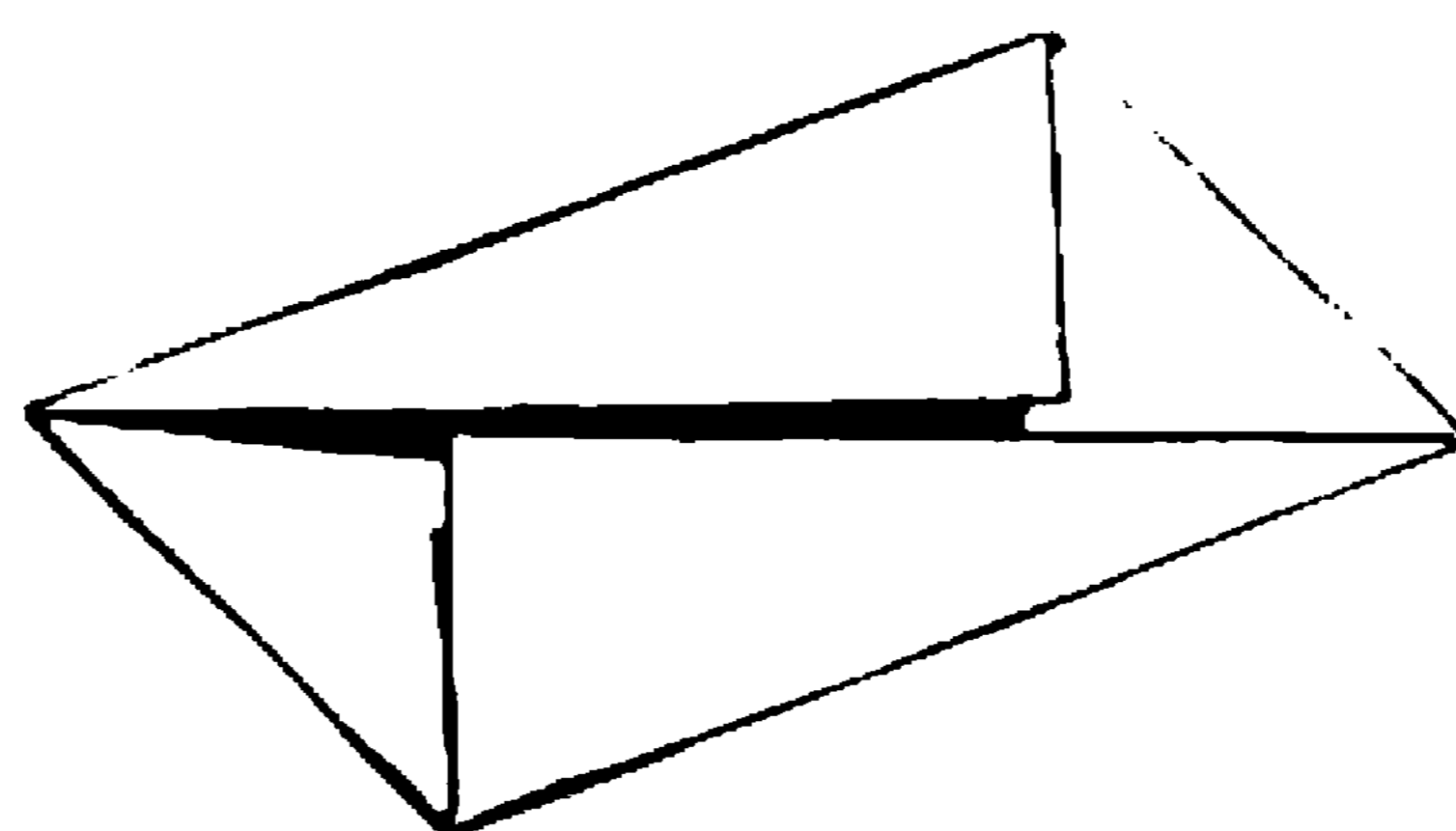
In dictating a folding lesson, see that the child works by opposites, and does not turn the paper about or lift it from the table, except in some of the last difficult folds. This is so that he may acquire the



NO. 2. SHOE TRAPEZOID.



NO. 3. KITE TRAPEZIDIUM.

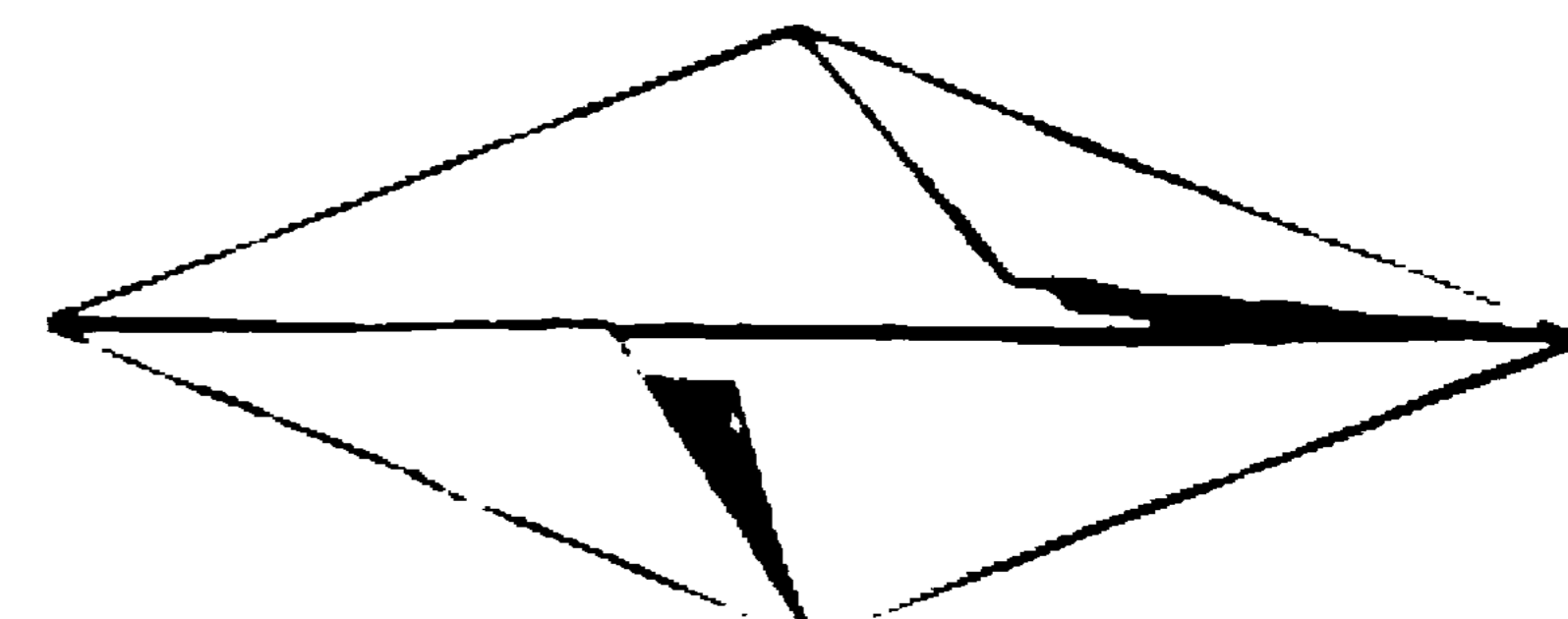


NO. 4. RHOMBOID.

benefit of using both hands, and learn to fold in all directions equally well. Each object is made from a fresh square.

In this article are given some specimens of the geometric folding, and also "forms of beauty" which can be made.

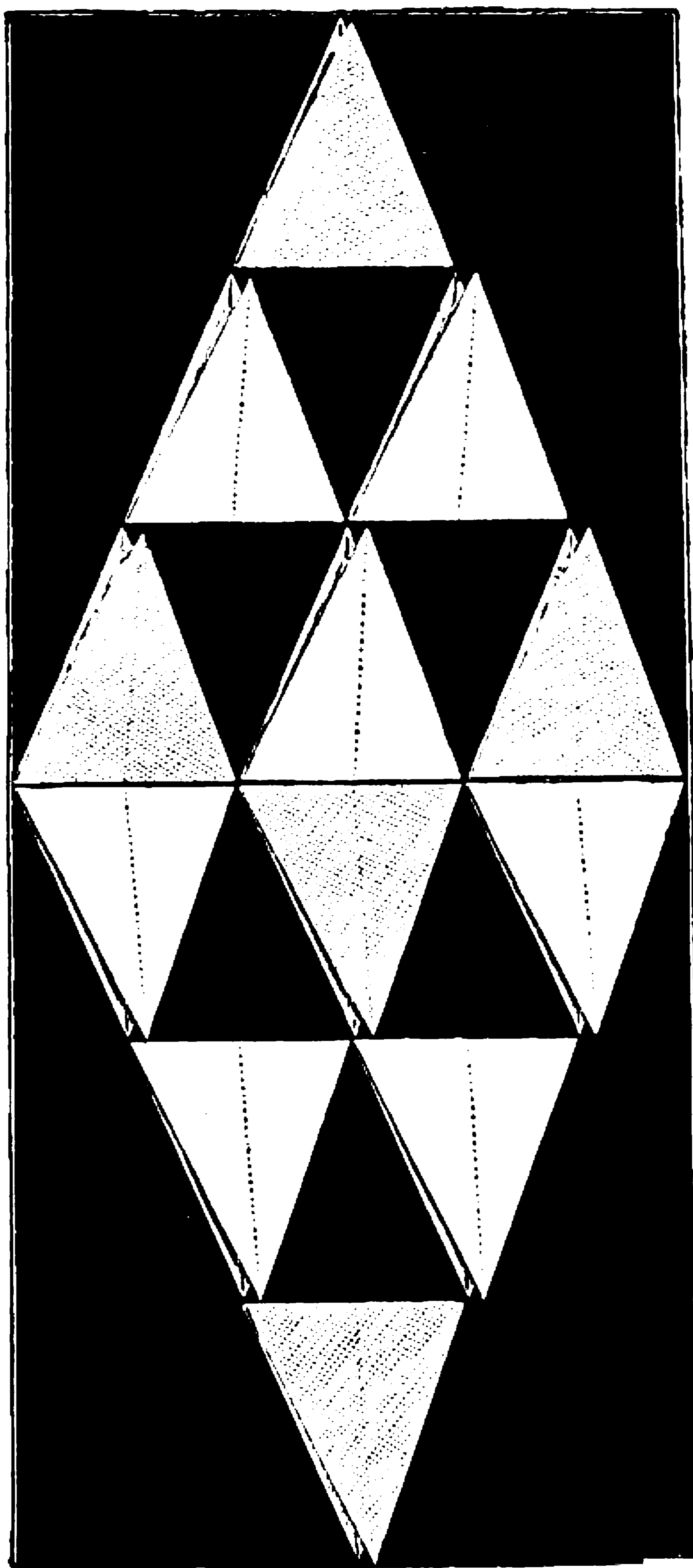
The number of possible forms is infinite,—an exhaustive description of them would be impossible and undesirable,—therefore only a few shapes have been selected which will best show the plan of work and the logical connection, and the mother and child can make further discoveries themselves.



NO. 5. RHOMBUS.

Chapters of this length forbid the presentation of even one complete series upon the square, and there are many series taught in the various training-classes, and work done upon the oblong, hexagon, triangle, and circle, as well as upon the square.

There are several uses of the mathematical forms. Simply for an acquaintance with the different figures, we have the laying of them in symmetrical designs in imitation of tile or Mosaic work for floor or fireplace of a toy house, or like the inlaid hardwood floor or top of a table; the making of rosettes and star forms, for mottoes, wall decorations, or trimmings for some celebration; and the pasting of them in books, or on sheets of Bristol board which are afterwards tied together. The latter is the most common use. Nothing which a child makes with care



NO. 6. GROUP OF ACUTE ISOSCELES TRIANGLES.

should be uselessly thrown aside.

In order that these figures may be small enough to make a pretty group on pages about ten inches square we divide the four-inch paper into four small squares of two inches each. Arrange by opposites, mount the figures with the smooth side uppermost, and use only one of a kind in a single design, that is, if your form is a triangle make the group wholly of triangles; and it is well to emphasize four or some multiple of four with a four-sided form, or five and six with figures of that number of sides. Following is a good series:



NO. 7. SCALENE TRIANGLE.

THE SQUARE.—Any placing of four 2x2-inch squares which the child may desire.

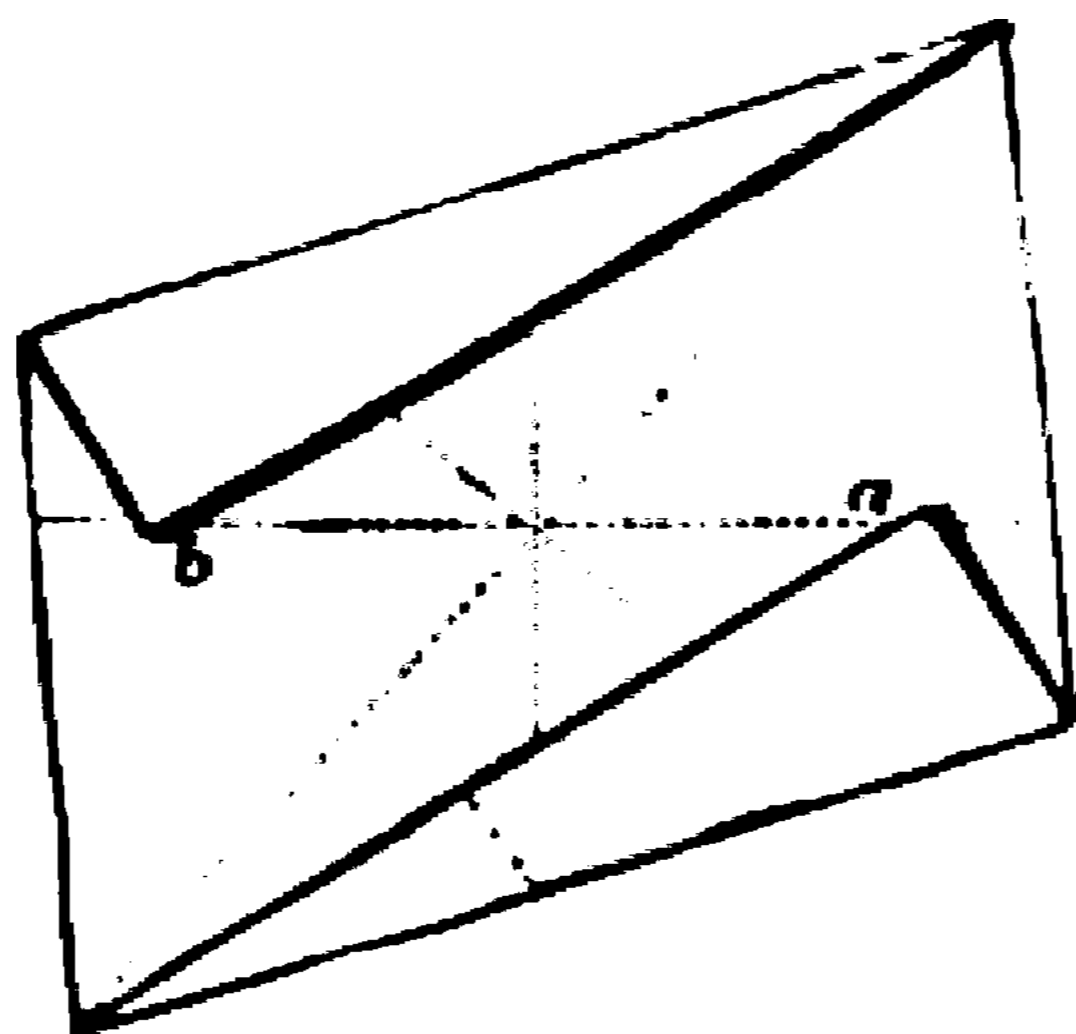
OBLONG.—The above square folded in half, either vertically or horizontally.



NO. 8. OBTUSE-ANGLED TRIANGLE.

TRIANGLE.—Divide the square in half diagonally.

BOAT TRAPEZOID.—Fold a triangle, and with the base towards you again fold a triangle by turning the right corner upon the left one. Now fold the apex of this small triangle to the middle of its base. No. 1 shows a group of twelve of these trapezoids, smooth sides uppermost.



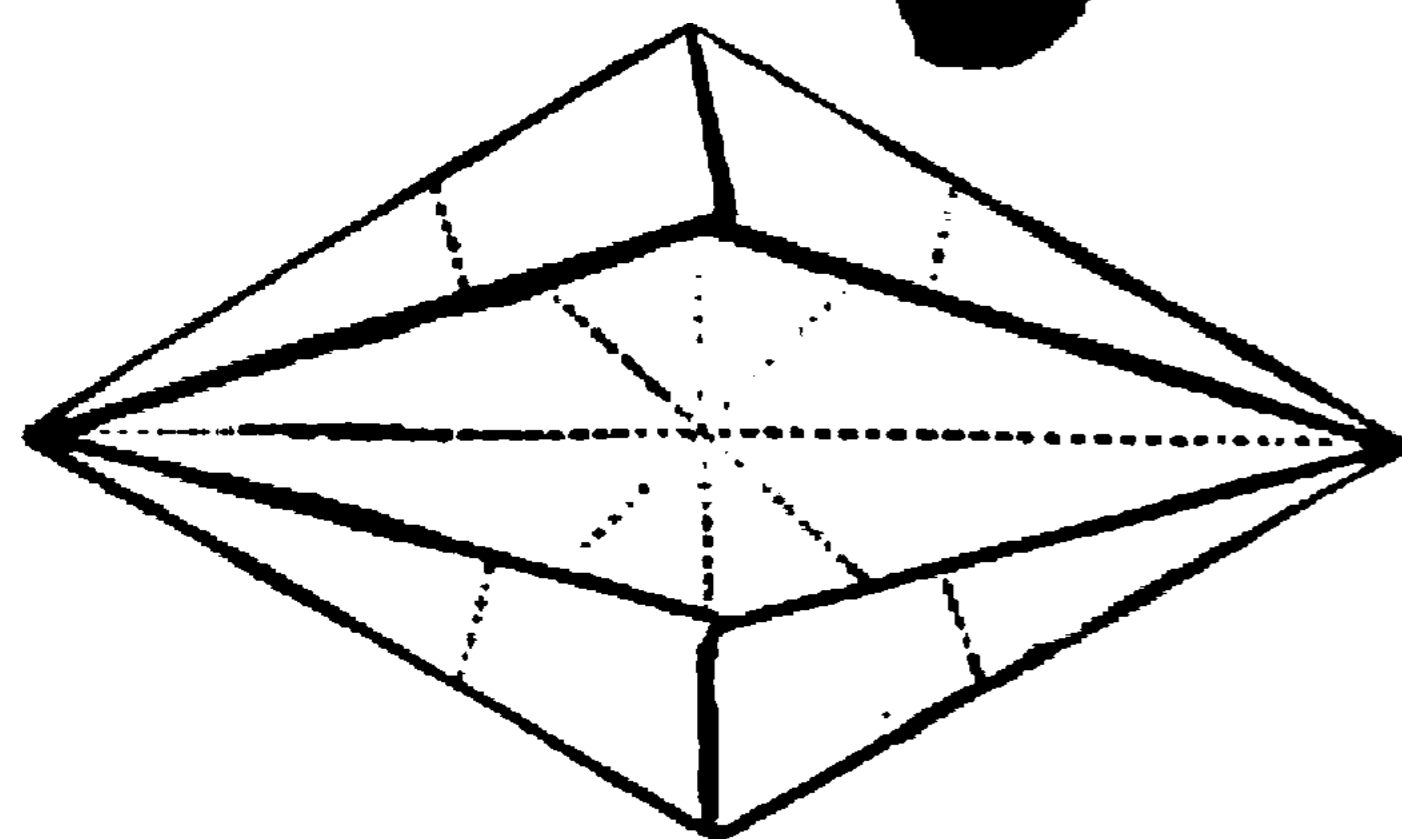
NO. 9. RHOMBOID.

SHOE TRAPEZOID.—Fold another boat trapezoid, place the long edge towards you, smooth side down, then fold the right corner over to touch the apex. (See No. 2.)

KITE TRAPEZIUM.—After having folded a triangle, open and place it upon the table so that the crease you made is a vertical line. Now fold the front right and left edges to coincide with this line. (See No. 3.) This is a pretty form for crosses and stars.

RHOMBOID.—Fold a triangle, open, and this time place the diagonal crease horizontally. Fold the front right-hand edge and the back left-hand edge to touch this line. (See No. 4.)

RHOMBUS.—Fold the rhomboid again. With the smooth side down and the diagonal still horizontal, fold the other two edges to this same line. (See No. 5.) Perfect eight-pointed stars can be made of these.



NO. 10. RHOMBUS.

Now we fold four different triangles: the acute isosceles, scalene, obtuse, and equilateral.

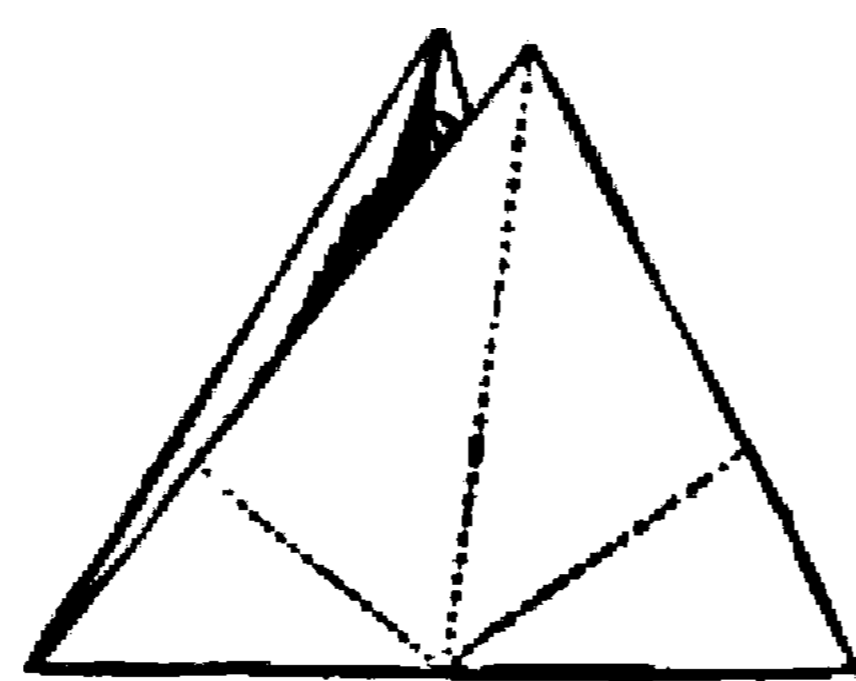
ACUTE ISOSCELES TRIANGLE.

—This is made by dividing the rhombus (No. 5), in halves by folding the two acute angles together. No. 6 shows a group of these folded triangles made in two colors.

SCALED TRIANGLE.—Fold the isosceles triangle in half vertically. (See No. 7.)

OBTUSE-ANGLED TRIANGLE.—Fold the rhombus (No. 5) and divide it lengthwise by folding the obtuse angles together. (See No. 8.)

EQUILATERAL TRIANGLE.—This is harder, and brings in a new slant, used in the five-sided and six-sided figures which follow. Upon a small square fold the vertical and horizontal lines and both diagonals. Open, and place upon the table with an edge towards you. Fold the front right corner to touch the horizontal line at *a*, which is distant from the right edge of the paper about one-third of the length of this line from edge to center. (See No. 9.) Crease this slant to the front left corner. Fold the back edge in the same way, bringing the back left corner to the point *b*. (See No. 9.) Now turn the shortened edges (at the right and left) in the same way (see No. 10), and you have a rhombus again, but wider than the one folded before. With the folds of this rhombus uppermost, fold the acute angles together, and you have the equilateral triangle. (See No. 11.)

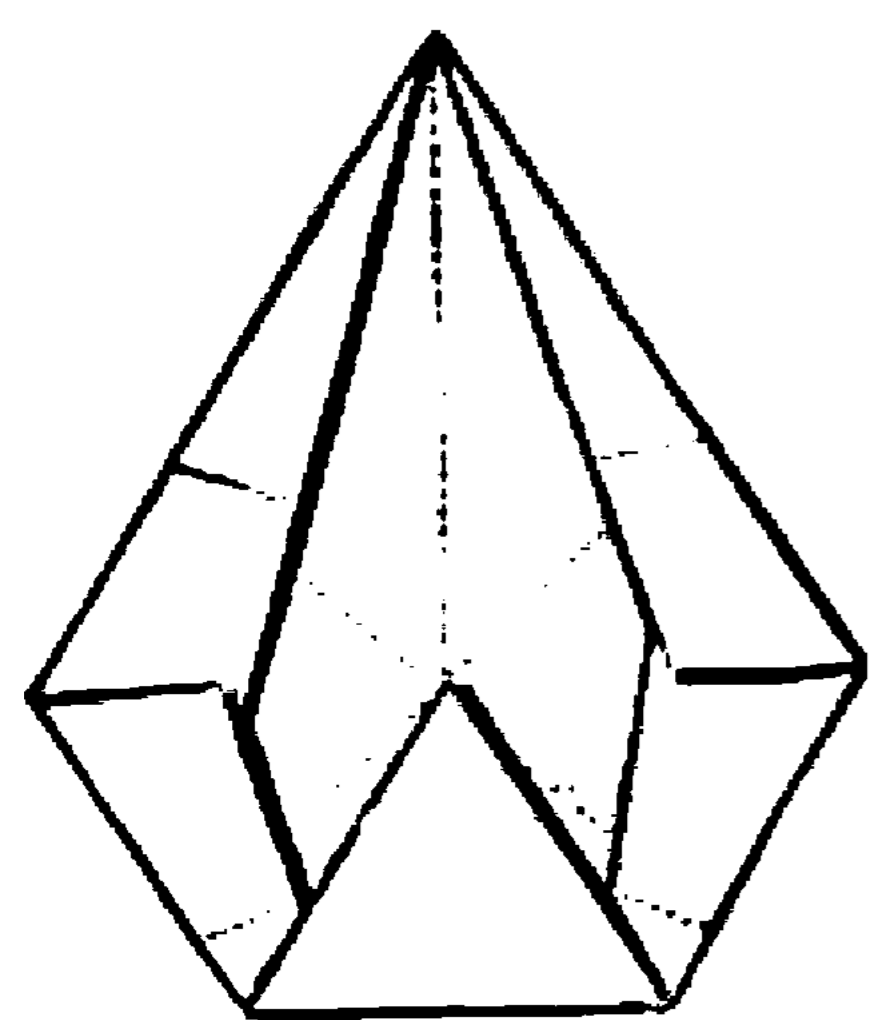


NO. 11. EQUILATERAL TRIANGLE.

IRREGULAR PENTAGON.—This is made from the rhombus just folded, by turning one acute angle to the center. (See No. 12.)

REGULAR HEXAGON.—This is made by folding both acute corners of this rhombus to the center.

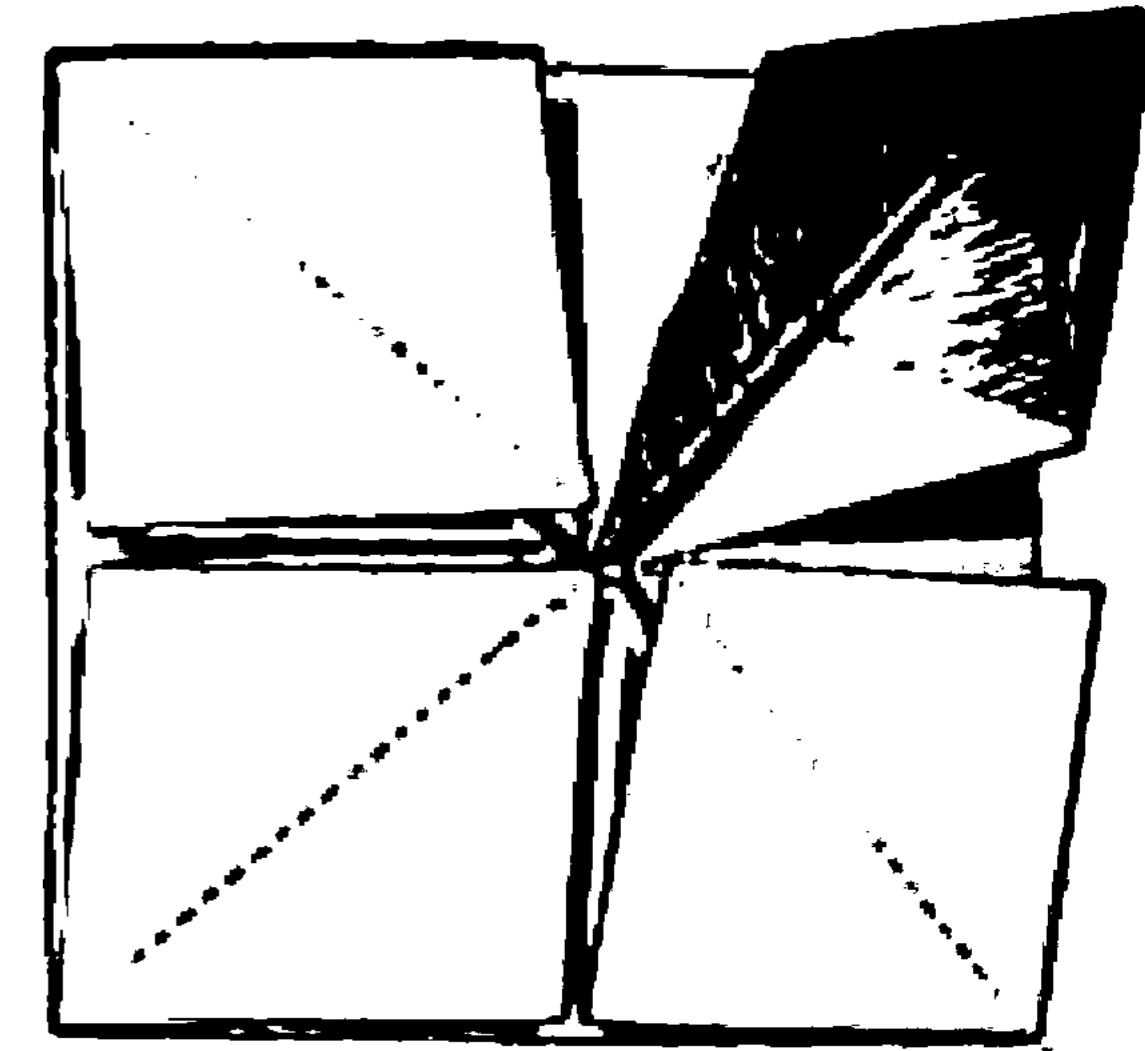
Two contrasting colors are pretty, if the figures are to be mounted. The harmony of color and symmetry of form are felt in this series, while accuracy and



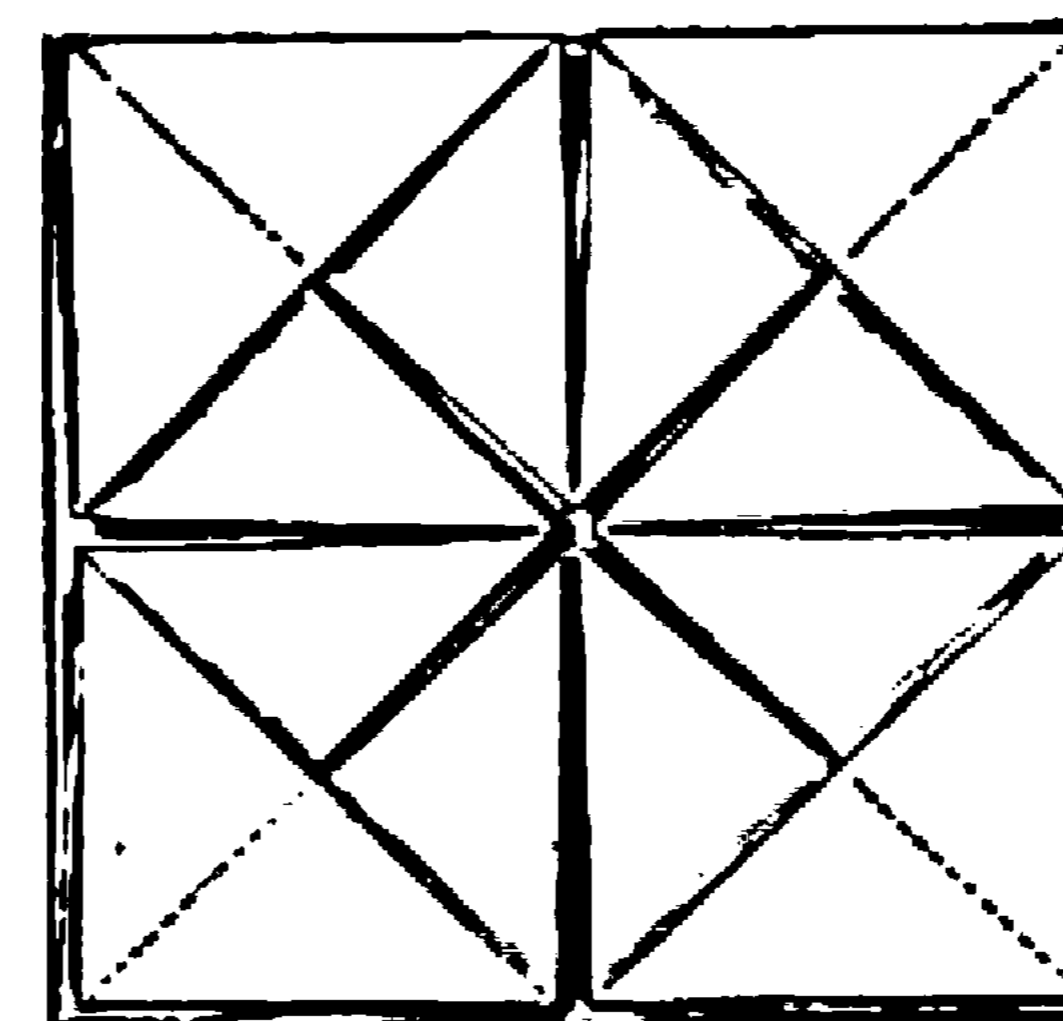
NO. 12. IRREGULAR PENTAGON.

acquaintance with geometric figures are also gained. These forms are presented to the child, however, without any abstract language. They are "objects of sense," things which he handles and shapes himself, and the play and conversation meanwhile remove all danger of excessive mental effort. Get in as much talk of number, form, color, size, edge, angle, direction, position, and fractions, as is interesting to the child.

An attractive sequence in "forms of beauty" is folded upon what we call the "third fundamental." For these prepare twenty-four four-inch squares of paper in the following manner: Fold vertical, horizontal, and both diagonal lines on your square. Open, and fold each corner to the center. Turn the paper over, and again fold all the corners to the center. Now open it all out and turn it over so that the sharp creases of the two-inch square which you see in the center of the paper are on the under side. Then bring the middle of each edge to the center of the paper: all the corners will stand like the one of No. 13. Now flatten each of the corners so that you have the small squares on top, as also shown in No. 13.



NO. 13.



NO. 14.

Take a fresh fundamental (all folded as above) for each pattern, and in the work hold an *edge* towards you. I shall speak of but one corner, but of course all four on each fundamental are to be treated alike.

1ST PATTERN.—Fold the inner corner of each small square to its outer corner. (See No. 14.)

In the following illustrations, four patterns will be shown on each, but in making, fold all four corners alike.

2ND PATTERN.—Fold the first pattern, then fold the apex of this triangle to the middle of its base. (See *a*, No. 15.)

3RD PATTERN.—Fold the first pattern, smooth it out, then turn the inner corner to the middle of the line just made. (See *b*, No. 15.)

4TH PATTERN.—Fold the third pattern, turn this all outward upon the first crease made, and it leaves a boat trapezoid on top. (See *c*, No. 15.)

5TH PATTERN.—Fold the third pattern, open, place the base of the small triangle upon the first line made, and crease well. Turn the apex of the small triangle to the middle of its base, then open these, and fold down on each crease alternately, like a fan, to look like *d* on No. 15.

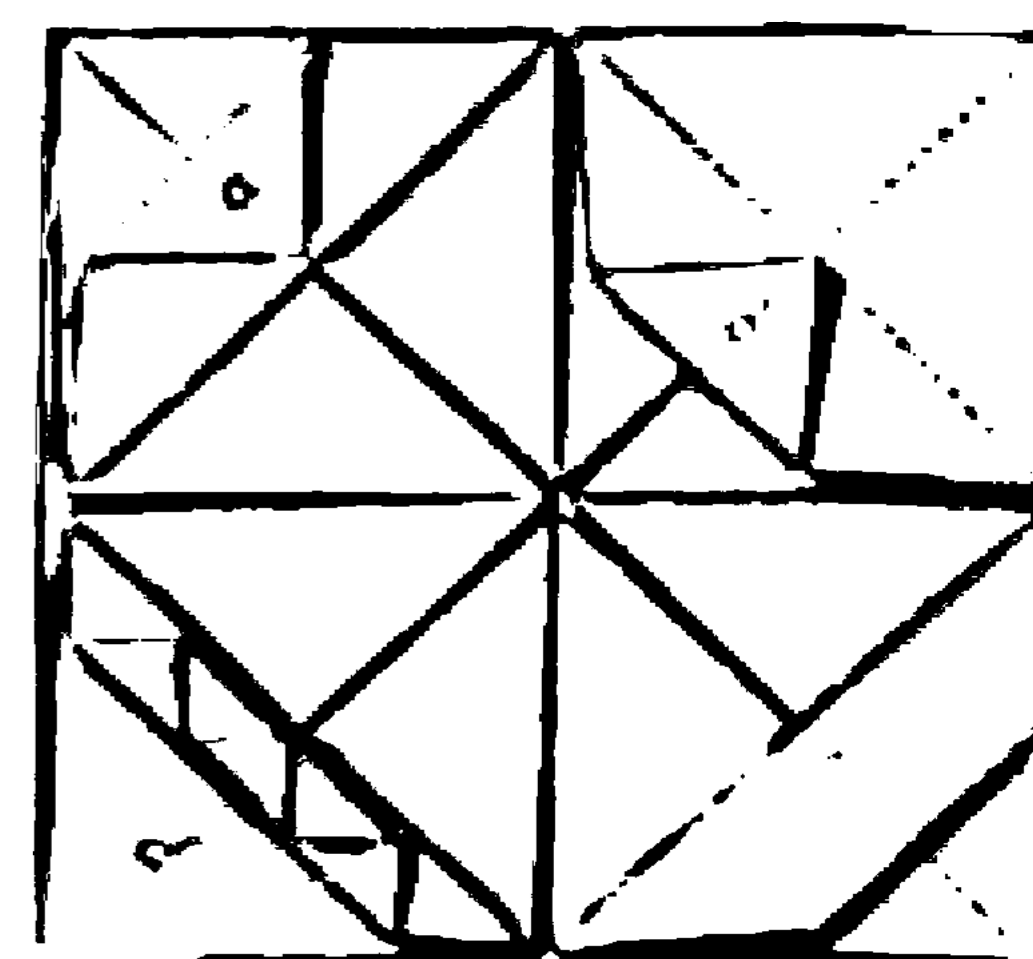
6TH PATTERN.—This is the opposite of the fifth pattern. The little folds are all turned *under*, leaving a long narrow boat trapezoid on top.

7TH TO 12TH PATTERNS, INCLUSIVE.—These are exactly the same six folds shown in the previous patterns, but made on the *inner* double corners seen on the form after all the single corners are turned outward as directed for the first pattern (No. 14.) These six patterns are shown in succession from *a* to *d* on No. 16, and *a* and *b*, No. 17.

13TH PATTERN.—Turn the opposite double corners of the small square to its center, like *a*, No. 18.

14TH PATTERN.—The opposite of the preceding. These corners turned *under* make the same figure, but with smooth side uppermost.

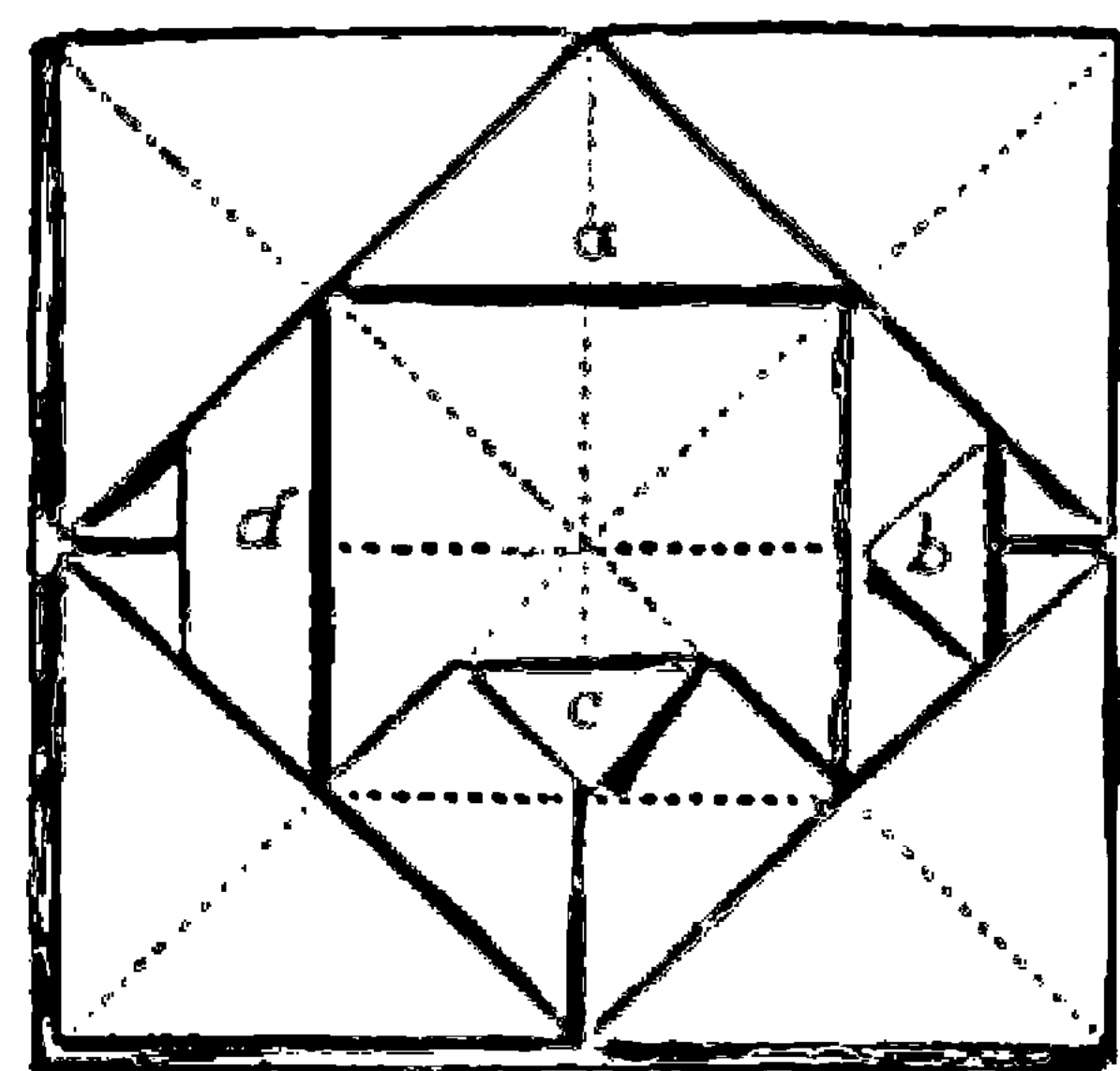
15TH PATTERN.—This is the kite trapezium shown in No. 3. Fold the front and the left-hand double



NO. 15.

edges of the small square to coincide with its middle diagonal line. (See *b*, No. 18.)

16TH PATTERN.—The opposite of the preceding: the same folds on the under side.



NO. 16.

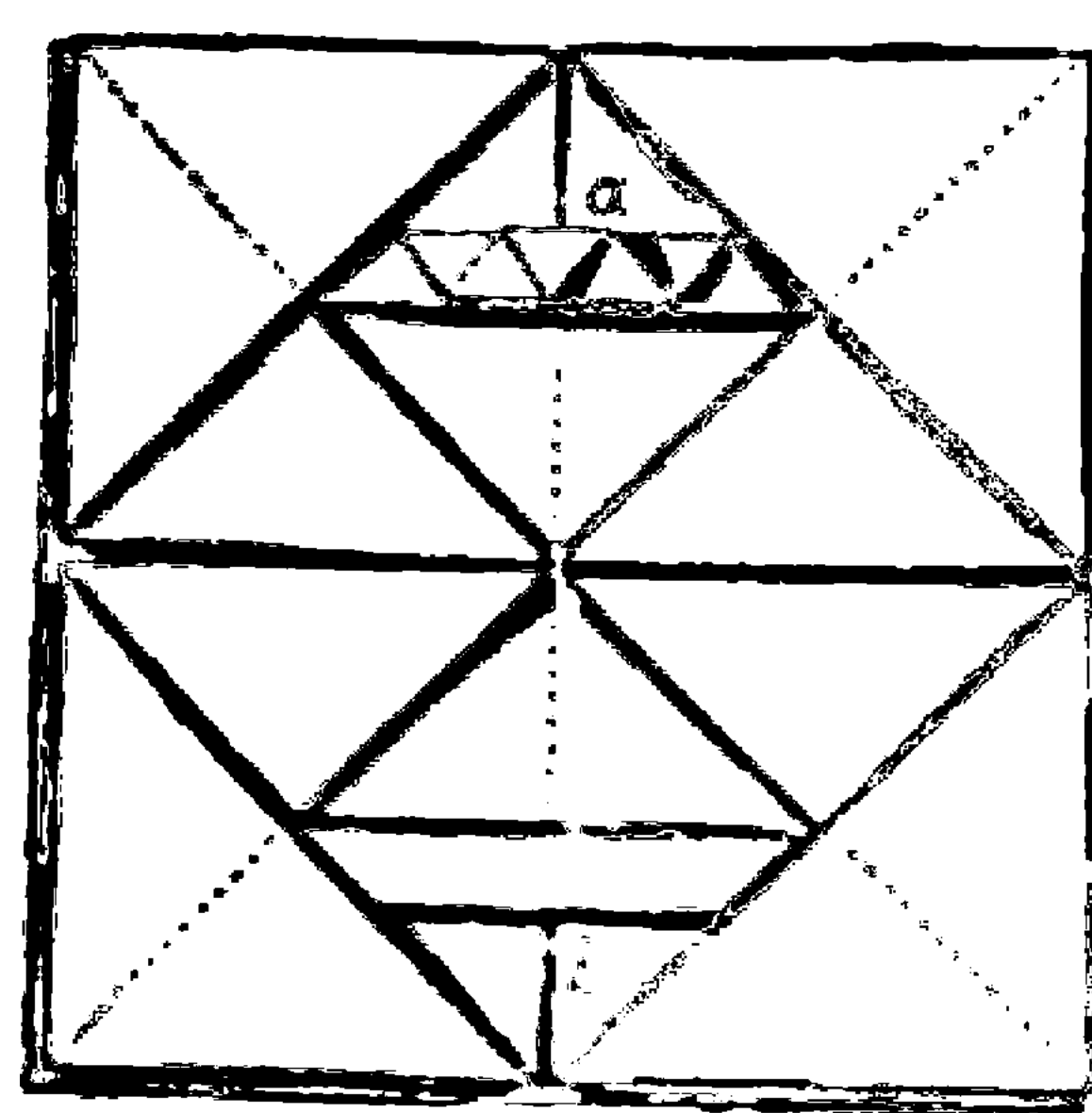
17TH PATTERN.—The kite form again, but with the right angle in the center. (See *c*, No. 18.)

18TH PATTERN.—The opposite of the preceding: the edges folded under.

19TH PATTERN.—This is one fold each of patterns fifteen and seventeen, on the same square. (See *d*, No. 18.) This is the rhomboid shown by No. 4.

20TH PATTERN.—The opposite of the preceding: the rhomboid again, with edges folded under.

21ST PATTERN.—This is the rhombus shown by No. 5.



NO. 17.

Fold pattern nineteen again, then fold the short right and left edges to coincide with the same middle line. (See *a*, No. 19.)

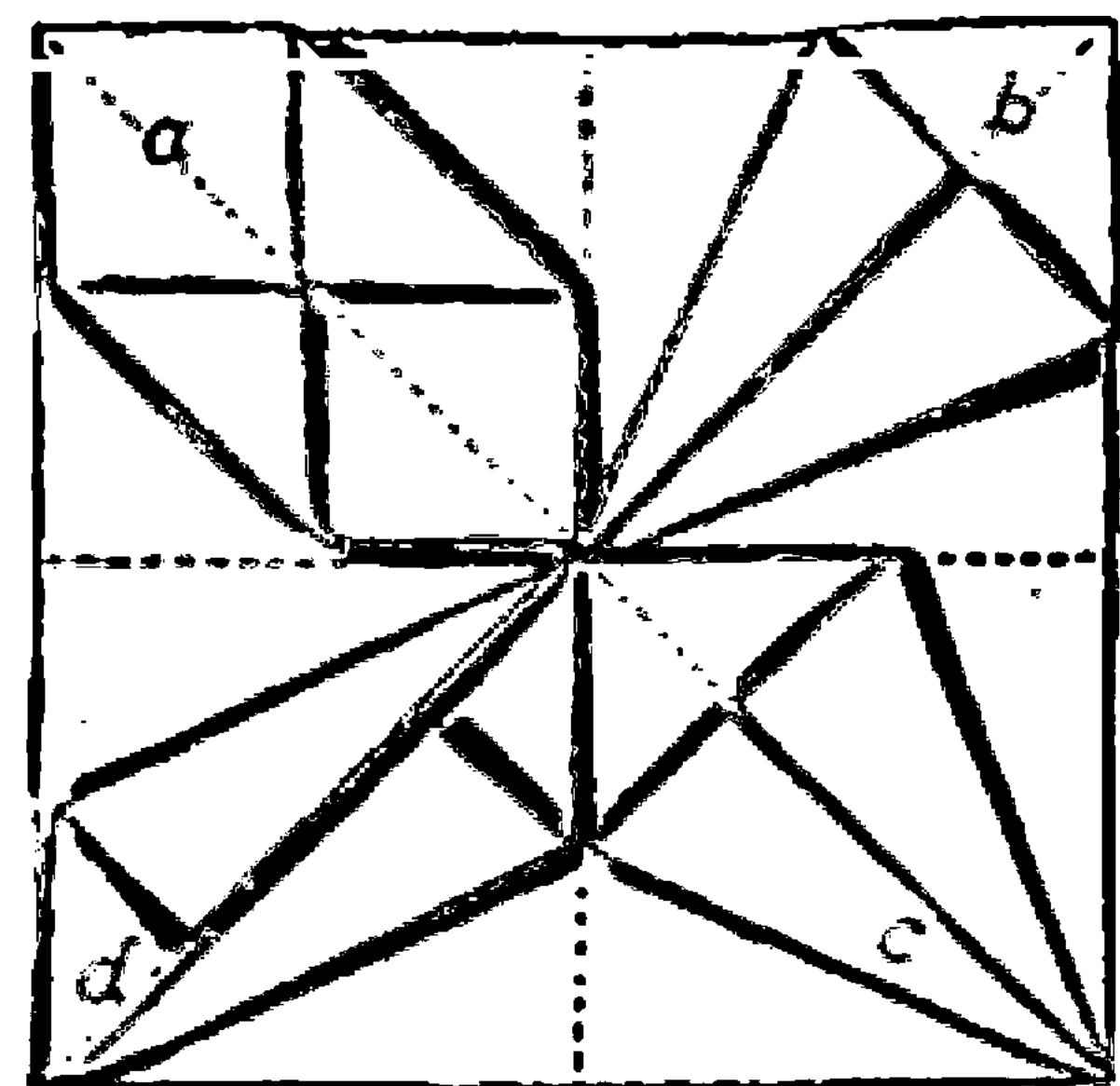
22ND PATTERN.—The opposite of the preceding: the edges under. (See *b*, No. 19.)

23RD PATTERN.—Fold *b*. No. 18. Push out the upper edges of this fold, flatten the little triangles made

by so doing, and you have the form shown in *c*, No. 19.

24TH PATTERN.—Fold pattern twenty-three, then turn the long sharp corner away from the center. (See *d*, No. 19.)

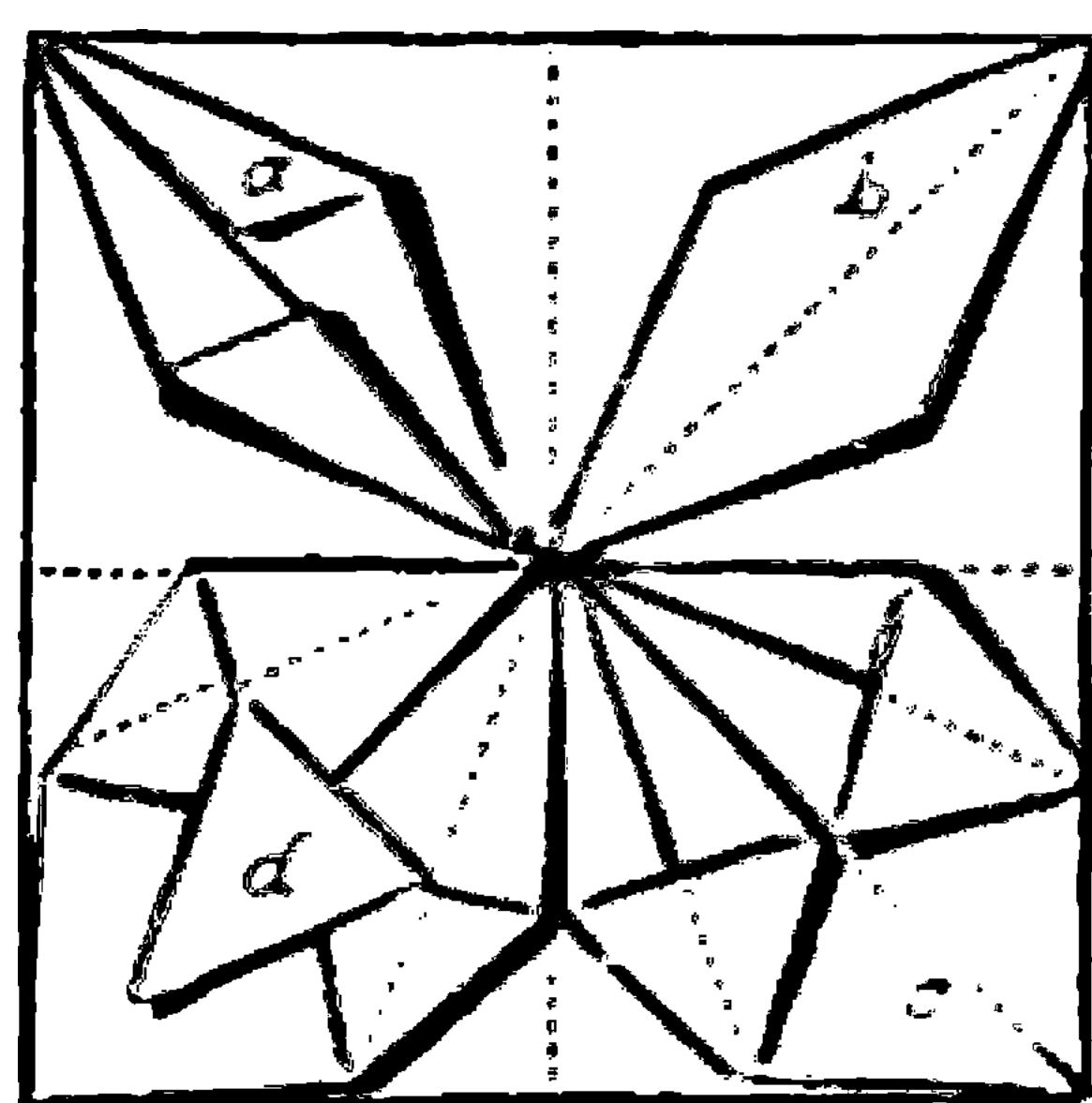
These last two designs are especially effective made of the glazed papers, and both make pretty rosettes. All of this series are suitable for mounting in books, eight or twelve of them making an attractive page. We also use them in the kindergarten for valentines, birthday or Christmas cards, frames, and for making the letters of a motto for the wall.



NO. 18.

In all this work give sufficient time for free production; encourage the children to work out designs of their own. Do not judge wholly by visible results: if the child does his very best it is enough, no matter how little or how poorly done when compared with the work of another. Can we not see that all hand-work is moral or immoral, according to the manner of doing? It may be botched in the spirit of haste and deceit, or done thoroughly with honest effort from the beginning.

KATE HAWLEY HENNESSEY.



NO. 19.

A LAWN-TENNIS SET FREE.

If you wish to learn how to obtain a Lawn-Tennis or Croquet Set free, or at very little cost, refer to page 588.

YOUR CHOICE OF OIL-STOVES,

Free of cost. See page 588.

Sanitarian.

Heart Disease vs. Functional Disorder: How to Distinguish Between Them.

SYMPTOMS AND TREATMENT.

It is very common in medical practice to meet with patients who think they have heart disease: they have had certain unpleasant symptoms, and perhaps a feeling of suffocation about the heart; the pulse, too, may have been quite abnormal at times; and there has been some difficulty of breathing, particularly when a little extra exertion was made. Some of these patients may have had a consultation with one or more physicians; and it is just possible that there has been a hasty diagnosis, and that a mistake has been made: at any rate, among patients of this class not one in ten is really suffering from any organic disease of the heart, though it may be a difficult matter to convince him to the contrary.

I do not mean to say that there is no such thing as organic disease of this organ. on the contrary, there are numerous affections of the heart that may be caused by some organic lesion in its valves or other structures; and I will also add, it requires considerable skill and experience on the part of the physician, to be able to distinguish these various affections, and to discriminate as to the changes that have taken place in the cardiac structures. In fact, one needs to be pretty well versed in physical diagnosis of the chest, in order to be sure that he will make no mistakes; he must understand thoroughly the character of the normal pulse, in order to detect any deviation from it; and he must likewise be familiar with the various heart-murmurs which are present in certain diseased conditions. In examining the pulse, there is a little instrument, recently invented, called the sphigmograph, that is very useful.

Organic diseases of the heart, or, rather, diseases that are due to structural changes in that organ, are most common among those who are addicted to the use of alcoholic drinks. They are also caused by the habitual use of tobacco,—the cigarette, especially, is said to have many victims; and there are certain medicines that are apt to cause heart disease. Red and black pepper (particularly the black) have a very deleterious effect upon the heart's action, and I might say that pungent spices have a similar effect. All stimulants impose an extra amount of work upon the heart and the circulatory system in general; and where there is much dissipation in the matter of eating and drinking, derangement of the heart is likely to follow.

We hear a great deal said, of late, about "heart failure;" and in this fast age of ours there are many causes at work to produce it. The heart itself is a very strong muscular organ, and everything about it is constructed with a view to strength. It never stops beating from the moment we are born (and before) until we die; it keeps the whole vital machinery in motion; it supplies nutrition and warmth to every part of the body. This is why it is so well constructed. But, strong as it is, it cannot endure everything: long-continued and excessive burdens will eventually break it down.

Still, the cases are relatively few in which the actual structure of the heart has been seriously damaged; but the cases are many in which there is functional disturbance, more or less severe. Indeed, the causes that I have already pointed out as sources of organic heart-disease will also produce functional disturbance. To tell the truth, there is, in nearly every instance, much functional disturbance, often

long-continued, before there is any organic disorder. Matters do not reach a climax all at once : it is often after many years of transgression that there comes a day of reckoning. Little by little the changes go on in the vital structures, like the constant dropping of water on the hard stone, which in time will wear its surface away.

But there are other causes than those I have named, which disturb the heart's action : potent among them are all those causes which tend to derange the digestive organs. I will illustrate this by an example : A patient comes to me and assures me that he has heart disease. I ask him why he thinks so : then he tells me that he suffers a great deal from palpitation of the heart ; that his heart beats so violently that it (the beating) can be seen through his clothing ; also that his pulse beats irregularly, and that sometimes it stops altogether for a short time. I examine the pulse, and find little, if any, irregularity, at least in the beats, though the pulse itself may not be exactly normal : that is to say, there is a variation in the character of the pulse, sometimes it beats regularly, and sometimes it does not ; perhaps after eating it will manifest very great irregularity, but at other times it returns to an approximately normal condition. I make a further examination of the patient, and pronounce him a bad dyspeptic. I find the blood so thick and foul that it does not circulate freely, and the obstruction in the general circulation is so great that the heart's action is interfered with. There may also be severe congestion of the brain, accompanied at times with giddiness and nausea ; the patient may have spells of being bilious, and possibly there are sick-headaches ; the skin is torpid, either dry and parched, or inclined to be clammy and sticky ; more than likely there are cold extremities ; and there may or may not be occasional distress in the stomach. Dyspepsia, let me say, has so many symptoms that we rarely find them all present in the same individual : but the point I want specially to make is, that in many of the so-called heart diseases, the real trouble is in the digestive organs.

But I have not named all the causes that will produce irregularities in the heart's action. Anything that will cause pressure upon the heart and its membranes may interfere with its function. Dropsical effusions may do this, and an enlarged liver and spleen will do the same thing. When these organs are very much increased in size, owing to chronic congestion, they cause pressure both upon the lungs and the heart, and this will produce shortness of breath, and, often, palpitation.

It may be asked, just here, whether these functional disturbances in the heart's action, caused by pressure or overwork, or perhaps both, would in time lead to organic disease, to actual lesions in the heart structures : to which I must reply, that in all probability most of the cases of actual heart-disease have been brought about in this way. First there is slight disturbance, then more severe, and by and by the trouble is serious. As before remarked, we do not reach the goal of misery at a single bound. Nature does not give up without a struggle, and often it is a long one.

The way, then, to discriminate between functional disorder of the heart and an actual organic disease, is to note, first, whether the abnormalities that present themselves are constant, or whether they are only detected occasionally. If the pulse is quite irregular at times, but strictly normal at others, this is evidence that the disturbance is functional, not organic. In other words, the pulse, in organic disease of the heart, is regularly irregular, at least in most valvular disorders. Moreover, if there is a peculiar murmur about the heart, owing to some diseased condition, this murmur would be present at all times. If these facts were borne in mind in making a diagnosis of the patients who have heart troubles (or think they have), fewer mistakes would be made,

and often much needless anxiety on the part of the patients and friends might be avoided.

As regards treatment there is no hope of a cure in organic disease of the heart, though very much may be done to prolong the life of the patient and to make him more comfortable. Patients sometimes live many years with more or less organic disorder of the heart. Irregularities of all kind should be avoided. The habits of life, in eating, sleeping, exercise, rest, everything, should be in strict accordance with the laws of health ; and the mind especially should be free from anxiety or any abnormal excitement. The patient should not dwell upon his condition, but should endeavor to take life as evenly and smoothly as possible.

But, as already stated, very few cases of so-called heart-disease are anything more than functional disturbance, due either to chronic dyspeptic conditions or to some other cause. In these cases we must treat the primary disorder : if the digestive organs are impaired, we must endeavor to restore them to normal conditions ; if there is great nervous prostration, the treatment must be such as will build up the general health ; if there are dropsical effusions about the heart, these should be absorbed, if possible ; should the liver or spleen be so much enlarged as to press upon the heart and interfere with its normal action, this enlargement or congestion should be reduced, but to bring about so desirable a result one must know the causes that have produced the congested condition. This latter is often the result of taking drug medicines, and sometimes it is a difficult matter to reduce the congestion.

Aside from conforming to strictly hygienic habits, much can often be done in the way of actual treatment : hot fomentations over the congested part, electricity properly applied, local wet compresses worn at times, thorough rubbing or massage intelligently administered,—these are some of the means or agents that can be employed in such cases.

If the patient is dyspeptic, then the treatment must be of the kind that will restore tone to the digestive organs. There are many things that will aid in this : a correct dietary, plenty of exercise in the open air, increased capacity for breathing, a certain amount of bathing and rubbing, a sufficiency of sleep, periods of rest for body and mind, cheerful surroundings, etc., etc. Many a patient has found his "heart symptoms" disappear after getting rid of his dyspeptic conditions ; and he who is troubled with abnormal affections of that organ need not regard his case as hopeless until he has first ascertained whether those affections are not dependent upon some other functional disorder.

SUSANNA W. DODDS, M. D.

Hagar and Ishmael.

(See Page Engraving.)

THE beautiful group in marble of "Hagar and Ishmael," by the great German sculptor Max Klein, is finely represented in our engraving taken from a photograph of the original.

We all know the pathetic story of Hagar the Egyptian, whose presence Sarah, the wife of Abraham, could not brook in her household after the son of promise, Isaac, came to gladden her old age. With reluctant steps and slow, the outcast bondswoman and her son make their way across the desert, where his hand was to be "against every man, and every man's hand against him."

The pathos of the Bible story would lend interest to an indifferent group ; but in this case the skill of the artist has deepened the impression which touches the heart at the contemplation of Hagar's affliction.

Artistic Notes.

Vases can be utilized as candle-holders with very pretty effect. First fill the vase with equal parts of sand and pearline: when the first candle has burned away it will be found that the circular place for the candle has become a solid socket, and that tipping the vase over has also become almost impossible. For some time New York manufacturers of lamps and chandeliers have been using Chinese and Japanese vases for lamps.

A group of vases used as candle-holders should vary in height. Increase this effect by having one candle higher, and one decidedly lower, than the rest of the group. One vase should be blue, another red, another yellow, or have these colors largely predominant, for the same reason that in arranging any group of "still life" to paint a picture from, yellow, red, and blue must be present, either alone or combined, to be chromatically complete.

A high lamp may be contrived if you are near any pottery, by obtaining from the potter a circular pot made of the same material as a common flower-pot, a foot high, and of a diameter to suit the glass base of some lamp you have or are sure you can buy easily. Any potter who can make a butter-jar can make this lamp-stand. Rub molasses—not syrup, but New Orleans molasses—all over the pot. Let it stand for a day or two, and then paint with oil tube-paints, such as artists use. Have some brown Japan dryer to mix with the paint so as to give a glossy, or glaze-like, appearance. If you wish to lighten your colors with white, use zinc white only. Avoid black. Use no chromes. A pleasant arrangement of color, without any attempt at forms, is very successful, provided you keep the darker tints near the base. If you do not like your first painting, you can paint over until the coloring suits your taste and surroundings.

A "grand" piano was recently decorated with classic pictures of the origin of music, painted on the side of the lid that shows when it is open. The god Pan is represented playing on reeds, and little Cupids are holding shells to their ears. In the distance is the blue sea, and there is a wide, band-like place of gold following the line of the lid. Strictly speaking, it is not a decoration: it is a good picture, by a good artist, painted on the wooden panel of the lid of a good piano.

To lighten a dark hall, cut out the wooden panels of the upper part of the door, and put in glass. Provide two pieces of glass for each panel. After one piece of glass has been fastened in with putty, take the door off its hinges, lay it flat on a table, and clean the glass thoroughly. Lay on the glass fern-leaves that have been pressed smoothly, taking care not to place one fern over another. Large and small ferns may be so arranged as to leave small, graceful spaces between the leaves. It will add to the beauty of this door if the ferns selected to be pressed have as long stems as possible. When this arrangement is concluded, place the second glass over the ferns, and fasten it around the edges with putty. The advantage of this fern decoration is that it will admit light, which will be softened by passing through the delicate green fern-leaves.

The Russian artist Verestschagin is a strong example of determined industry and persistent pluck in gathering material for his pictures. Painting out-of-doors, one Russian winter, he hired two Russian peasants to move his elbows for him while he painted the snow-clad mountains. Verestschagin charged them with the work of seeing that he did not freeze, and he devoted his thoughts and his fingers to painting on canvas the principal points of the scenery.

A reading-table may be constructed with very little expense, if you have a small table with a square or oblong top. If, for instance, you have one sixteen inches square, buy a sheet of pasteboard, brown and stout, rule a line in the middle, and cut, not through, but half-way through, the thick pasteboard. It is now possible to fold it together, still enough of the pasteboard must be left to hold it, hinge-like. Let the pasteboard be ten and a half inches each side of the cut, by fourteen inches the other way. Glue a piece of wood an inch high, fourteen inches long, and about half an inch thick, close to the lower edge of one outer side of the pasteboard, to form a ledge at the bottom, sand-paper the ends of the wood, and then paste paper over the cut part on the pasteboard and on the sides. Stand this on the table, with the

wooden ledge at the bottom of the front side, and it will hold a magazine or book. Gray smooth paper is best to paste on this book-rest. The table may be covered with any easily washed material, for the first requisite in a reading-table is cleanliness. The material should not be white, as that is hard for the eyes. Buff pongee silk will answer very well, as it is easily washed.

Flower-jars for cut stems and blossoms may be made by taking a tall, wide-mouthed bottle and filling it one-quarter full with small shells, before putting in the water. The white glass allows the stems to be seen, which are pretty in themselves. The shells help to make the base heavy, and look pretty, as their peculiar beauty is suited to water, their natural element. Flowers are so beautiful in themselves that a flower-holder, æsthetically speaking, should show the slender stems, which ought not to be crowded too tightly.

A temporary frieze for a summer room may be made of Japanese books of birds and flowers, which can be bought at any well-stocked Japanese store. The pages are not cut like ours, as the Japanese print only on one side of the paper; so a book will fold out sufficiently to ornament one side of a room of average size. The gilt picture-molding will afford sufficient support for this thin paper. The two book-covers may be tacked fast, and an occasional pin will hold the other leaves; or if there is no picture-molding, a few small tacks will suffice. When the frieze is taken down the tack-holes should be filled up with plaster-of-Paris and water applied with a paint-brush. This must be done quickly, as plaster-of-Paris "sets," or becomes hard, quickly. Powder color may be mixed with the plaster-of-Paris so as to match the tint of the wall.

The stamp-basket is a novel decorative contrivance for a writing-table. To make it, you need three small baskets with handles, one small bottle, with a broad base to fit in one basket, two yards of very narrow ribbon, and a tablespoonful of sand. One basket is to hold one-cent stamps, another two-cent stamps, and the third basket is to accommodate the bottle, which is to be filled with water, to moisten the backs of postage-stamps. The mouth of the bottle must be small enough to be covered by your second finger, because after you have placed tissue-paper on the bottom of the basket and poured in the required amount of sand for ballast, the bottle is fitted in, and the narrow ribbon tied on the handle and around the bottle. One single motion of the hand tips the bottle-basket sufficiently to moisten the end of your finger, by which you can dampen the postage-stamp to be applied to your letter. The ribbon is tied to one side only of the handles of the baskets holding the stamps, a long piece of ribbon being left between them, so that the stamp-holders are not disturbed by the tipping of the basket holding the bottle.

It will save time, thought, and motion, to have the baskets red, blue, and yellow, and place the one-cent stamps in the red basket, and the two-cent stamps in the blue basket. You can gild the yellow basket with bronze powder mixed with gum-arabic and water. If you choose, you can add a fourth basket, and in it keep a small piece of white cheese-cloth button-holed around with colored flax thread, with which to dry your fingers. This whole contrivance is light, and can be easily moved from table to desk.

The essence of decoration is making a pleasure of production. A picture, a piece of sculpture, purely a thing of beauty, which exists for itself alone without any relation to anything else, is fine art. Decorative art is the application, to daily life, of the principles which underlie the beautiful, in the fashioning of the objects of use, so that neither the form nor color shall offend the eye, mystify the mind, or insult the common sense. The higher the development of the individual, the more harmony of color and beauty in form is demanded; so in choosing your baskets take two-cent and one-cent stamps along, that the baskets and stamps may either contrast or harmonize in color. Cut the ends of the ribbon diagonally. Be sure there are only two ends, for fluttering ribbons distract the attention and tire the eye, and this is the reverse of the object to be attained by decoration, which is to rest, to soothe, and to charm the eye, "the window of the soul." Drop sealing-wax on the ribbon ends: this will serve two purposes; first, it will weight the ribbon so it will not move with every wave of wind; and secondly, it will obviate the risk of soiled ends, for the sealing-wax can be wiped off if soiled.

ALICE DONLEVY,

Of the "Ladies' Art Association."

Chat.

PHOTOGRAPH MENUS were the novel and charming souvenirs of a June luncheon enjoyed by a select party of friends at a beautiful country-seat noted for its picturesque grounds. The hostess is an enthusiastic and indefatigable amateur photographer, and a true lover of nature as well, and finds one of her greatest pleasures in photographing her favorite nooks under different conditions. Twelve of these views she utilized for menus by pasting on each negative two pieces of paper, one near the top, where it would interfere least with the effect of the view, and the other at the bottom, and then made blue or gray prints of them, and mounted them with broad white margins. On the upper blank space was written the menu for the luncheon, and on the lower space the guest's name; and the white margin was ornamented in water-colors with sprays of flowers or leaves or vines like those growing in the places photographed. A lake view was surrounded by leaves of aquatic plants; the picture of an arbor was framed in sprays of Virginia creeper; and a wreath of wild-flowers encircled a restful picture of a shady woodland nook. On the back was the hostess's name, the name of the country-house, and the date of the entertainment. All was the handiwork of the talented lady, and the souvenirs thus possess a value far beyond their intrinsic worth.

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THE SOUVENIR SPOON FAD has developed yet another phase, that promises to attain even greater popularity than the original idea of forming a collection of silver spoons while traveling, as mementos of the places visited. One society girl, who was early inoculated with the fancy, has a superb collection, all of the specimens unique, and many of them of historic value, which she keeps in a sandal-wood cabinet bound with gold and fastened with a gold lock and key; and she has studied up the history of each spoon, and the origin of the design on it, and many interesting things about the place where it was obtained, and all of her friends are tolerant of her "hobby," because she tells the story of each spoon in such a pretty way that she excites a strong desire to emulate her.

But silver and gold spoons are expensive in themselves, and traveling costs "a little penny," and not everyone has traveled friends generous enough to contribute to the collections of stay-at-homes, and, after all, a souvenir spoon may be a memento of something besides travel; and as the real value of a memento lies in the sentiment the material is a secondary consideration, so the new phase of the fad is a collection of wooden spoons, gifts of friends. These spoons are of ordinary white wood, and after being smoothed and improved in shape, are carved, or decorated with pencil or brush, and finished with a ribbon bow. They serve for wedding presents, as souvenirs of anniversaries, for favors and prizes, and are dainty gifts for any occasion, and if the handiwork of the donor, all the more valuable.

A "friendship" spoon is prettily decorated with ivy and forget-me-nots; Cupids and hearts and darts and bows appropriately ornament a "wedding" spoon; and a "birthday" spoon can have on the inside of the bowl a miniature calendar of the month with the special day prominent, and a ribbon wound around the handle bearing the motto "Many happy returns."

* * * * *

A "LUCKY SLIPPER" BROOCH is the newest present for a bridesmaid. The design is a golden slipper with a true-lovers' knot in jewels on the toe, and a Louis Quinze heel in enamel. The dainty trifle finds as dainty a nest in a white satin box in the shape of a slipper.

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FLOWERS AND PERFUMES are chosen by fastidious ladies to accord with the furnishings of the private apartment. One lady, to whom heliotrope tints are especially becoming, has her boudoir draped with heliotrope silk, and a large bunch of heliotrope is always standing before a marble statuette of Cupid. In a white-and-gold room daisies are the chosen flowers, and they being odorless, the fragrant perfume of spring flowers is diffused from the curtains and other draperies, which are sprayed with the extract, an atomizer being used for the purpose.

What Women are Doing.

Miss Mary Dickens, granddaughter of the novelist, has become an actress.

Adelaide Ristori is nearly seventy years old, but still preserves her clear voice and her erect figure.

Fully 800 working-girls every week enjoy the benefits of the Boston Y. W. C. A. gymnasium.

About 100 women stenographers and typewriters in New York City are organizing to improve their condition professionally.

Miss Antoinette Knaggs, a young college-bred woman, owns and manages a farm of two hundred acres in Ohio.

At Alexandra College, Dublin, and Holloway College, England, both female colleges, a department of horticulture has been added to the curriculum.

Senator Peffer's eldest daughter has been taught to set type, and his three other daughters are skilled in stenography, typewriting, and book-keeping.

Mrs. Horace Goodwin, of Boston, has invented a spoon for measuring medicine, with which the exact quantity can be given without spilling.

Miss Lizzie Rogan, of Birmingham, Conn., has been made an active member of the "Storm Engine Company." She is the first woman in the State admitted to the fire department.

Miss Annie Chamberlain, a blind girl, has been trained as a *masseuse*. Everyone knows how sensitive is the touch of the blind, and it is found that some patients prefer the services of a rubber who cannot see.

Verina Morton, a young colored woman, a graduate of the Woman's Medical College of Philadelphia, has just entered upon the practice of her profession in Brooklyn. She is the first woman of her race to become a regularly educated physician.

Karolina Pettersson, a widow of Vadstena, Sweden, carried the mail between the latter place and Hof for twenty-two years, and has now retired at the age of sixty. During that time she walked on foot over forty thousand miles.

Mrs. Sarah Bristol Cooper was chiefly instrumental in founding the twenty-five free kindergartens of San Francisco, where more than two thousand street children are now being trained. Mrs. Leland Stanford contributes about \$30,000 annually to the support of these schools.

Miss Clara Langdon Woodward, of Chicago, who was recently married to Mr. Chamberlain, is a direct descendant of Miles Standish, and has in her possession some of the tea the Bostonians tried to throw into Boston Bay, an easy-chair three hundred years old, and a number of other interesting and historical relics.

Miss Jessie Sudlow, a seventeen-year-old South Carolina girl, has won the prize offered by the "Times" of Manchester, England, for the best composition on "The Best Book, and Why I Like It." There were competitors from France, Germany, Canada, South America, Mexico, and the United States. Miss Sudlow's subject was "Ivanhoe."

Miss Amanda T. Jones is president of the "Woman's Canning and Preserving Co.," of Chicago, which is said to have a capital of \$1,000,000, and has one plant in operation in Chicago which can put up five hundred cans daily. They have also decided to build a factory for the canning of uncooked foods.

Mrs. James T. Fields, of Boston, the widow of the publisher, is said to possess one of the largest private literary collections in the world. In the library are quantities of valuable original MSS. and autograph letters, and in the garden, at the rear of the house, grow trees that were planted by many famous authors and public men.

Miss Mollie E. Church, who has been at the head of the German department of the colored high school of Washington, D. C., for several years, has been offered the position of registrar of Oberlin College. Miss Church graduated from Oberlin in 1884 with distinguished honors, being specially mentioned for her excellent record in Greek, and then traveled and studied abroad for three years. If she accepts the offer from Oberlin, she will be the first colored graduate, it is said, of the older universities, to become a member of the faculty of her college.

WOMEN AND BASEBALL.

"THE NATIONAL GAME" is usually an enigma to the average woman who watches a match, and she wonders "What there is in baseball, anyhow, that makes the men and boys so enthusiastic over it!" An exhaustive and splendidly illustrated article, written by one baseball enthusiast and illustrated by another, will appear in our August

number, which will furnish the key to the uninitiated, and so plainly show by the numerous pictures every stage of the game as it progresses, that anyone may clearly see how baseball is played and learn all about it; and after reading the article a woman will be as crazy as any one of the other sex to see a baseball match.

The World's Progress.

CURRENT TOPICS, NOTES AND COMMENTS ON EVENTS OF THE DAY.—INTERESTING SUBJECTS AND NOTABLE THINGS WHICH HAVE OCCURRED DURING THE PAST MONTH.—CONTEMPORANEOUS HISTORY FROM A FAMILIAR POINT OF VIEW.

The Chilian War.

The Chilian war which now is destroying a beautiful and progressive country is regarded by partisans of the Government as a reactionary intrigue against republican institutions. Like other Spanish-American republics, Chili was governed by an oligarchy; but there was not a less democratic government in South America. The President was elected for five years by indirect suffrage, and while ineligible for a second term was enabled to nominate his successor. The executive authority was shared with a Council of State of eleven members, six of whom were elected by Congress, and five nominated by the President. A President was succeeded by a brother-in-law or by a nephew, and a few aristocratic and wealthy families ruled the State. But with the close of the war with Peru and the conquest of the nitrate provinces, the tyranny of the land-holding oligarchy was overthrown, and Jose Manuel Balmaceda became the leader of the masses against the classes, and when elected President he filled the civil service with ambitious politicians who had never before been in office. Then the Conservatives, fearing that President Balmaceda, being leader of the Liberals, would nominate a liberal as his successor, attempted to subordinate Executive to the Legislative authority, which, according to the Balmaceda partisans, was an attempt to subvert republican institutions. This is the version of the cause of war according to friends of the Government. According to this, Balmaceda is fighting the people's battle and defending the Presidency and republican form of government against monarchical innovation.

But the insurrectionists consider the revolution a stand made by patriots against personal government and political usurpation, and represent President Balmaceda as an arbitrary and unprincipled dictator. The Deputies and Senators met on January 1, and solemnly deposed the President for violating the constitution. The revolution followed, and all the horrors of war have been devastating the country since. Now the United States is actively interested also, for the Chilian merchant-steamer "Itata," armed as a cruiser, and forming part of the naval forces employed by the insurgents, attempted to take on a cargo of arms and ammunition at San Diego, California, and as the Itata had thus broken the neutrality laws, the United States cruiser "Charleston" was ordered to seize the Itata, and failing in this, was sent in pursuit of the insurgent steamer, the right of the United States to thus pursue and capture a vessel on the high seas being warmly debated by the press and public. As the matter stands now, the Itata case promises to be one of the most famous in the annals of international law; and whatever the outcome of the Chilian revolution, which promises to be a long conflict, the United States cannot fail to be most interested, not only in the results, but the resultant incidents of the struggle.

Christian Creeds.

The active mentality and vigorous thought of the times leavens all the affairs of men, and it is not surprising, therefore, that religious questions should be brought forward into the light of new thought, and that the Christian consciousness of the age should be deeply tinged with it. The so-called progressive theology of the Congregational churches, the movement to revise the standards of doctrine in the Presbyterian Church and the present widespread discussion in that Church of the views of Dr. Briggs, as heretical or otherwise, the Broad Church movement in the Protestant Episcopal Church, evince a remarkable growth of liberal ideas and a spirit of inquiry in all denominations. The present session of the Presbyterian General Assembly marks a distinct phase of religious thought in registering the judgment of the Church regarding the fitness of Dr. Briggs to be a professor in one of the Church's theological seminaries, and also in regard to the revision of the Westminster Confession, which, however much the fact may be deplored by the conservative element, no

longer expresses the full thought and belief of the Presbyterian Church. In one respect the advocates of revision have a strong argument in their favor, in claiming the right to revise what the conservatives maintain were once for all formulated by the Westminster divines, never to be modified or altered; that is, the assertion of the Church's right to review its Creed is, in point of fact, an assumption that the living Church to-day possesses the same measure of inspiration as those divines, and that all symbols of belief are human, and so subject to change. The more conservative may easily intrench themselves in the strongholds of time-honored Christian creeds, and discipline such individuals as adopt views from without; but there is no doubt that even in the heart of modern Christianity a new activity of thought is developing, the future of which will doubtless lead the thinking body of Christians to weigh and sift much that on the one hand is considered as faith in traditional interpretation of the Scriptures, and on the other, as prejudiced opinion.

Aluminium.

The newer electric processes for the manufacture of aluminium have called much attention to the use of that metal and its adaptability to various purposes for which bronze and iron are used. Aluminium is comparatively a new metal, having never been produced commercially until forty years ago, and then at a price higher than silver. As for its physical properties, aluminium is a bluish-white metal, gray when it contains much silicon, silvery white when it has been treated with chlorhydric or fluorhydric acid and washed with water. As a conductor of electricity it stands as 50 to 100 of copper, and this is very much lessened by the addition of foreign metals. Its specific heat is enormous, about 0.22; as a conductor of caloric, it stands at a little more than half as much as copper. Its point of fusion is at 625°. Pure aluminium is very malleable: it can be beaten to leaf-metal like gold and silver, or drawn out into very fine threads, of which, until lately, the only use made was in the manufacture of tiny weights, but which are beginning to be used in fabrics, fringes, etc. It can be forged, wire-drawn cold, stamped, and made into *repoussé*. Its elasticity and density are such that a bar of aluminium suspended from a cord, when struck emits a very pleasing sound, and the same is true of cups or goblets of aluminium, so that it may possibly be used in bell-making. From a chemical point of view aluminium occupies an intermediate rank between the precious and the common metals. It is very slightly susceptible to ordinary chemical agents: it does not oxydize by cold, nor dry air, nor damp air; sulphuric and nitric acids affect it but slightly; sulphurous gas does not stain it; it resists acetic and citric acids so that it is available for table service; in the latter case it is best not to expose it to the action of soda water and alkalis in general. In a molten state its properties are very different: it oxydizes readily, and enters into very stable combinations, which only decompose under the effect of powerful chemical or electric actions. It is remarkable that aluminium should have been so little known in comparison with the progress of other metals; but it is doubtless due to the imperfect knowledge of electrical agents hitherto possessed. The present method of manufacture is by incandescent electrolysis.

An Unhappy Queen.

The sad story of Servia's beautiful ex-queen, who has just been expelled from the kingdom over which she once ruled, and where her son is to sit on the throne when he comes of age, reads like a chapter from some romance of the Middle Ages, in which royalty was involved in an atmosphere of dangerous intrigue and diplomacy. King Milan of Servia married, in 1875, Natalie Keschko, the beautiful daughter of a Russian colonel, who, it is said, overruled objections against the match which were raised by Natalie. However, the unwilling bride made a most devoted wife, and a son, Alexander, the present young King of Servia, was born to them, August 14, 1876. The King, however, soon grew neglectful of his wife, and at last applied for a divorce, which was finally obtained through the violation of the Servian law and through political influence. The unfortunate Natalie vainly protested, and public opinion was so strong against Milan that he finally abdicated, and it was arranged that during the minority of King Alexander his parents should both leave Servia. Milan agreed, but the queen refused obstinately: and in the early part of May the three Regents expelled her from the kingdom and caused her to be sent beyond the frontier. The expulsion of the unhappy queen caused great excitement in the capital, Belgrade, where she was greatly beloved. Her son will probably recall her to Belgrade after he has reached his majority and has become the real ruler of Servia. The Government fears that Queen Natalie will attempt to return to Servia and put herself at the head of her supporters. Whatever political prudence would seem to dictate, it is unquestionably a bitter trial to a young mother to be forbidden all intercourse with her

only child, and sympathy for poor Natalie is so widespread as to cause much uneasiness in Servian authorities. Young, beautiful, rich, and free, Natalie, ex-Queen of Servia, is still a most unhappy woman, and in the cup of her affliction there is little left for her to drain. She is about to return to her Russian estate, and her progress is marked by assembled crowds of sympathizers.

The Ocean Cattle-Trade.

A voluminous report reviewing the history and present condition of the trans-atlantic cattle-trade has just been completed by the English committee which has just been engaged in investigating it. The committee's report admits that it is difficult to arrive at the exact truth as to the cruelties to which it is alleged cattle on board ships are subjected, because it is to the interest of all concerned to conceal the real facts. In regard to the management of cattle in transit across the ocean, the report admits that the foremen engaged for the voyage are usually experienced and skillful men, but that frequently men who are employed under these foremen, to feed, water, and otherwise attend to the cattle on shipboard, are unskilled, and in many instances totally unable, physically, to endure the exertion, privations, and hardships of a rough voyage from America to England. They are also often badly paid and fed, and some of them are simply working a passage over without pay, being known as deadheads, or "stiffs." The committee recommend that, in every case, the foreman should have not less than four competent assistants for the care of each one hundred head of cattle, and that they should sign the ship's articles and be directly under the authority of the captain. Proper accommodation for the storage of food for the cattle on board should be provided, and in every vessel a sufficient supply of fresh water, with proper means for distribution among the cattle, should be insured. The recommendation is also given to insurance companies to remove the existing impression among cattle-men that insurance agents desire them to keep suffering cattle alive, and that they will not pay the policies if cattle are slaughtered on board. In conclusion, the report says that cattle should not be carried on bridge, decks, poop, or upper deck, but under shelter, which should be of such character as to form part of the permanent structure of the ship, and not on hatchways or on any place to impede the navigation of the ship, nor on lower decks, unless adequate means of artificial ventilation be provided. In other respects, the report gives an implied approval of the United States regulations for the inspection and shipment of cattle.

The International Postal Congress.

The International Postal Congress of the Universal Postal Union is now holding its fourth quinquennial convention in Vienna. It is composed mainly of officers prominently connected with the postal administrations of the countries adhering to the Union. The object of the Congress, as described by the Austrian Minister of Commerce, is to establish the basis of a scheme for linking together the civilized nations of the world in a single postal federation. A matter of interest to the United States, which will be brought before the convention, is the proposition to abolish or reduce the charges made by the countries of the Union for conveyance of mails in transit over the territory of one or more of them to the country of destination. A strong effort will also be made to secure the adoption of an international postage-stamp, good for the prepayment of postage in every country belonging to the Postal Union.

The Beecher Monument.

The statue of Henry Ward Beecher modeled by Sculptor J. Q. A. Ward is about to be placed in position on the green plot in front of the City Hall in Brooklyn, N. Y. The statue, which is of bronze, is about nine feet in height, and represents Mr. Beecher standing erect in an easy attitude. He is shown wearing the cape overcoat which all who have seen him often so well remember. In his left hand he holds the familiar Kossuth hat. The statue will rest on a granite pedestal, which in turn stands on a base having three steps, making the total height of the monument about eighteen feet. Leaning against the right side of the pedestal is the figure of a negro woman in an attitude of sorrow, the impression to be conveyed being the grief of the colored race over the loss of such an earnest worker in the cause of the abolition of slavery. At the left of the pedestal are the figures of a boy and a girl, the former lifting the girl in his arms to place a string of flowers at the feet of the statue. Mr. Beecher's attitude is indicative of fearlessness, yet the pose is also suggestive of his genial character.

Postal Savings-Banks.

The European system of post-office savings-banks, wherever they have been introduced, has been the means of inducing thousands of persons in the humbler ranks of life to save their earnings. In this there has been a large steady increase throughout Great Britain ever since the experiment was introduced. Japan has had them since 1875, and her working people deposit over \$20,000,000 a year into them for interest and safe-keeping. The present Postmaster-General is an enthusiast on the subject of postal savings-banks, and believes that postal savings-banks would be a blessing to the common people, whose earnings are easily dissipated in the unnecessary, as well as the necessary, things of life, and that their existence would incite them to the

habit of saving, by the convenience with which it can be done. He would have the people of these United States request the Post-Office Department for facilities of depositing savings in local post-offices, with "Uncle Sam" as custodian, investor, and responsible treasurer of the money. This scheme is not original with Postmaster Wanamaker, but he has had it presented to Congress, and in his annual report again calls attention to it. His general plan is based upon the system adopted in Canada and England. The bill presented to Congress provides, in substance, that none but money-order post-offices can be authorized to receive deposits. No single deposit can be less than ten cents, nor more than one hundred dollars. No more than one hundred dollars can be deposited by one person within any period of thirty days. The amount due a depositor is limited to five hundred dollars. Money deposited is to be immediately forwarded to some Government depository by the postmaster who receives it, and invested by the Secretary of the Treasury, in interest-bearing securities issued or guaranteed by the United States, and if these cannot be purchased without loss to the depository, then in approved State securities. The account of each depositor is to be kept at the central depository in Washington, where interest at the rate of two per cent. per annum is computed and credited. All withdrawals are by checks issued under the authority of the Postmaster-General. The expenses of the system are to be paid from the profits of the business. There is force in Mr. Wanamaker's suggestion that postal savings-banks are particularly desirable in States that have no laws authorizing and regulating savings-banks. There will be one advantage about the postal savings-banks: if established, they are not likely to be affected by financial panics.

A Hebrew Exodus.

As a result of the Russian illiberality towards the Hebrews, a veritable exodus of Jews from Russia is in progress, and it is said that England is becoming alarmed at the large numbers of Hebrews who are seeking refuge in Great Britain. However, the manager of a shelter provided for the reception of Hebrews, in London, says that fully nine-tenths of the destitute arrivals are re-shipped to the United States or the British colonies. As to the question of how destitute Hebrews gain admission into the United States, the reply was that they were provided for before being shipped. It would seem from the way matters now stand in Russia, that about the only thing Hebrews can do is to emigrate, or starve. The fact is that Russians are angered because the foreign Hebrew bankers who have helped them for years now refuse to do so because the promises made to Sir Moses Montefiore, when he visited St. Petersburg, have not been fulfilled.

Mexican Trade.

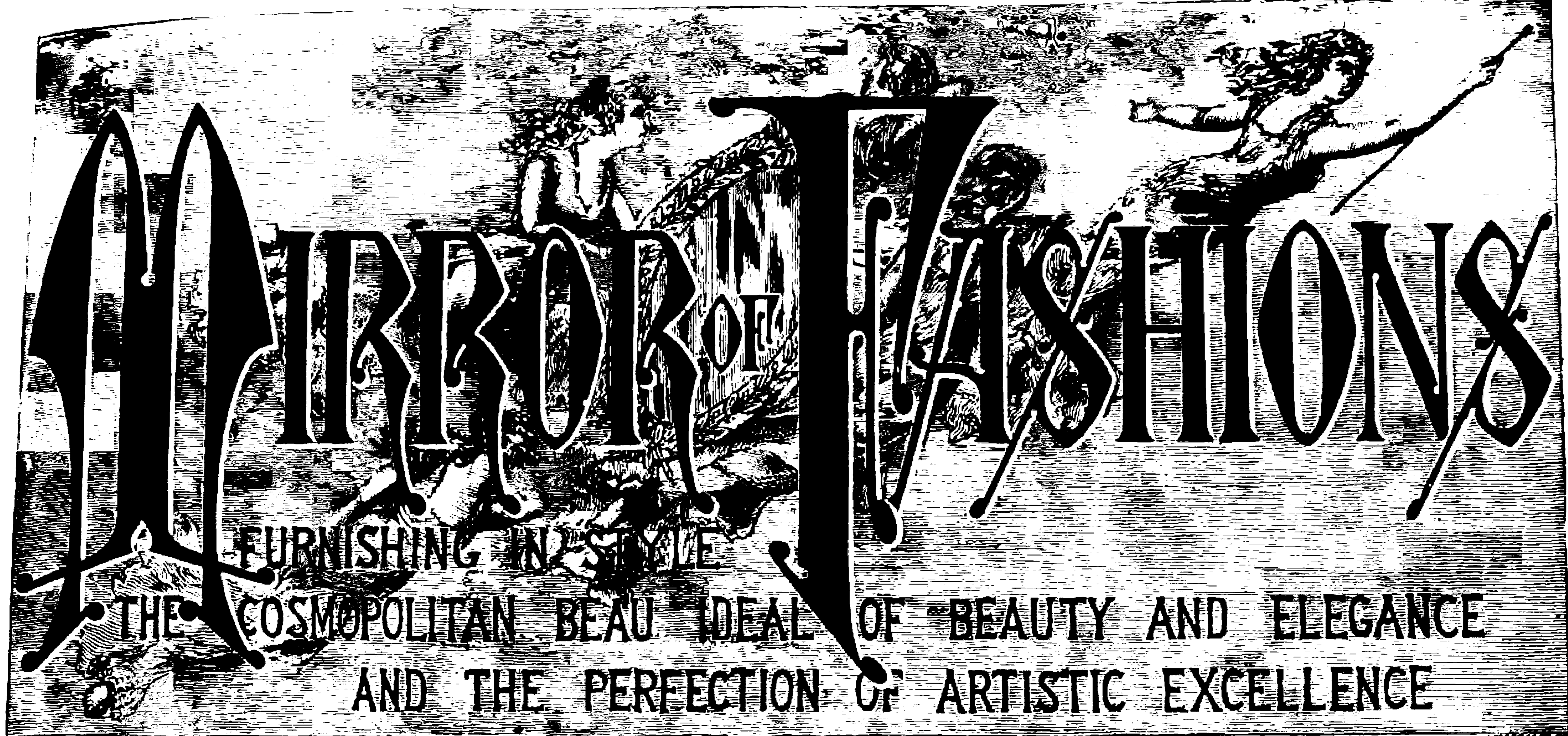
A communication from Senor Romero, the Mexican Minister, relating to the trade with Mexico, has just been transmitted to the Treasury Department. Minister Romero presents in this communication a number of statistics of trade between Mexico and the United States, which he adduces as proof that the railroad trunk-lines connecting the two countries are, as was expected, considerably increasing trade. It appears that Mexico's commercial relations with the United States differ from those of other American republics in that the principal trade of almost all of them is with Europe, while both the import and export trade of Mexico is chiefly with the United States. In 1889 Mexico's exports amounted to \$62,499,338, of which 80 per cent. went to the United States. Owing to the incompleteness of the reports of the Statistical Bureau of the United States Treasury, the figures given for the exports made by railway over the frontier are little more than one-half of the real exports.

Washington's Mother.

A new monument is to be erected over the grave of Mary Washington, the mother of George Washington, at Fredericksburg, Virginia, by the efforts of a number of patriotic women who have organized themselves under the name of the Mary Washington Monument Association. The plan is to have a large number of steel engravings made from an oil painting of Mary Washington now in possession of descendants of George Washington living at Fredericksburg. This portrait was painted in England, and is the only likeness of Mrs. Washington in existence. The face of the picture was slightly damaged in bringing it to this country, and fifty-five years ago an effort was made to repair the injury, but with very little success. The proposed engravings will be quite large in size, and prepared by a New York firm of well-known ability. Special arrangements will be made for their sale at the World's Fair.

Tooth-Pulling in China.

In the report of the physician in charge of the Ningpo Missionary Hospital there are some interesting observations on tooth-pulling in China. It seems that Chinese teeth are much more easily extracted than those of Americans or Europeans. The native dentists are said to possess a wonderful powder which is rubbed on the gum over the affected tooth. In about five minutes thereafter the patient is told to sneeze, whereupon the tooth falls out. The physician above referred to, Dr. Daly, has offered a reward of one hundred dollars to any one performing the operation in this way in his presence, on condition that he is allowed to choose the tooth and examine the mouth before and afterward. Thus far no one has been found to consent to perform the operation on these conditions.



REVIEW OF FASHIONS.—JULY.

PATTERN ORDER,

Entitling holder to a Pattern, will be found at bottom of page 589.

MIDSUMMER TOILETS are more charming than ever this season: they are light and bright and altogether appropriate in design and color, and the combinations of colors, both in "fancy" fabrics and in solid-colored goods combined in costumes, indicate the rapid growth of artistic taste in the matter of dress. Some of the least expensive dresses are studies in color-effects that even a fastidious artist could not criticise adversely. Light-quality fabrics and light colors are almost universal, and, excepting for "knock-about" wear, a dark or somber colored toilet without its enlivening touch of color is so rare as to be remarkable.

One of the favorite methods of producing some of the most exquisite color-effects is by making-up the thinner goods—lace, *crêpe*, *chiffon*, and *crêpon*,—over a foundation of a different color, as pale yellow or pale green over pink, primrose pink over yellow, lilac over pink or pale green, etc.; and cream and black laces are used over all colors and tints, light and dark. One of the daintiest toilets shown this season, remarkable also for its simplicity, is a pink dimity with cream-white daisies over it, which is made over a foundation of pink satine. The skirt has the front draped just enough to avoid a perfectly plain effect, and the back is gathered full, and at the foot there is a gathered flounce of cream-white lace about six inches deep. The waist is slightly full in the back and finished with a sash of pink satin ribbon, and the front has a full surplice vest of the dimity, which shows between cutaway jacket-fronts of cream lace. The puffs on the sleeves are made of strips of dimity alternating with lace insertions of the same width, and the tight lower parts are of lace lined with satine. The neck is cut a little low back and front, and finished with a falling frill of the lace. This model would serve for the least expensive goods, and the effect could not fail to be becoming if the colors were well chosen.

Black grenadine, piece or flouncing lace, and light-quality dotted net, like that used for veiling, enjoy about equal favor for summer gowns, and are almost universally made up over a color, stem-green, sulphur, pale gray, pearl, or coral pink, although there are some very elegant all-black

lace toilets made up over satin and profusely trimmed with jet. Gold galloon and jetted passementeries are also used on these dresses, the garniture set in bands or stripes on the black foundation and gleaming through the transparent fabric. An effective arrangement is a panel at each side of the foundation skirt, formed by three or five perpendicular rows of trimming, and stripes back and front on the silk foundation-waist, brought in narrow at the waist-line. A Cleopatra girdle finishes the waist. The same idea is carried out with colored ribbons. In many lace and net dresses the sleeves are of the foundation material with lace garniture at the wrists only.

Gored demi-train skirts (like that illustrated in the March number) are made in India and changeable taffetas silks and trimmed at the foot with a lace flouncing from seven to ten inches deep, or with a cluster of three narrower and fuller flounces, and are worn for the house with dressy waists of silk of a contrasting or harmonizing color, having a deep lace flounce set on the lower edge and reaching about one-third the depth of the skirt. These give an effect of height to even a quite short person,—a desirable point at present. Yellow, rose, lilac, and other flower-tints are liked for these waists.

For all but the most practical and tailor-made costumes, the neck with a small V back and front is preferred, and, as a rule, is finished with a flat fold of ribbon, *crêpe* or net; but unless the neck and throat are especially pretty, a fuller garniture, softening the outline, is preferable. An unusually becoming finish for low-throated waists is a collarette made of two rows of embroidered silk muslin about three inches wide, sewed to the edges of a ribbon band about half an inch wide. This is passed around the neck, fastened in front with a jeweled pin, and carried down the front to the belt, forming a full jabot.

Dark blue serge continues to be the favorite material for boating and yachting costumes, and the designs of the waists vary from the severely plain demi-long coat with slashed tabs all around, and open in front a white linen shirt front, shield-shaped and stiff, to the jaunty cutaway, sleeveless jacket worn over a full waist of white serge with full sleeves finished with deep cuffs of the blue. The skirt is invariably simple, either gored or in straight breadths, but not very full. Pale blue is also a favorite combination with the dark shade.



Ladies' Costumes.

STANMORE CAPE.
DEMI-TRAIN SKIRT.

CLITHEROE COAT.
CLITHEROE SKIRT.

Ladies' Costumes.

FIG. 1.—Walking or driving costume, arranged with a dress of figured India-silk (with plain gored demi-train skirt, like that illustrated in the March number, trimmed with deep fringe at the foot), and the "Stanmore" cape made of silver-gray broadcloth, the edges pinked, and the yoke trimmed with silver braid. The hat is of blue tulle trimmed with white lilacs. The cape pattern is fully described on page 569.

FIG. 2.—House-dress of golden-brown surah, made after the models of the "Clitheroe" coat and "Clitheroe" skirt. The back view is shown in the small illustration on this page. The foot of the skirt may be trimmed with gathered bias ruffle as shown on the front view, or with narrow lace, as on the back view. The revers, collar, and sleeves of the coat are faced with rose-pink surah, and a scarf of black lace is tied about the neck and forms a full



Clitheroe Coat.
Clitheroe Skirt.
(BACK.)

trimming between the revers. A lace flounce imparts the coat effect, but the pattern contains a skirt-piece, so that it can be made of the dress material, if preferred. See page 569 for full particulars about the pattern.

Laces Sleeve.

AN especially pretty sleeve to be made in thin fabrics, particularly desirable if the arm is thin. Instead of the fullness standing high, it is allowed to droop naturally. See page 569 for a description of the pattern.



Laces Sleeve.

Tennis Blouse.

FOR all games and outdoor exercises, or for negligé use indoors, this is an excellent model for an appropriate and thoroughly comfortable garment. It is suitably made in silk, woolen, or washable goods, according to the purpose it is to be used for. The back is arranged the same as the front. The pattern is fully described on page 569.

Tennis Dresses.

SUMMER serge and light-weight flannels in white, blue, red, pink, and stripes of all these colors, are the goods usually selected for tennis-gowns, which are made almost invariably with blouse and plain full skirt. All-white is

certainly the most charming of tennis-dresses, but the difficulty of keeping it clean often leads the prudent tennis-playing girl to make her skirt of blue or crimson serge and wear a white or striped blouse. A pretty effect is often obtained by making the gown of white, with a band on the skirt, and collar, cuffs, and belt of striped red-and-white or blue-and-white flannel.

There are also, for warmest weather, lovely light blouses of serge-silk, which can be worn with flannel or serge skirts, as a tennis dress, and a "blazer" to match the skirt is then necessary (in fact is always desirable) in case of sudden changes of temperature.

The inexpensive "outing" cloth makes excellent tennis-suits for real everyday service, as it can be laundered much more easily than flannel and looks very much like it. One thing the laundress should be reminded to do, that is, iron it on the wrong side, and on flannel.

Jersey, or woven knitting, cloth is also sometimes used for tennis-suits, but, as it has a clinging tendency, is not always preferred. Light-weight woolens, such as albatross and veiling, are sometimes selected for tennis-dresses, but their use is better confined to the blouse, with heavier material for the skirt, which will not so easily fly about as when of lighter weight goods.



Tennis Blouse.



Fashionable Head-Wear.

Leone Waist.

THIS style of waist can be worn with any kind of skirt for a morning house-dress, or it is suitable for tennis, boating, and other sports, worn with a simple skirt of appropriate material. It can be made in silk, woolen, or washable goods. At the back is a short yoke, with very little fullness below. A belt can be worn instead of the girdle, and the part below the belt can be tucked under the skirt. See page 569 for directions for the pattern.



Leone Waist.

Mila Waist.

(See page 569.)

THE simplicity of this design and its becomingness for undeveloped figures make it especially desirable for seasonable fabrics. It is the same back and front, and may be made in the same material throughout, although a combination is usually more effective. The pattern is described on page 570.

Women and Baseball.

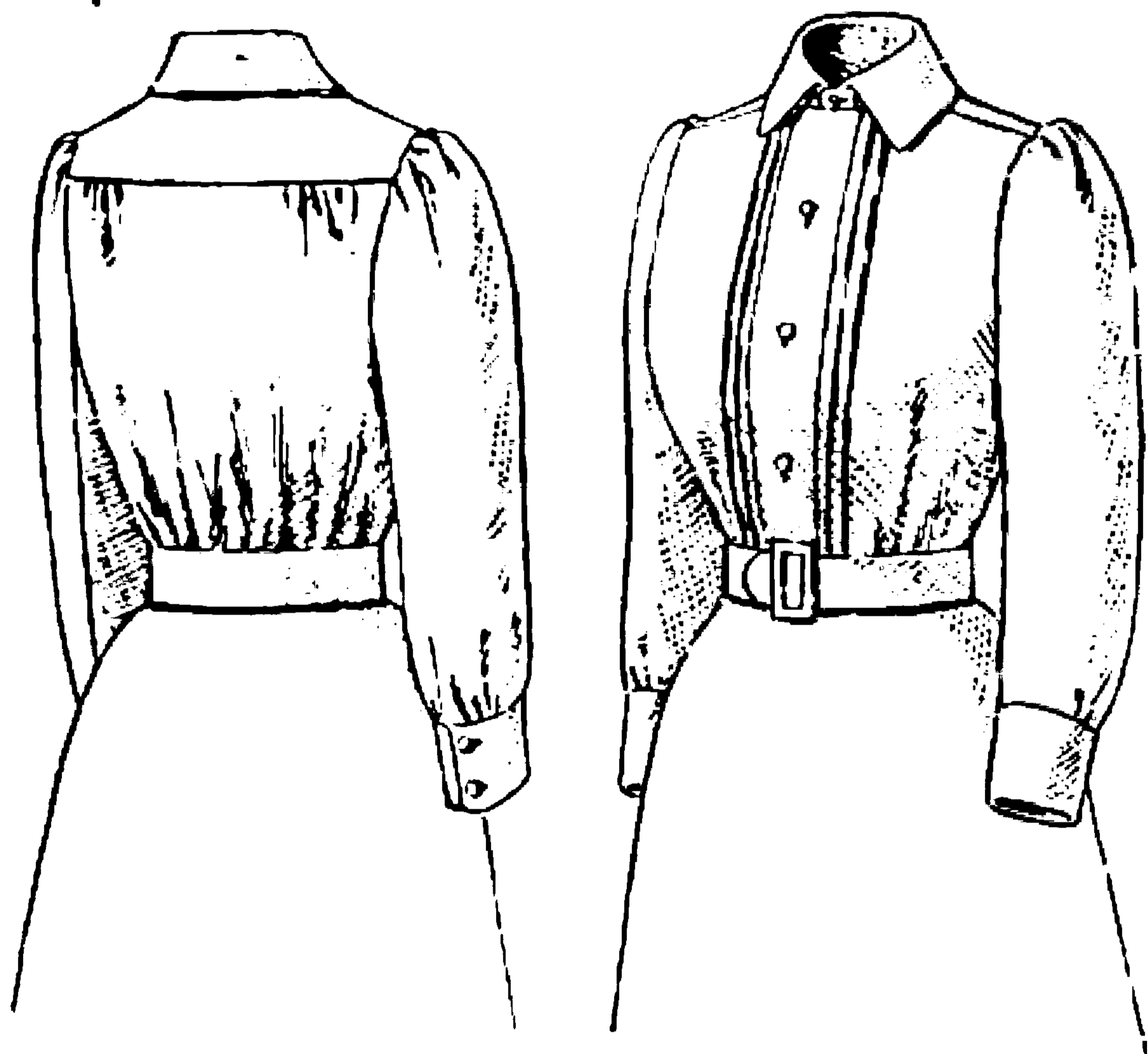
"THE NATIONAL GAME" is usually an enigma to the average woman who watches a match, and she wonders "What there is in baseball, anyhow, that makes the men and boys so enthusiastic over it!" An exhaustive and splendidly illustrated article, written by one baseball enthusiast and illustrated by another, will appear in our August number, which will furnish the key to the uninitiated, and so plainly show by the numerous pictures every stage of the game as it progresses, that anyone may clearly see how baseball is played and learn all about it; and after reading the article a woman will be as crazy as any one of the other sex to see a baseball match.

A linen shirt-waist and a "blazer" are often worn with a tennis-skirt, and for some figures the result is certainly more becoming than the blouse.

though it is certain nothing can be more convenient or comfortable for active exercise than the latter.

Fashionable Head-Wear.

No. 1.—Plateau bonnet made of black lace and jet *bandoaux*, with pale pink roses across the front, under the lace, and at the back. Rose-colored ribbon strings.



Shirt Waist.

No. 2.—Young lady's coiffure, arranged with a loose knot at the back and in light curls in front, and a fillet of pale blue ribbon with a bow in front.

No. 3.—Little girl's cap of white lawn, with a full ruching of plaited lawn.

No. 4.—Girl's hat in Tam o' Shanter style, made of striped surah,—cream, blue, and gold,—with a visor of plaited *crêpe*, and trimmed with bows of ribbon matching the surah.

Shirt Waist.

THE favorite style of waist for outdoor sports, worn with a cutaway jacket, or "blazer," or without. Silk, cotton, linen, or light woolen goods are used for it. It extends a short distance below the waist-line, the extra length being worn under the skirt, and held in by a separate belt. The pattern is in sizes for ladies and misses. See page 569 for description of pattern.

Standard Patterns.



Adwilda Drapery.

Kilt-Plaited Skirt.

Aydia Sleeve.



Ismanta Jacket.

Orra Basque.

Elfrida Sleeve.



Diantha Waist.

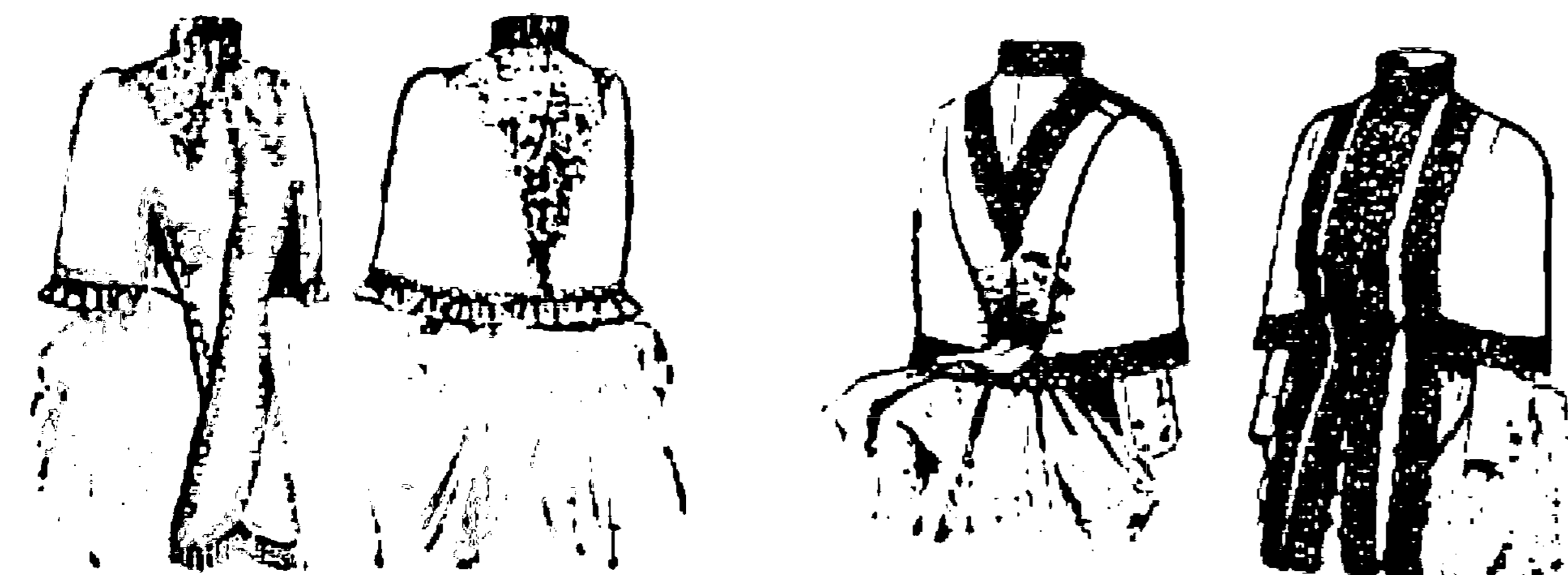
Felicia Mantelet.



Adwilda Basque.

Manhattan Bathing-Suit.
Rover Bathing-Suit.

Berenda Waist.



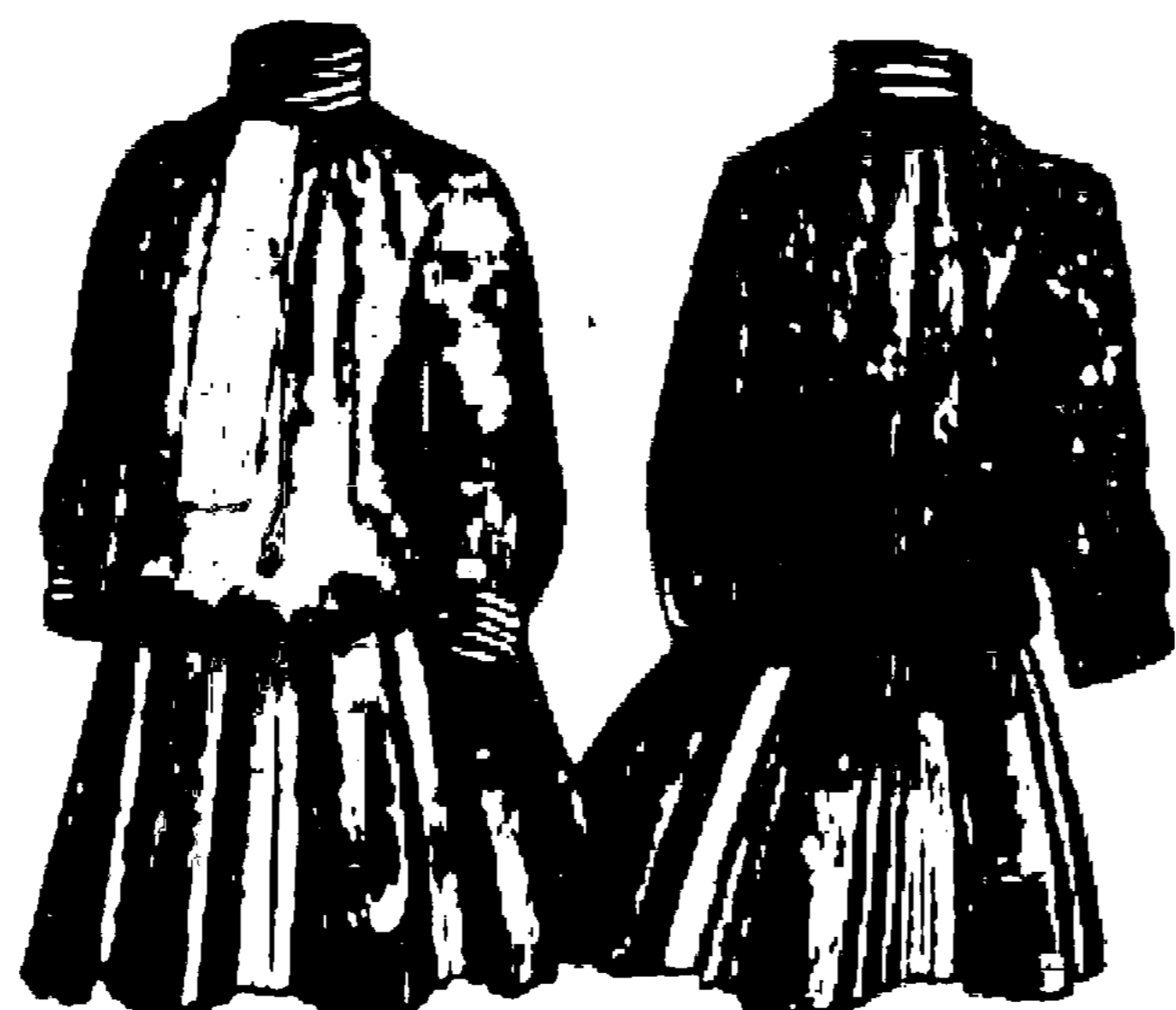
Bianca Mantelet.

Stephanie Mantelet.

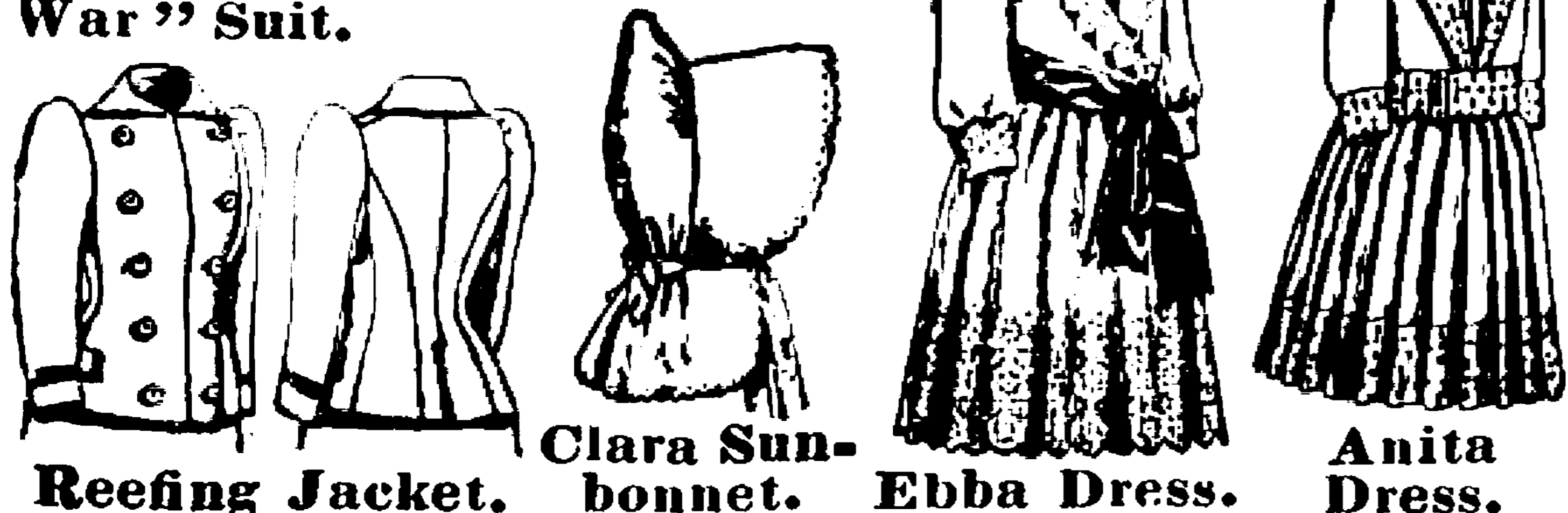


"Man o' War" Suit.

Ernest Suit.



Ailsa Dress.

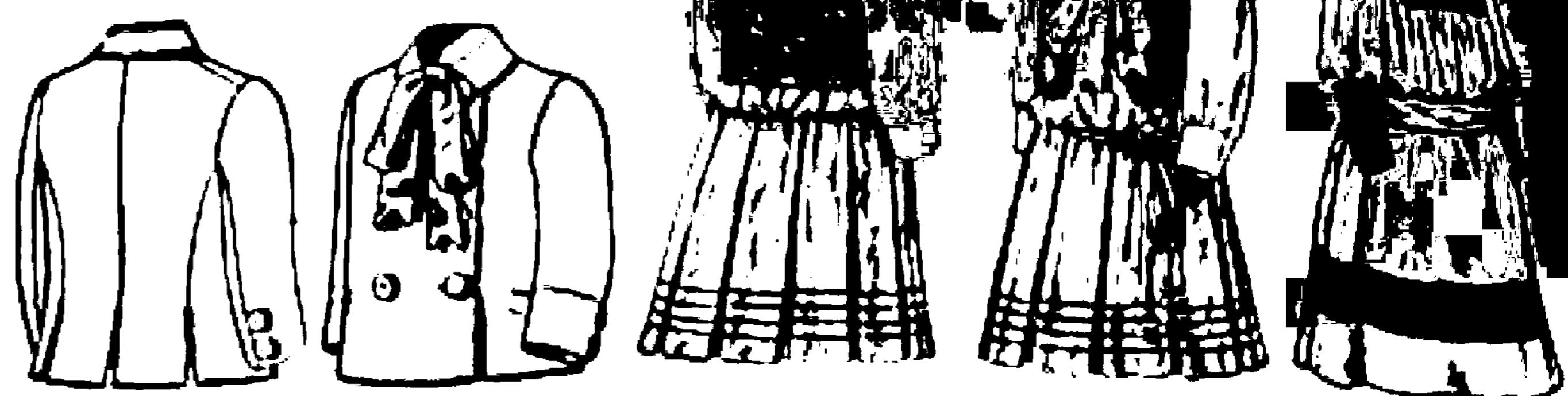


Reefing Jacket.

Clara Sun-bonnet.

Ebba Dress.

Anita Dress.



Lula Jacket.

Lita Dress.

Cyrilla Dress.

Descriptions of these Patterns will be found on page 570.

PATTERNS of these desirable models being so frequently called for, we reproduce them in miniature this month in order to bring them within the limit of time allowed for selection. For it should be remembered that one inestimable advantage of our "Pattern Order" is that the holder is not confined to a selection from the patterns given in the same number with the "Pattern Order," but the choice may be made from any number of the Magazine issued during the twelve months previous to the date of the one containing the "Pattern Order." Always remember that a "Pattern Order" cannot be used after the date printed on its back.

Descriptions of the Designs on the Supplement.

WE DO NOT GIVE PATTERNS FOR ANY OF THE DESIGNS ON THE SUPPLEMENT.

The designs on our Supplement are selected from the most reliable foreign sources, and also represent popular fashions here. They furnish suggestions for draperies, trimmings, combinations, etc.—in fact, for every detail of the fashionable toilet,—and the models are so practical, and in many instances differ so little from the patterns we give, that they can easily be modified, even by the least experienced amateur, to suit individual needs, and adapted to all reasonable fabrics, simple as well as expensive; while for professional dressmakers they are invaluable.

- 1.—Summer dress of dark blue veiling with ruffles or white chiffon.
- 2.—Heart-shaped brooch of moonstones set in pearls.
- 3.—Tea-gown of pink China silk with white crepe front.
- 4.—Reception toilet of white cloth with gold embroidery.
- 5.—Costume of gray Henrietta cloth trimmed with black lace and braiding.
- 6.—Tea-gown of dark red veiling with white lace collar and jabot.
- 7.—Moonstone brooch with setting and true-lover's knot of pearls.
- 8.—Promenade costume of old-rose bengaline de soie, trimmed with écu lace, and made with jacket of velvet brocade. Straw hat trimmed with red roses.
- 9.—Black lace evening-dress with orange-colored surah sash.
- 10.—Neck scarf and jabot of white satin-corded chiffon.
- 11.—Bride's toilet of white veloutine with point Duchesse veil.
- 12.—Collar of ruby velvet cut in points over embroidered crepe edging.
- 13.—Finger-ring set with two turquoises in heart-shaped settings of diamonds, and a diamond true-lover's knot.
- 14.—Bridal robe of white faille with white thread-lace flounces and garniture of orange-blossoms. Tulle veil.
- 15.—Medici collar of embroidered white silk wired into shape.
- 16.—Diamond engagement-ring.
- 17.—Bridal toilet of white India-silk trimmed with ostrich-feather edging. Tulle veil.
- 18.—Greek coiffure with gold fillets.
- 19.—Summer costume of blue-and-white striped cambric with white braided girdle and cuffs.
- 20.—Costume of tan-colored Bengaline.
- 21.—Gold bracelet of plain curb-links.
- 22.—Girdle of braided black silk cord with passementerie pendants.
- 23.—Costume of black China-silk with white stripes and figures. Hat trimmed with white chiffon and black feathers.
- 24.—Costume of gray figured India-silk trimmed with ribbon. Parasol of white crepe with chiffon ruffles.
- 25.—Gold bracelet with platinum bars.
- 26.—Girdle of netted gold-colored silk.
- 27.—Costume of heliotrope crepon with garniture of colored crystal beads.
- 28.—Tennis dress of figured outing-cloth trimmed with red-and-white striped flannel.
- 29.—Costume of cream-colored China-silk with black velvet-ribbon garniture.
- 30.—Costume of mauve silk and white embroidery. Fancy straw hat trimmed with field flowers.
- 31.—Summer toilet of pale pink flowered organdie.
- 32.—Toilet of light green China-silk trimmed with white lace and dark green velvet.
- 33.—Promenade costume of russet faille with brown and gold embroideries.
- 34.—Watering-place dress of blue and white serge trimmed with blue velvet. Toque of gilt cords trimmed with flowers.
- 35.—Blouse of white mull with embroidered lawn corsage-girdle and sleeves.
- 36.—Design of head passementerie garniture.
- 37.—Dress for boy of two years, made in blue percale with white embroidery.
- 38.—Jacket-blouse of black cashmere embroidered in bright colors.
- 39.—House-dress of gray silk with black stripes, and garniture of black embroidered daisies on white silk.
- 40.—Calling costume of Pompadour brocaded black silk, with lace-draped waist. Empire bonnet of pale green straw trimmed with pale yellow ostrich-feathers and tea-roses.
- 41.—Afternoon dress of black-and-gray striped silk, with corselet over white China-silk waist figured with lilac stars.
- 42.—House-jacket of pink zephyr-gingham trimmed with white Hamburg embroidery.
- 43.—Street-dress of gray chevrot and white serge.
- 44.—Gold crop and platinum curb sleeve-links.
- 45.—Coiffure of looped braid for a young girl.
- 46.—Seaside costume of white serge.
- 47.—Tennis costume of blue-and-white plaid flannel.
- 48.—Sleeve-links representing gold crop and coach-horn.
- 49.—Visiting toilet of pale gray figured bengaline with jetted braids, and gray feather toque.
- 50.—Girl's dress of gray Henrietta cloth with gold-cord edging and green feather-stitching.



Fashion Gleanings from Abroad.

(For Descriptions, see Page 568.)

WE DO NOT GIVE PATTERNS FOR ANY OF THE DESIGNS ON THIS SUPPLEMENT.



Fashion Gleanings from Abroad.

(For Descriptions, see Page 568.)

WE DO NOT GIVE PATTERNS FOR ANY OF THE DESIGNS ON THIS SUPPLEMENT.

Claudia Dress.

THIS especially becoming model for a slender girl is very prettily made in silks and woolens of light quality, and some washable goods, and will be quite as desirable for heavier materials. The coat is the same length in the back, and is slashed at the seams. The illustration represents plain green cashmere and foulard silk, a cream ground with the design in pink and green. The pattern is fully described on page 570.



Mila Waist.
(See Page 567.)

Vida Dress.

SUITABLE for either a boy or girl, this little model can be made in all seasonable goods, and also in heavier fabrics for

or are low-necked and short-sleeved to wear with lawn and cambric guimpes.

Figured China and India silks make charming and quaint dresses for girls of all ages. One specially attractive little dress, for a girl of four or six, has a plain skirt, and a baby waist with puffs for sleeves. The garniture is a species of ruching about two inches wide, made of the silk laid in tucks and gathered closely to make rows of tiny parallel ruffles. This is put on around the neck and



Vida Dress.



Zora Dress.

sleeves and waist, and is a dainty garniture for all such materials as India or China silk, crepe, etc.

Rows of very narrow ribbon-velvet, and passementerie cord edgings with parallel loops are the favorite trimmings for children's dresses of silk and light woolens. Pretty challee dresses have garnitures of silk ribbons, and small gilt and silver buttons are used

as occasional garnitures. Sleeves to all dresses are full, and for dressy wear have high shoulder-puffs and cap-shaped epaulets.

Zora Dress.

A SIMPLE model, appropriately made in any of the materials suitable for the dresses of little girls. The illustration

represents it made in pale blue cashmere feather-stitched with white, and the blouse of white surah. The back and front are arranged in the same manner. The pattern is fully described on page 570.



Claudia Dress.

Girls' Summer Dresses.

DAINTILY colored and figured satines are made up in picturesque styles for girls' summer dresses, as well as white goods. They have doubled ruffles of the material put on the plain waist in V's and forming sleeve-caps. The skirts are full and plain. Velvet ribbon waistbands and loops are sometimes added. These dresses are made complete with full sleeves,

Descriptions of Our Cut Paper Patterns.

REMEMBER THAT EACH "PATTERN ORDER" ENTITLES THE HOLDER TO BUT ONE PATTERN.

Always refer to these descriptions before sending your "Order" for a Pattern, that you may know just the number of Pieces that will be in the Pattern received.

FOR GENERAL DIRECTIONS FOR CUTTING AND JOINING THE PIECES, SEE THE BACK OF THE ENVELOPE IN WHICH THE PATTERN IS INCLOSED.

CLITHEROE COAT.—Half of the pattern is given in 10 pieces: Front, side gore, side form, back, skirt-piece, revers, two collars, and two sides of the sleeve. The row of holes down the front shows where the revers is to be placed. The standing collar is to be placed just below the narrow collar. The skirt-piece—whether of lace or material—is to be gathered at the top and to extend only as far back as the notch in the lower edge of the back piece. The sleeve is to be gathered at the top, between the holes. A medium size will require three and a quarter yards of goods twenty-four inches wide, five-eighths of a yard of twenty-inch goods to face the revers, and two yards of flouncing. Patterns in sizes for 34, 36, 38, and 40 inches bust measure.

TENNIS BLOUSE.—Half of the pattern is given in 7 pieces: Front, back, neck-band, collar, and three pieces of the sleeve. The back is to be laid in three box-plaits (half of the middle plait is given on the pattern). The notches at the top and bottom of the front designate the middle, and the portion beyond is to be laid in a box-plait on the outside; back of this another box-plait is to be laid. The large piece of the sleeve is to be gathered top and bottom, between the holes, and the lower edge is to be placed to the row of holes across the sleeve. A medium size will require three yards and three quarters of goods twenty-four inches wide, and one-half yard of contrasting goods for the collar and lower parts of the sleeves. Patterns in sizes for 34, 36, 38, and 40 inches bust measure.

LEONE WAIST.—Half of the pattern is given in 8 pieces: Front, lining for top of front, side gore, back, yoke for back, collar, and two pieces of the sleeve. The front is to be gathered at the top, forward of the hole. The

back is to be gathered at the top, back of the hole. The sleeve is to be gathered at the top, between the holes. A medium size will require four yards of goods twenty-four inches wide. Patterns in sizes for 34, 36, 38, and 40 inches bust measure.

LADY'S SHIRT-WAIST.—Half of the pattern is given in 7 pieces: Front, back, yoke for back, neck-band, collar, sleeve, and cuff. The notches at the top and bottom of the front indicate the middle, and the portion beyond the notches is to be laid in a box-pleat on the outside. Back of this the front is to be laid in two plaits turned forward on the outside. The back is to be gathered at the top, between the holes. A medium size will require three and a half yards of goods twenty-four inches wide. Patterns in sizes for 34, 36, 38, and 40 inches bust measure.

LORES SLEEVE.—The entire pattern is given in two pieces. The larger piece is to be gathered at the front and back edge, and drawn in so that the notches will match with those in the other piece; and is to be gathered at the top, between the holes. Patterns in a medium size.

STANMORE CAPE.—Half of the pattern is given in 4 pieces: Front and back of yoke, cape, and collar. The top of the cape is to be gathered and sewed to the yoke according to the notches. The ruffle below the yoke is to be four inches deep. A medium size will require two yards and an eighth of goods forty-four inches wide. Patterns in two sizes, medium and large.

CLITHEROE SKIRT.—Half of the pattern is given in 5 pieces: Front, side gore, and back of foundation skirt; and front and back of drapery. The front piece of the drapery is to be laid in three plaits at the top and one at the side, all turned forward on the outside. The back piece of the drapery is to be laid in a box-pleat near the front edge, as indicated by the holes, and back of the plait can either be plaited or gathered. Eight yards of goods twenty-four inches wide will be required for the drapery, and two and a half yards additional for the ruffles. Patterns in a medium size.

GORED FOUNDATION SKIRT.—Half of the pattern is given in 4 pieces: Half of front, one side gore, half of back breadth, and belt. Sew to the belt with a shallow plait on each side of the front, near the seam; a shallow plait in each side gore, forward of the notch; and gather the side gore, back of the notch, with the back breadth. A medium size will require four and three-quarter yards of goods twenty-four inches wide. Patterns in three sizes: 23 waist, 39 front; 25 waist, 40 front; 27 waist, 41 front.

MISS'S SHIRT-WAIST.—For description of pattern, see "Lady's Shirt-Waist," above. The size for sixteen years will require three and a half yards of goods twenty-four inches wide. Patterns in sizes for 12, 14, and 16 years.

MILA WAIST.—Half of the pattern is given in 11 pieces: Front, side gore, side form and back of lining; full front, full back, neck-band, collar, and three pieces of the sleeve. The full front and back pieces are to be shirred about an inch from the top. The large piece of the sleeve is to be gathered top and bottom, between the holes, and the lower edge is to be placed to the row of holes across the sleeve. The size for fourteen years will require two yards of goods twenty-four inches wide, and three-quarters of a yard additional to face the yoke and the lower parts of the sleeve. Patterns in sizes for 12 and 14 years.

CLAUDIA DRESS.—Half of the pattern is given in 11 pieces: Lining for front, full front, jacket front, side gore, side form, back, revers, and three pieces of the sleeve, for the coat; and one-half of the skirt. The notch in the lower edge of the full front designates the middle. The lower edge of this piece is to be gathered forward of the hole. The back side-form and side-gore seams are to be left open below the lower notch in each. The large piece of the sleeve is to be gathered top and bottom, between the holes, and the lower edge is to be placed to the row of holes across the sleeve. The skirt is to be gathered at the top. The size for fourteen years will require four and a half yards of figured goods, and two and a half yards of plain, to make as illustrated. Patterns in sizes for 12 and 14 years.

ZORA DRESS.—Half of the pattern is given in 11 pieces: Front and back of waist lining, full front, full back, plaited front, plaited back, collar, and three pieces of the sleeve of the waist; and one-half of the skirt. The full front and back pieces are to be gathered at the neck, and at the bottom, forward and back of the hole in each, respectively. The plaited pieces are each to be laid in two plaits turned upward. The large piece of the sleeve is to be gathered top and bottom, between the holes, and the lower edge is to be placed to the row of holes across the sleeve. The skirt is to be gathered at the top. The size for four years will require four yards of goods twenty-four inches wide. Patterns in sizes for 4 and 6 years.

VIDA DRESS.—Half of the pattern is given in 8 pieces: Front and back of waist lining, full front, jacket front, side gore, back, sleeve, and one-half of the skirt. The full front is to be gathered at the neck, and at the bottom forward of the hole. The back seam is to be left open below the notch. The sleeve is to be gathered at the top, between the holes, and shirred at the bottom about an inch from the lower edge. The skirt is to be gathered at the top. The size for four years will require two and a half yards of dark goods, and one yard and a quarter of light, to make as illustrated. Patterns in sizes for 2 and 4 years.

ADWILDA BASQUE.—Half of the pattern is given in 9 pieces: Plain front, full front, side gore, side form, back, collar, and two pieces of the sleeve, and cap. The full front is to be gathered at the top and at the lower edge of the extension. The row of holes down the back indicates the outline for the trimming. The cap is to be gathered at the top, between the holes. A medium size will require three yards and a half of goods twenty-four inches wide, to make entirely of one material, and five yards of velvet ribbon or braid. Patterns in sizes for 34, 36, 38, and 40 inches bust measure.

ORRA BASQUE.—Half of the pattern is given in 9 pieces: Front, chemisette, side gore, side form, back, two collars, and two pieces of the sleeve. The row of holes in the front shows where it is to be turned back for the revers. The chemisette can be made separate or sewed in with the shoulder seam. A medium size will require three yards of goods twenty-four inches wide. Patterns in sizes for 34, 36, 38, and 40 inches bust measure.

BERENDA WAIST.—Half of the pattern is given in 11 pieces: Front, revers, chemisette, side-gore, side form, back, collar, and puff, cuff, and two sides of the sleeve. The front edge of the revers is to be placed in the row of holes in the front. The chemisette can be omitted, if preferred. The puff for the sleeve is to be gathered at the top between the holes, and all across the bottom, and placed on the plain sleeve according to the notches. The cuff is to be joined to the bottom in an ordinary seam. A medium size will require two and a half yards of goods twenty-four inches wide, and one yard of contrasting goods. Patterns in sizes for 34, 36, 38, and 40 inches bust measure.

DIANTHA WAIST.—Half of the pattern is given in 10 pieces: Plain front, full front, side gore, side form, plain back, full back, collar, two sides of the sleeve, and puff. The full front is to be gathered at the bottom forward of the hole. The full back is to be shirred at the bottom, below the row of holes. The puff is to be gathered top and bottom between the holes, and the lower edge is to be placed to the row of holes across the sleeve. A medium size will require three yards of goods twenty-four inches wide. Patterns in sizes for 34, 36, 38, and 40 inches bust measure.

STEPHANIE MANTELET.—Half of the pattern is given in 3 pieces: Front, back, and collar. The outer edge of the trimming on the back and front is to be placed to the row of holes. A medium size will require one yard and three-quarters of goods twenty-four inches wide, and five and one-half yards of trimming. Patterns in two sizes, medium and large.

BIANCA MANTELET.—Half of the pattern is given in 4 pieces: Front, back, and two collars. If preferred, the large collar (which forms a *plaque* in the back) can be omitted, and the trimming arranged in a similar shape. A medium size will require two and a quarter yards of goods twenty-four inches wide. Three-quarters of a yard extra will be sufficient for one row of ruching around the back of the collar. Patterns in two sizes, medium and large.

FELICIA MANTELET.—Half of the pattern is given in 3 pieces: Front, back, and collar. A medium size will require one yard and a half of goods twenty-four inches wide. Patterns in two sizes, medium and large.

ELFRIDA SLEEVE.—The pattern consists of 3 pieces. The larger outer piece is to be gathered at the top, between the holes.

AYDIA SLEEVE.—The pattern consists of 5 pieces: Two pieces of foundation sleeve, cuff, and two puffs. The large puff is to be gathered at the top between the holes, and all across the bottom, and placed on the foundation sleeve according to the notches. The cuff is to be joined to the bottom in an ordinary seam. The small puff is to be gathered at the top and lapped under

the cuff as far as the row of holes: the lower edge is to have a ribbon or elastic run through a hem to draw it in to the required size. Patterns in a medium size.

ISMANTA JACKET.—Half of the pattern is given in 9 pieces: V. n. t. front, side gore, side form, back, two collars, and two pieces of the sleeve. The sleeve is to be gathered at the top, between the holes. A medium size will require one yard and three-quarters of goods twenty-four inches wide for the jacket, and two and a quarter yards of velvet for the sleeves and vest. Patterns in sizes for 34, 36, 38, and 40 inches bust measure.

ADWILDA DRAPERY.—Half of the pattern is given in 3 pieces: Half of the front, one side gore, and half of the back. The sides of the front drapery are to be laid in three plaits turned upward on the outside. The panel is to be laid in three plaits turned forward on the outside. The front edge of the back drapery is to be lapped over the panel so that the notches at the top will match. The top of the back drapery is to be gathered forward of the cluster of holes, and the portion back of the cluster, with the corresponding portion on the other half, will form a burnous plait that is to hang loose on the outside. Eight yards of goods twenty-four inches wide will be required, and four yards of velvet ribbon. Patterns in a medium size.

LADY'S KILT-PLAIED SKIRT.—Half of the pattern is given in 4 pieces: Half of front, one side gore, half of back breadth, and one-quarter of the kilt plaiting. Lay the piece for the plaiting in plaits as indicated by the holes, all turned one way; and attach the upper edge to the skirt in a line with the row of holes across the front. The rows of holes across the back breadth show where the casings are to be placed for steels. Sew the skirt to the belt in the same way as directed above for the "Gored Foundation Skirt." Twelve yards of goods twenty-four inches wide will be required for the kilt-plaiting and to face the foundation skirt, and four and three-quarter yards additional for the foundation skirt. Patterns in a medium size.

MANHATTAN BATHING-SUIT.—Half of the pattern is given in 10 pieces: Two pieces of the yoke, two full pieces, collar, sleeve, and belt for waist; one-half the skirt; and one leg and belt for drawers. Gather or plait (inside or box plaits) the top and bottom of the full pieces of the waist, and join to the yoke and belt, respectively, according to the notches. Gather or plait the top of the skirt, and join to the belt with a little more fullness in the back than in front. Gather the drawers at the top, and join to the pointed belt. The drawers and waist can be joined, and the skirt buttoned on the outside; or the skirt and waist can be joined, and the drawers buttoned on the inside. For the former arrangement, sew the full part of the waist to the top of the pointed belt, and leave the drawers open in front, using a fly for the buttons. For the latter arrangement, sew the waist and skirt to the straight belt; leave the skirt open a little way in front, and open the drawers on one side. A medium size will require six and a quarter yards of goods twenty-four inches wide, and five and a half yards of braid for one row. Patterns in two sizes, medium and large for ladies.

ROVER BATHING-SUIT.—Half of the pattern is given in 6 pieces: Back, front, belt, collar, and sleeve of waist; and one leg of drawers. Gather the waist at the bottom, forward and back of the holes, respectively. Gather the drawers at the top, forward and back of the holes, respectively, and leave them open at one side. The size for eight years will require two and a half yards of goods twenty-four inches wide, and three and a quarter yards of braid for one plain row. Patterns in sizes for 6, 8, and 10 years.

CYRILLA DRESS.—Half of the pattern is given in 9 pieces: Plain front, full front, plain back, full back, collar, puff for sleeve, and two pieces of the sleeve for the waist; and one-half of the skirt. The space at the top of the underwaist, back and front, outlined by holes, is to be faced to simulate a yoke. The full pieces for the waist are to be gathered at the top and drawn in to fit the underwaist, and gathered at the bottom and sewed to the lower edge of it. The puff for the sleeve is to be gathered top and bottom between the holes, and the lower edge of it is to be placed to the row of holes across the sleeve. The skirt is to be gathered and joined to the waist with a little more fullness in the back than in front. If desired, the underwaist can be dispensed with, and the waist finished with a belt. The size for eight years will require five yards of material twenty-four inches wide for the dress, one yard and a half additional for the sash, and one yard and three-eighths of velvet. Patterns in sizes for 4, 6, 8, 10, and 12 years.

EBBA DRESS.—Half of the pattern is given in 10 pieces: Lining for front, chemisette, outer front, side gore, back, collar, cuff, two sides of the sleeve, and one-half of the skirt. The chemisette is to be gathered top and bottom. The sleeve is to be gathered at the bottom between the holes. The skirt is to be gathered and sewed to the waist with a little more fullness in the back than in front. The size for eight years will require four yards of goods twenty-four inches wide to make entirely of one material, and four yards of embroidery. Patterns in sizes for 8, 10, and 12 years.

AILSA DRESS.—Half of the pattern is given in 9 pieces: Front and back of yoke, front and back of blouse, collar, cuff, two sides of the sleeve, and one-half of the skirt. The front and back of the blouse are to be shirred above the row of holes in each, and drawn in to fit the yoke. The lower part of the blouse is to be gathered and sewed to a belt of the required size. The sleeve is to be gathered at the bottom between the holes. The skirt is to be laid in triple box-plaits, as indicated by the holes. The size for six years will require five and a half yards of goods twenty-four inches wide. Patterns in sizes for 6, 8, and 10 years.

LITA DRESS.—Half of the pattern is given in 8 pieces: Front and back of blouse, front and back of jacket, collar, sleeve, cuff, and one-half of the skirt. The blouse is to be gathered at the bottom, forward and back of the holes in the front and back, respectively. The sleeve is to be gathered top and bottom, between the holes. The skirt is to be laid in box-plaits, and then gathered to bring it in to the required size. The size for six years will require three and a half yards of goods twenty-four inches wide, for the dress, and three-quarters of a yard for the jacket. Patterns in sizes for 4 and 6 years.

ANITA DRESS.—Half of the pattern is given in 8 pieces: Front, side gore, back, revers, collar, cuff, and sleeve of the waist; and one-quarter of the skirt. The revers is to be placed on the front in a line with the row of holes. Between the revers the front can be faced with plain, plaited, or gathered material. The sleeve is to be gathered top and bottom between the holes. The skirt is to be laid in kilt-plaits, according to the holes. The size for four years will require three and three-quarter yards of goods twenty-four inches wide, and one yard of contrasting goods for the accessories. Patterns in sizes for 2, 4, and 6 years.

REEFING JACKET.—Half of the pattern is given in 9 pieces: Front, double-breasted piece, pocket lap, side gore, side form, back, collar, and two sides of the sleeve. The top of the sleeve is to be gathered between the holes. The size for twelve years will require two and a quarter yards of goods twenty-four inches wide. Patterns in sizes for 10, 12, and 14 years.

LULA JACKET.—Half of the pattern is given in 6 pieces: Front, side gore, back, collar, and two sides of the sleeve. The opposite notches at the top and bottom of the front indicate the middle. The slit in the front shows where the pocket is to be inserted. Close the seams in the back only as far down as the notches. The size for six years will require two yards of goods twenty-four inches wide, or one yard at forty-eight inches wide. Patterns in sizes for 4, 6, 8, and 10 years.

CLARA SUNBONNET.—Half of the pattern is given in 3 pieces: Front, crown, and cape. The top of the crown is to be gathered and drawn in to fit the front. After the crown and cape are joined, a casing is to be sewed on the inside, over the seam, for a draw-string to bring it in to the required size. The size for six years will require seven-eighths of a yard of goods twenty-four inches wide. Patterns in sizes for 2, 4, 6, and 8 years.

"MAN O' WAR" SUIT.—Half of the pattern is given in 9 pieces: Front, back, collar, chemisette, and sleeve of the blouse; and band, fly, and back and front of one leg of the trousers. Place the chemisette under the front of the blouse so that the holes will match. The size for 10 years will require four and one-half yards of goods twenty-four inches wide. Patterns in sizes for 8, 10, and 12 years.

ERNEST SUIT.—Half of the pattern is given in 8 pieces: Back and front of one leg of the trousers, and front, back, chemisette, collar, and two sides of the blouse. The chemisette is to be lapped under the front so that the holes will match. The bottom of the blouse can either be gathered and sewed to a narrow belt that can be buttoned to the trousers, or finished with a hem through which an elastic ribbon can be run to bring it in to the required size. The size for eight years will require three and one-half yards of goods twenty-four inches wide. Patterns in sizes for 6, 8, and 10 years.

THE THREE FOLLOWING ARTICLES are intended for "Medal Contest Recitations," and will be found in Book No. 3, just issued.

Political Action Imperative.

BY WM. JENNINGS DEMAREST.

THE more we study the attitude and developments of the Prohibition movement, the more profoundly will we be impressed with the necessity for a distinctive Prohibition party. Political action has become the grand lever that is to overthrow this diabolical business of poisoning the people with alcohol, and in no other way can we do so much to hinder and oppose this terrible drink-traffic as by using our political opportunities for its destruction. Our highest privilege and duty, therefore, are involved in the use of our political rights, concentrated in our vote in combination with others who agree on this question.

If there is no combination in our particular vicinity, we ourselves should commence such a formation, and cannot do less than this to have an approving conscience. Personal responsibility cannot be shirked or evaded without treachery to our homes and treason to our country. No other form of moral cowardice is more dastardly or more destructive to society than the careless, selfish delinquency of the voter in the exercise of his sovereign power when moral questions are up for consideration or when his country's interests are in jeopardy.

As the liquor traffic is now threatening the life of the nation and has its grip on the neck of our civilization, and so much of human happiness depends on the proper use of the ballot, there certainly should be no question as to the obligation to meet this enemy of our race with the strongest and most effective weapons that can be used for its destruction.

The exigency is now upon us. The liquor-dealers care but little for our sentiments or our prayers: if we allow them to control our vote, this will be to them the only security they want for their nefarious business. Having control of our votes they can afford to laugh at our credulity and sneer at our impotent denunciations of the horrors of their business. They taunt us with the statement that "men cannot be made sober by act of Parliament," notwithstanding that all their fascinating allurements and claims to respectability are based on legislative enactments for the protection of the traffic.

What wonder that the liquor-dealers are petted and feted as dignitaries of the land, when all the influence they enjoy comes through their political success in sending their own men to represent them in the halls of legislation!

"You cannot make men sober by law," they say; but you can make men drunk by State and national law; you can so cheat and delude the dear people that these men are even bribed with a license or put into power and authority by the very money they secure from the traffic legislatures have legalized. This should arouse men to action to defeat these enemies in their fraudulent and misleading arguments intended to cheat the people.

In view of this deluge of fraud and duplicity which now threatens our country, to turn the tide of the people's thoughts to some means of escape from the maelstrom that is now whirling us along towards its vortex, to save our homes and country from the utter ruin that the liquor traffic is bringing upon us, we have need to make determined and enthusiastic struggles which may cost us all the moral and physical courage that we can command, to overcome this monster enemy.

We may be assured that the liquor-dealers and their sympathizers are not to be met and overcome by sentimental appeals to their magnanimity. Intrenched by law they must

be fought with determined and aggressive action, and that action must be an unflinching, uncompromising diligence in the use of all the political means that God has put in our power.

In the Bushel, or In the Jug.

EXTRACT FROM A SPEECH BY EX-GOVERNOR ST. JOHN.

FARMER BOGGS planted some new seed-corn last spring, imported from a far-distant land, and as the result gathered two thousand bushels from twenty acres, and he took a wagon-load to the country town to exchange for some necessaries of life.

He had just entered the main business-street, when a saloon-keeper hailed him and inquired the price of his corn.

"Forty cents a bushel," said Boggs.

"But I can get plenty of corn for thirty," replied the dealer in liquid goods.

"Not such corn as this," said the farmer. "This is a new kind—grown from imported seed. Nothing like it in the State."

"All right," said the saloon-keeper, "I will take it, as I have the best family-horse in the country, and he shall have the very best corn in the market; so you may drive around to my barn and throw the corn in the crib, and while there please tell John, my hired man, to give old Faithful a good feed, and have him hitched up by two o'clock, for I want to take my wife and children out riding this afternoon."

Boggs unloaded the corn as directed, got his pay for it, made a few purchases, and left for home, while John promptly at two o'clock hitched old Faithful to the phaeton. But as the saloon-keeper, his wife, and two little daughters were getting into the vehicle, old Faithful's eyes flashed like fire: he reared upon his hind feet, snorted like a locomotive, and it was all John could do to hold him. At last, when all were fairly seated, John was told to let him go, and off went old Faithful down the street, wholly unmanageable, until suddenly turning a corner over went the phaeton, smashed into splinters, and its occupants were sent sprawling into the street.

While the bruised and battered family were being picked up and cared for, a crowd of men succeeded in capturing old Faithful. A veterinary surgeon was called, and as he took hold of the bit old Faithful's breath struck him fully in the face. He smiled and said, "There is nothing the matter with the horse, *only he is drunk.*" Drunk on that new kind of corn.

The next day the farmer, ignorant of what had happened, took another load to town. He stopped at the saloon, but the proprietor was not in. He then drove around to his residence, rang the bell, and the saloon-keeper, with a patch over one eye, his arm in a sling, nose mashed, hobbled to the door, and was asked by Boggs if he didn't want to buy another load of corn.

Raising a crutch, he ejaculated: "Corn! Corn! Do I look like I needed any more of that kind of corn? Look at my wife there, with a broken arm. See my darling little angels, bruised beyond recognition. See my three-hundred-dollar phaeton, smashed into everlasting smithereens, and old Faithful so humiliated and ashamed that he can't look decent people in the face, and then dare to ask me if I want any more corn! Get out of here, you villainous old clodhopper, or I'll set my big dog on you!"

Boggs had two thousand bushels of that kind of corn. He had depended upon it to lift the mortgage off his farm; but now it seemed that all was lost. He went to a lawyer

and told him his story. The lawyer informed him that all he had to do was to take out a license.

A petition was at once prepared, and the farmer started out to get signers. He went first to the saloon-keepers, supposing that they would sign without a word. But he was mistaken: instead of signing his petition they with one accord declared that any man who would sell that kind of corn to be fed to a dumb brute was worse than a heathen.

Even the deacons refused to sign, declaring that they could not stand it to see a colt humiliate and disgrace its mother by reeling through the public streets, or to hear a cow bawl at the sight of her besotted calf; while a minister, with a look of indignation that was indescribable, said, in thunder tones, that if his party ever licensed the sale of that kind of corn he would never vote its ticket again, and then he quoted Scripture about no drunkard entering the kingdom of God, and, as a final crusher, he asked Boggs what would become of all the poor dumb brutes if we licensed the sale of that kind of corn. *Then he wept.*

Poor Boggs, discouraged, returned to the office, dropped the petition on the table, and sank into a chair as he exclaimed, "Personal liberty is a myth!"

The lawyer, moved by sympathy, as lawyers always are, put on his best thinking-cap. In a moment his countenance beamed with joy. He slapped Boggs good-naturedly on the back and said: "Brighten up, old boy, I've got an idea. A capital idea, too,—one that lets you out slick and clean, saves your farm, and, above all, preserves your personal liberty. You proceed at once to draw that corn to the distillery, have it made into whisky, then circulate your petition for a license to sell the whisky, and they will all sign it; and thus the dumb brutes will be protected, personal liberty perpetuated, and, besides all that, such a course will not hurt the party. You see it all depends upon whether the corn is sold in a *solid* or *liquid* state."

Genuine Reforms.

It seems, sometimes, to the careless and gainsaying world, as if reforms and reformers came too soon. They are like unripe fruit brought into market after a wind-storm, with immense possibilities in their future, but lacking the days and the months of rain and of sunshine to bring them to ripeness and usefulness.

But if we look carefully at the philosophy of reform, when it passes out of the tumult of discussion into the calmness of history, we shall see that reforms always come at the right time, come in the logic of events, and the logic of events is only another name for the logic of Almighty God.

It was the wisest man the world ever saw, and he, too, under the power of divine inspiration, that once said, "The preparation of the heart and the answer of the tongue are from God;" and if we look below what seems to be only a proverb, as we speak it, we shall find the deepest truth that lies along the line of God's dealings with humanity, namely, that God always prepares the hour for the man, and the man for the hour.

God's year is not all springtime, when under our feet and over our head is the thrill of a new and an awakening life; God's year is not all lavish, glorious summer, when we stand amid the wealth of bough and blossom; God's year is not all autumn, when it drops its ripened miracle into our hands in the shape of purple cluster and golden fruit: part of God's year is winter, colorless, odorless, flowerless, stilly, sodden deep under the snow.

What is true of God's year in His material universe, that ripens to beauty and perfection its fruitage, is true of the long cycles of His moral world, where He ripens human thought and human progress.

All of God's centuries are not springtime, full of thrilling life; not lavish, glorious summer; not ripe and golden autumn: part of them are odorless, colorless, sodden deep under the snow. But always in God's winter He is getting ready for another spring, and always, in the winter of human progress and human thought, God is getting ready for moral victories, and grand autumns of gathered fruitage.

It was winter for Israel when they were under the bondage of Egypt, and Moses was on the "back side of the mountain" feeding sheep and learning patience as a leader; but it was springtime when he stood by the Red Sea, and it was summer when the hosts were led through the waters.

It was winter for the world when the Church had drifted into the darkness of the Middle Ages, and Luther prayed as a monk in a convent; but it was summer when that grand soul, alone with God, nailed his thesis to the cathedral door, and awoke not only Germany, but the world.

It was winter for four millions of bondmen in this country when statesmanship failed to break their bonds, and Abraham Lincoln was managing his flatboat on the Mississippi River or splitting rails on his father's farm; but there came a supreme hour when that tall, gaunt figure bent over a sheet of paper very soon to become immortal by immortal words, and the hand that guided the flatboat wrote the Emancipation Proclamation and shattered their chains forever. We knew then that God had prepared the hour for the man, and the man for the hour.

It was winter in this land for the temperance question when no one lifted his voice against strong drink, when from pulpit and pew, from halls of legislation and from the heights of society, men were going down; but the early springtime dawned when Lyman Beecher, from the grave of his smitten and destroyed friend, stood in his pulpit and preached the wonderful seven sermons, and it was growing springtime when Gough followed with his matchless eloquence.

It was coming toward the early green of summer when on the women of Ohio God sent the power of the Holy Ghost, and the daintiest women, from their embroidery-frames and their sheltered home-places, went out to stand with our God, if they stood alone. It is almost summer to-day for this reform, when there are, as a result of that work, so many brave voices to speak. I doubt not that at this time God has prepared the hour for the man, and the man for the hour.

MRS. MARY T. LATHRAP.

LADY HENRY SOMERSET, who is to represent the British Women's Temperance Association at the World's W. C. T. U. Congress in Boston, this autumn, and who will deliver addresses in other cities, is a most indefatigable worker for the cause of Prohibition. She is the daughter of Earl Somers, who died in 1883, leaving two daughters. The elder married in 1872 the second son of the Earl of Beaufort, and became Lady Henry Somerset; the younger sister is now the Duchess of Bedford. Lady Henry Somerset has one son, who was born in 1874. On the death of her father, she succeeded to the Eastnor Castle, Reigate Priory, and the Somers Town estates, and is the eleventh owner of Eastnor in direct descent from the first of the family who settled there.

Some idea of this worthy lady's work may be gained when it is understood that on Monday in one week she was speaking at the Central Hall, Manchester: at the Mayor's parlor on Tuesday afternoon; in Liverpool on Wednesday afternoon; in Bootle on Wednesday night; Thursday in Liverpool again; and on Friday she left Liverpool for Blackburn, for the purpose of furthering the work she has so much at heart.

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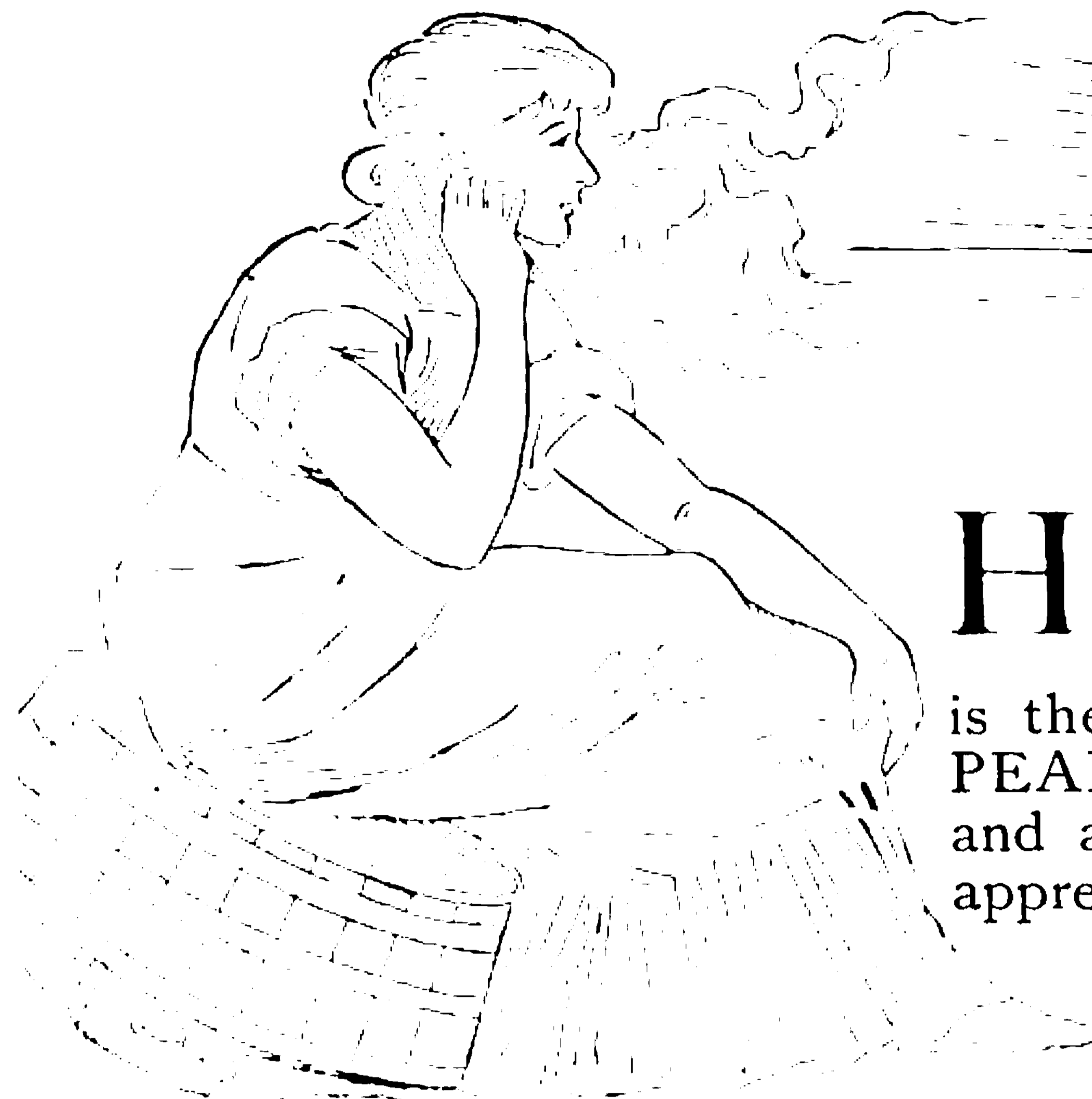
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Household

A Tennis Tea

THE summer season with its attendant outdoor sports and entertainments affords opportunity for the spirit of hospitality to materialize in some very attractive forms. Of these the midsummer "tea" is one of the most popular. Small tables can be placed around the lawn and piazzas instead of in the dining-room, and a sort of supper is served which is called a "tea." Fine damask cloths are used for tea-cloths, and none of the decorations of luncheon or dinner are employed. Souvenirs may be a feature, but this is not often the case, as a tennis tea, or tea served as a supplement to a lawn or garden party, where any of the popular outdoor games are the attraction, is a secondary matter.

Refreshments are very simple and within the means and possibilities of almost everyone, such as tea, Russian tea, coffee or chocolate with whipped cream, and wafers; frozen coffee and cakes; rolled sandwiches of chicken, tongue, or ham, or one or two kinds of salad. A nice menu is as follows: Berries with sugar; cold tongue; tomatoes stuffed with cress; sweet sandwiches; lemonade; ice-cream. Another is: Chilled raspberries; chicken salad; thin bread-and-butter; wafers; macaroons; tea. For another: Rolled chicken sandwiches; crab croquettes; rolls; ice-cream; cake; coffee.

In serving chicken-salad a quart is usually considered sufficient for eight persons; in ordering ice-cream, allow one quart to each five persons. For the tongue sandwiches, one tongue will do for twenty persons. Chop the meat very fine; add to it half a pint of thick cream, a quarter of a pound of melted butter, and a saltspoonful of pepper. Mix to a smooth paste; spread on thin slices of bread and press two together; cut into squares, diamonds, or strips two inches wide and four inches long. These can be made the day before, and kept fresh in tin boxes closely covered.

For sweet sandwiches, cut the crust from

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From Professor Blot.

A good dish is often spoiled or rendered unpalatable by the use of a detestably cheap, impure and deleterious Flavoring Extract.

In answer to inquiries from the ladies of my various classes, I invariably reply that during the past two years of my lectures on cookery, "I certainly prefer those prepared by Joseph Burnett & Co., of Boston, above all others." All cooks and housewives should insist on obtaining Burnett's Extracts. For sale by all grocers. Take no others.

Mention Demorest's Magazine in your letter when you write.

Armour's

Extract of BEEF.

The best and most economical "Stock" for Soups, Etc. One pound equals forty-five pounds of prime lean Beef.

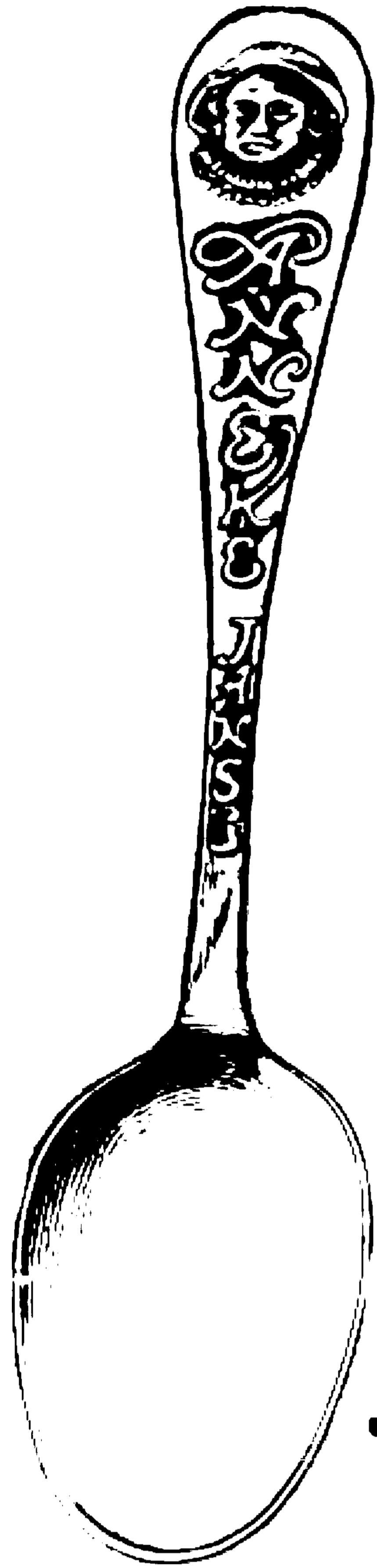
Send to us for our book of receipts, showing use of **ARMOUR'S EXTRACT** in Soups and Sauces.

ARMOUR & CO., Chicago.

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(Continued on page 574.)

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THE "Anneke Jans" Coffee Spoon.
A Souvenir of New York.
Sent to any address, \$1.25.

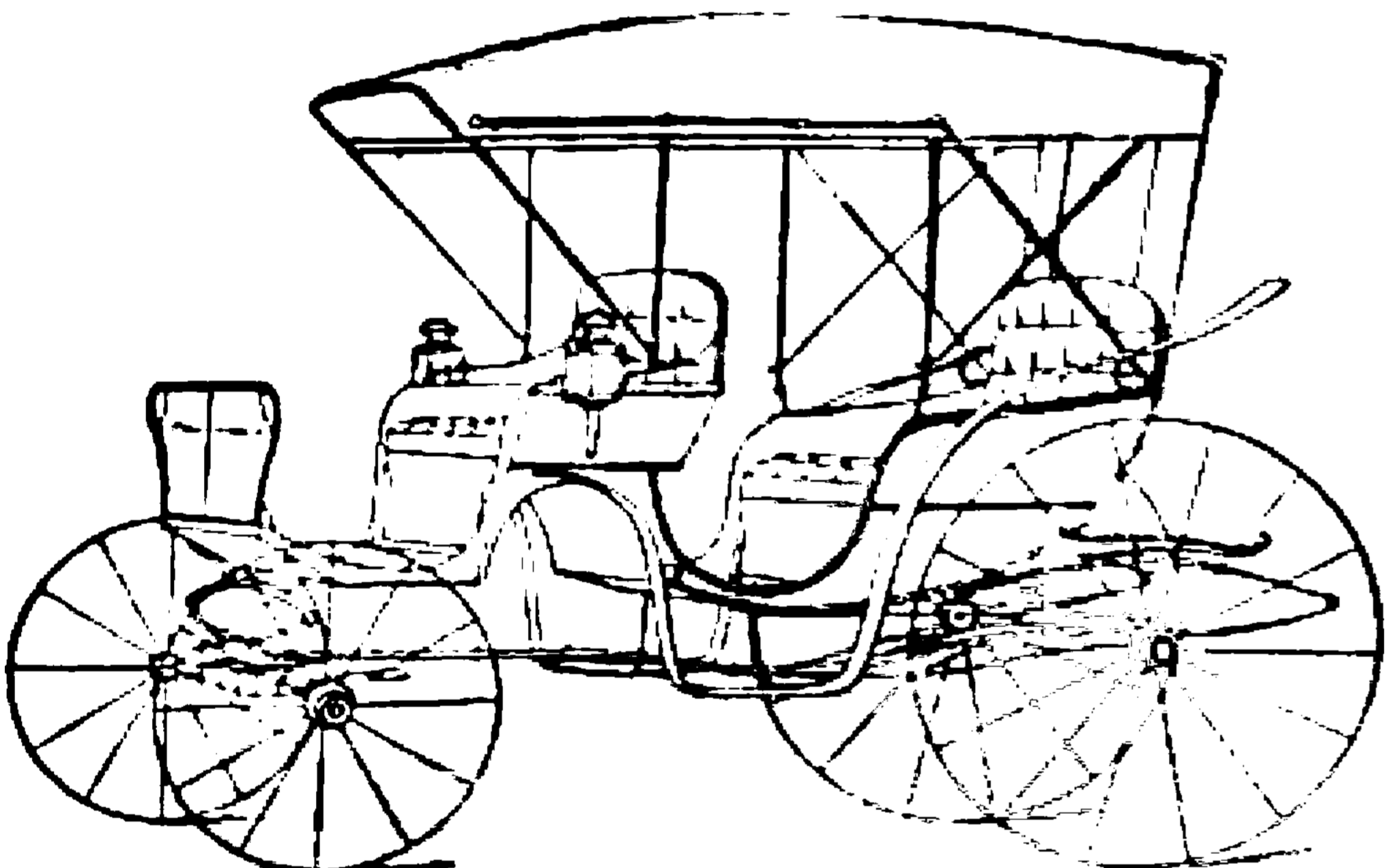
We are making a specialty of Souvenir Spoons, and will fill orders for the "Peter Stuyvesant," "Rip Van Winkle," "Knickerbocker," "General Sherman," "Washington," "Witch," "Dexter," "Plymouth," "Priscilla," "Standish," "Albany," "Charter Oak," "Hiawatha," and others as fast as introduced.

Send for illustrated price list.
Diamonds. Watches. Jewelry and Silverware.

J. H. JOHNSTON & CO.,
17 Union Square, N. Y.
ESTABLISHED 1844.

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FINE CARRIAGES
OF EVERY DESCRIPTION.



Many new styles. All late novelties in Fancy Traps and Buckboards. Ask your dealer for our work, or send for catalogues.

H. H. BABCOCK COMPANY,
WATERTOWN, N. Y.

NEW YORK CITY SALESROOMS,
406-412 Broome St.

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LADIES OF FASHION



can not do without
L. SHAW'S
Skeleton Bang and Ideal Wave,
Natural curled, feather light, lifelike, beautiful, from \$3.00 up.
WAVY HAIR SWITCHES,
All long convent Hair, from \$5.00 up. \$10.00 elsewhere.
COCOANUT BALM.

The only Complexion Beautifier endorsed by eminent physicians. Makes the skin as fair and soft as a child's. Price, \$1.00 per box. All Toilet Preparations of the Celebrated **PARFUMERIE MONTE CHRISTO.** HAIR DYES ALL SHADES, A SPECIALTY. Send for free pamphlet "How to be Beautiful."

54 West 14th St., New York.
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(Continued from page 573.)

the end of the loaf, spread the loaf very lightly with butter, and then with raspberry jam. Cut a slice from the loaf as thin as possible, and trim off the crusts. These sandwiches can be rolled, or two pressed together and cut into diamonds, squares, or finger shapes, and should be served on a napkin, arranged neatly in a tray or basket.

Chilled raspberries are prepared by covering them with orange-juice, then sprinkling them heavily with sugar, and keeping them in an ice-cream freezer for thirty minutes. Serve with plain cream.

For crab croquettes, boil one dozen crabs and pick out the meat: this should make one solid pint of meat. Put half a pint of cream in a small saucepan over the fire. Rub together one large tablespoonful of butter and three rounding tablespoonfuls of flour, add to the cream, and stir until you have a thoroughly thick, smooth paste; add the beaten yolks of two eggs, take from the fire, and add two hard-boiled eggs, chopped fine, a tablespoonful of chopped parsley, an even teaspoonful of salt, a dash of red pepper, and half a teaspoonful of onion-juice. Mix, stir in the crab-meat, and turn out to cool. When cold, form into tiny pyramids, dip in egg and bread-crumbs, and fry in smoking hot fat. Serve with a white sauce.

Tomatoes stuffed with cress are dainty for a summer tea. Peel nice ripe tomatoes and set them on the ice for two hours; then cut a slice from the stem end and carefully take out the seeds without breaking the tomato, and put the tomatoes back on the ice till serving time. Wash the water-cress and cut it up with a sharp knife. Moisten it with a French salad-dressing made of salt, mustard, vinegar, oil, and a teaspoonful of onion-juice, and after carefully mixing put it into the tomatoes, and serve each tomato on a nice lettuce-leaf.

A Cherry Tea.

ONE of the prettiest teas that can be given is a "Cherry Tea." Perhaps you do not know what a cherry tea is: neither did I when the idea dawned upon me to have one, but this is how I went about it.

The cherry crop was especially large and fine, and one delightful morning, while out looking at my trees, which were loaded with their luscious burden, the thought occurred to me to permit my friends to enjoy the beauty

(Continued on page 575.)

Tender Feet is a subject that appeals to all, for what lady living who does not at times suffer in every nerve from such ailment. The so-called reliefs are many and conspicuous by their failures, but it is for the readers of this magazine to learn there is a *positive relief* and *instant* at that, in the seamless glove boots made by F. S. Peshine of Newark, N. J. They are a positive luxury and once worn are never forgotten. As a commendable covering for the feet they are without peer. See his advertisement in this magazine. His thousands of clients all over the country gratefully testify to the truth of all his claims.

IF YOU WANT TO BUY

Custom Hand-Made Oak Tanned Harness direct from the manufacturer, single sets \$7 to \$40, double sets \$16 to \$50, send for 72 Page Illustrated Catalogue, **FREE**, giving full description.

KING & CO., Mfr's Owego, N. Y.
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DR. JAEGER'S
SANITARY WOOLEN SYSTEM CO.
HERMANN SCHAEFFER, President; EDWARD DEWEY, Vice-President

Note our Trade-Mark. of Imitations!

We ask attention to our Complete Assortment of
SUMMER UNDERWEAR
For Men, Women, and Children;
And especially to our exquisite
All-Wool GAUZE
Underwear for the hot, summer season.
These Sanitary garments are guaranteed to be all-wool of the finest quality; they are made under Dr. Jaeger's supervision.
Send for illustrated Catalogue.
Garments Made to Order, a Specialty.
Mail orders promptly attended to.
827 & 829 Broadway, New York.
153 Broadway, below Courtlandt St., New York;
501 Fulton Street, Brooklyn, N. Y.;
1164 Chestnut Street, Philadelphia, Pa.

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Dragon Fast Black
WITHOUT THIS  NONE GENUINE!
COTTON DRESS FABRICS.

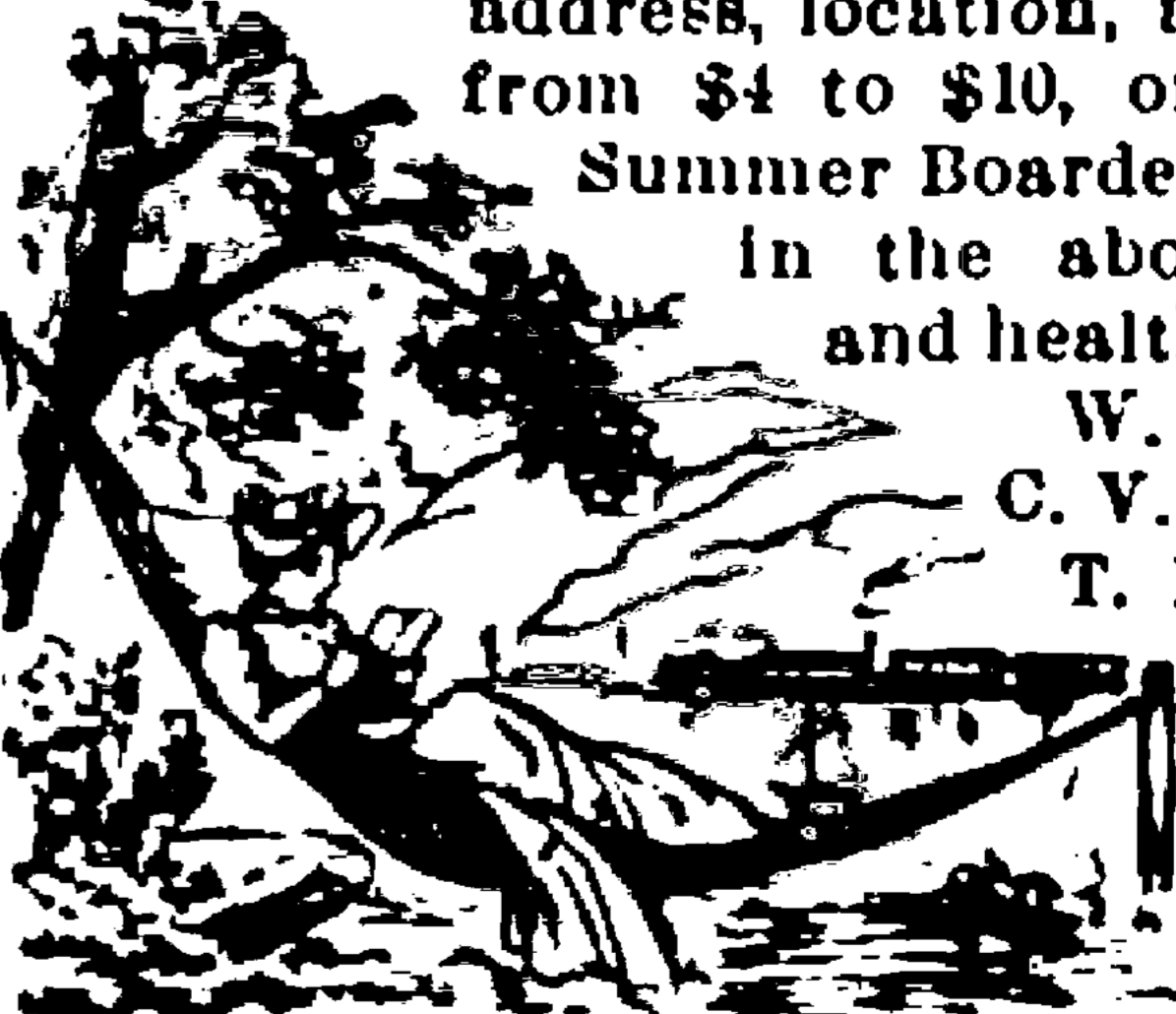
DOES NOT CROCK OR FADE IN SHEER INDIA LINONS LAUNNS & BATISTE PRINTED EFFECTS IMPROVED BY WASHING

WARRANTED ABSOLUTELY FAST
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BEFORE DECIDING ON YOUR SUMMER OUTING

address one of the Company's Agents, named below, for illustrated copy of "Summer Homes Among the Green Hills of Vermont and Along the Shores of Lake Champlain," which will be sent free. This book contains the name, P. O. address, location, and the prices per week, from \$4 to \$10, of 550 Private Homes for Summer Boarders; also list of 275 Hotels, in the above unsurpassed resting and health-renewing climate.

W. R. BABCOCK, S. P. A., C. V. R. R., 353 Broadway, N. Y.
T. H. HANLEY, N. E. P. A. C. V. R. R., 260 Washington St., Boston, Mass.
S. W. CUMMINGS, G. P. A., C. V. R. R., St. Albans, Vt.



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PLAYS Dialogues, Tableaux, Speakers, for School, Club & Parlor. Best out. Catalogue free. T. S. DENISON, Chicago, Ill.
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(Continued from page 574.)

and quality of the fruit with me, and this is how the cherry tea came to happen.

The cards of invitation each bore a dainty little bow of cherry-colored ribbon, and contained in one corner the announcement, "A Cherry Tea."

In the center of the table was a very pretty glass *épergne* holding a bunch of twigs and leaves from a cherry-tree, and four or five cherry-plumes. These "plumes" were made by tying, with a fine black thread, the cherries close together on a slender stem, until nothing but the fruit could be seen.

I also pulled a quantity of twigs with the leaves and clusters of fruit on them, and to these twigs I tied cherries of different kinds, until it seemed that each one bore three or four varieties. These branches I let radiate from the center design, and the effect of the bright-colored fruit and the glossy-green leaves and brown stems against the white linen cloth was exquisite, and called forth a murmur of admiration when the guests assembled around the table.

A menu-card at each plate bore a small cluster of cherries and leaves tied with narrow ribbon of a cherry color. Cherry sweet-pickle was among the edibles, and delicious, amber-hued cherry-preserve was served with the ice-cream. I also had cherry sherbet in thin glasses, each containing a lump of ice and a slice of lemon, and this drink proved as pretty as it was refreshing.

The use of the fruit as a decoration was all that an artistic eye could desire, for I had not only the bright-red cherry, but several other kinds, from the exquisite "Gov. Wood," to the dark, rich "black-heart." The guests were kind enough to pronounce the affair a very decided success, and one bright young lady remarked that she felt sure everybody had had a "cheery" time of it. The entertainment was quite a unique one in its way, yet withal very pretty and inexpensive.

HENRY CLEVELAND WOOD.

"Our Cooking Class."

LESSON XVI.

GENERAL HINTS ON THE COOKING OF MEATS AND VEGETABLES.

THERE are three principal ways of cooking meat; viz., stewing, boiling, and roasting. As we have had a lesson on the first it will be unnecessary to touch upon it again. For roasting, the cuts in general use are, in beef, the ribs and sirloin: the former by far the best, unless for a very large family; in mutton or lamb, the leg, loin, and

(Continued on page 576.)

Do you ask how it is possible for a firm to give so many valuable premiums, extras, etc., with the "Sweet Home" Soaps. This is the only brand of household soap that is sold direct to the consumer by the manufacturer. J. D. Larkin & Co., Buffalo, N. Y., are the only large soap manufacturing firm in the United States selling direct to the user. All other firms employ traveling salesmen; jolly, good fellows these travelers are too, live high, get big wages, wear fine clothes. The Bureau of Statistics at Washington says, that the wages paid during 1890 in this country to traveling salesmen, is one-fifth more than the income of all the ministers and doctors in the United States.

Now, if a manufacturer is willing to supply you direct, a better article than you can get at the stores, and is willing to give away for a limited time, to advertise and introduce his goods, all that is saved in expenses of traveling men, extra freights, profits of wholesale and retail dealers, had you not better accept the offer? We have used several of these "Christmas" boxes ourselves and know of a good many others who have done the same, and all speak of the goods in high terms of praise. We are sure you will make no mistake in ordering Larkin's "Christmas" box.



After your bath,—have you ever noticed it? There is one peculiar quality in Ivory Soap. No other soap can give you that exquisite sensation of perfect cleanliness. You feel as if you had been entirely made over. This undoubtedly is attributable to the effectual cleansing of the pores.

A WORD OF WARNING.

There are many white soaps, each represented to be "just as good as the 'Ivory';" they ARE NOT, but like all counterfeits, lack the peculiar and remarkable qualities of the genuine. Ask for "Ivory" Soap and insist upon getting it.

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COMMON SENSE GIFTS.

Make your friend happy by a present of some of Sinclair's useful and substantial Home Comforts.

Fireside Comfort is a very attractive seat for young or old. Try it and be happy. Strong, durable and comfortable. No light, trashy stuff, but good honest home comforts.

Special discount to clergymen. Send stamp for catalogue to

F. A. SINCLAIR, Mottville, Onondaga Co., New York.

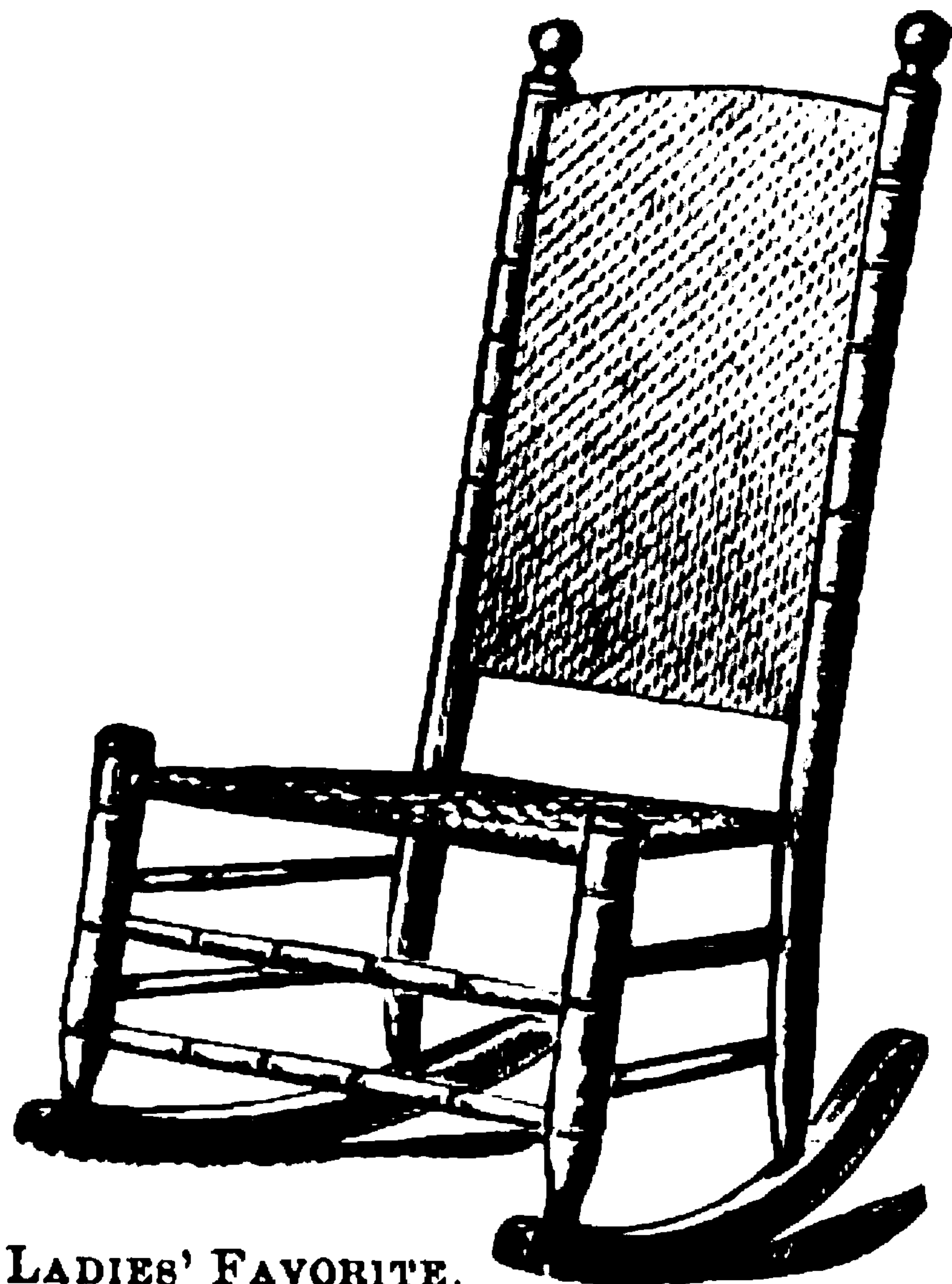
"The Common Sense chairs and settees of Mr. Sinclair are not surpassed by any other class of goods, and parties furnishing country houses and desiring inexpensive, comfortable and durable furniture will do well to write to Mr. F. A. Sinclair, at Mottville, N. Y., for a copy of his hand-book, which contains illustrations of the various articles he manufactures, with a schedule of prices."
—Scientific American.

Ask your Furniture Dealer for Sinclair's Common Sense Chairs.

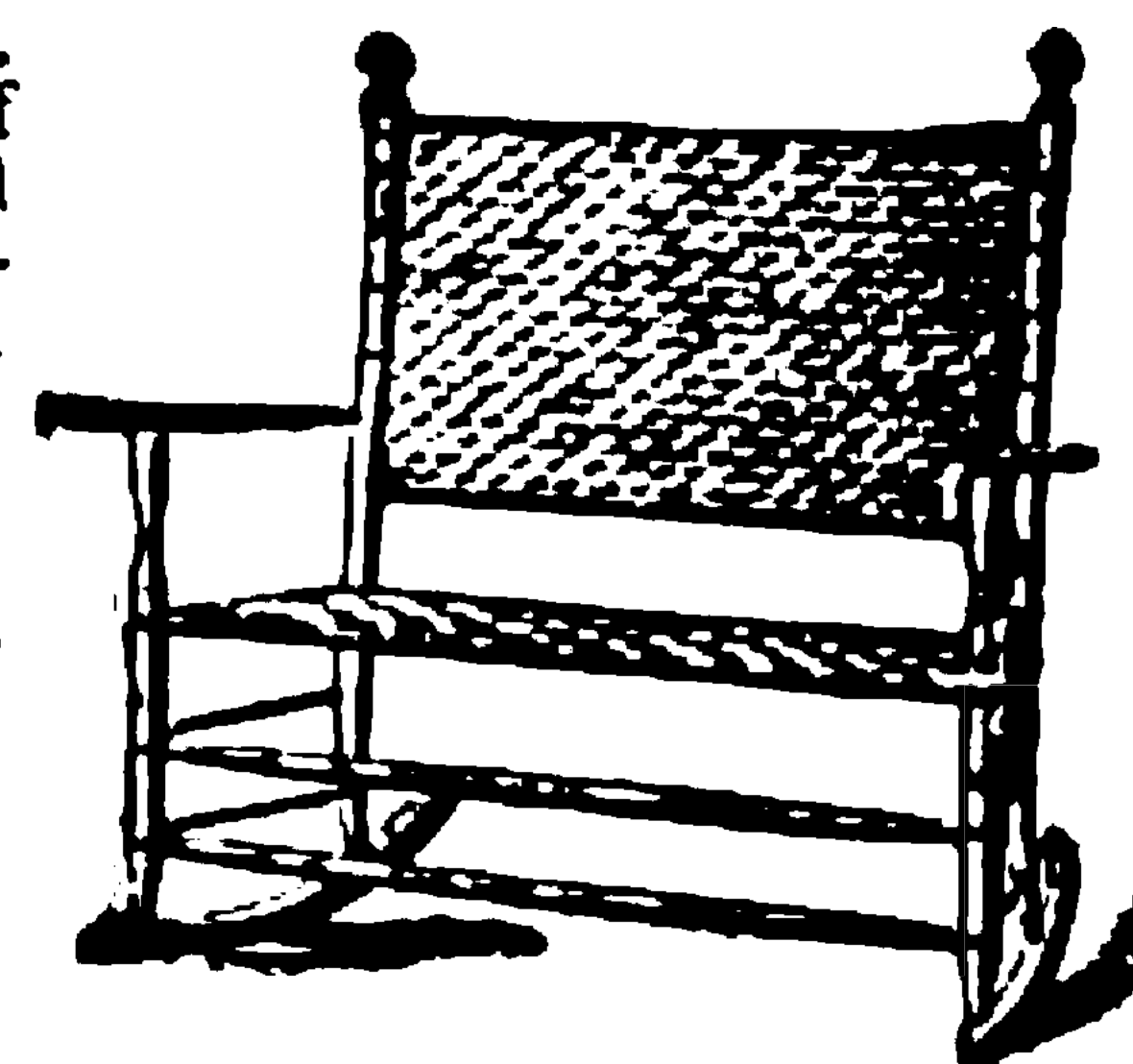
DON'T TAKE ANY OTHER.

My address is stamped on all of my chairs; please find it before purchasing.

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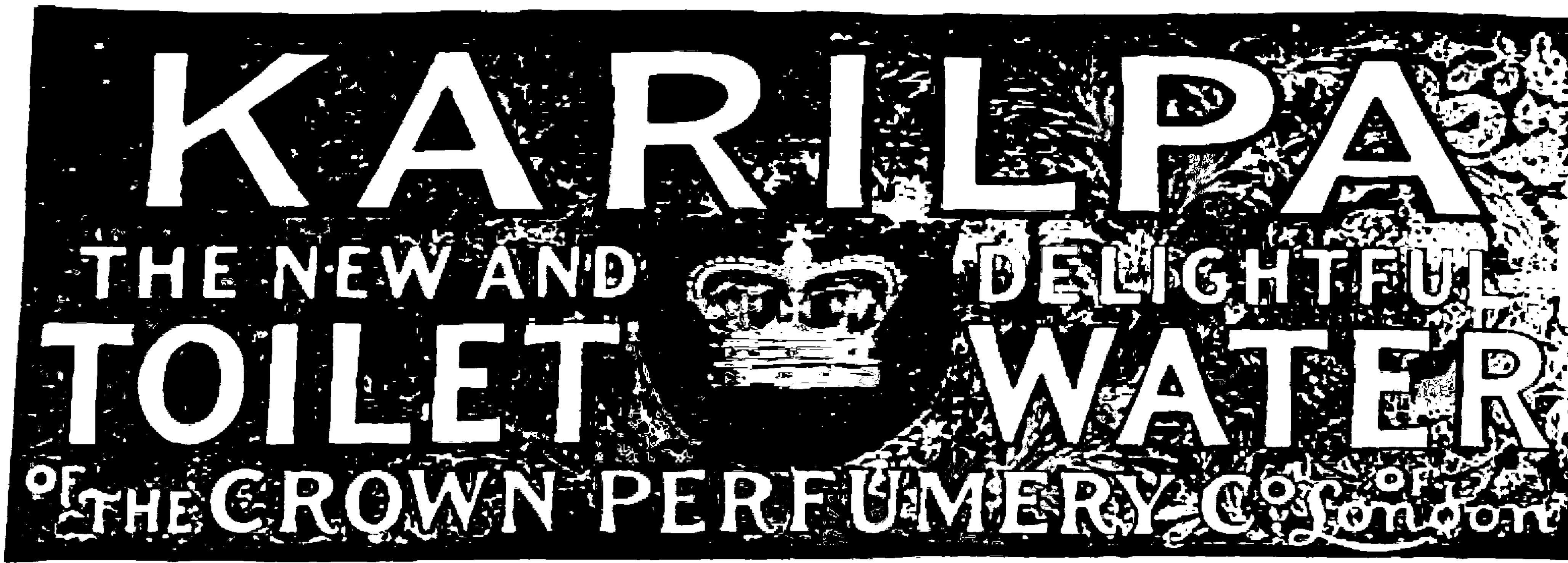
LADIES' FAVORITE.



FIRESIDE COMFORT FOR TWO.

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Send for a Sample Bottle of the New English Eau de Toilette



A LUXURY AND DELIGHT FOR EVERY HOME.

"Pungent and most refreshing. Something very delicious."—NEW YORK OBSERVER.
 "Nothing so choice in quality, and so unique and tasteful in the manner in which it is put up, as the Karilpa Toilet Water of The Crown Perfumery Co., has been seen in London. It is certain to prove a great favorite with all who desire a delicious and most refreshing toilet water."—LONDON COURT JOURNAL.
 "The new Karilpa Toilet Water, of the Crown Perfumery Co., of 177 New Bond Street, London, gives promise of being as eagerly sought for as their Famous Crab-Apple Blossom Perfume and Lavender Salts."—L'ART ET LA MODE, Paris.
 Ask your druggist for . . . Price, 4 oz., 75 cents; 6 oz., \$1.00; 8 oz., \$1.25. Send 25 cents in stamps to Caswell Massey & Co., New York, or Melvin & Badger, or T. Metcalf & Co., Boston, or George B. Evans, Philadelphia, and a full 1-ounce trial bottle of this new and delightful toilet water will be sent, post-paid, to any address. At wholesale by McKesson & Robbins, Hall & Ruckel, Park & Tilford, W. H. Schleffelin & Co. and Munro & Bateman, New York, Marshall Field & Co., Chicago, and all leading wholesale druggists and dealers in perfumery.

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"We are advertised by our loving friends."

King Henry VI.

The Portraits of
 Healthy Infants
 Sent by
 Thankful Parents
 Offer
 Irrefutable Evidence
 Of the Excellence of
MELLIN'S FOOD

FOR INFANTS AND INVALIDS.

THE DOLIBER-GOODALE CO., Boston, Mass.

Invites correspondence

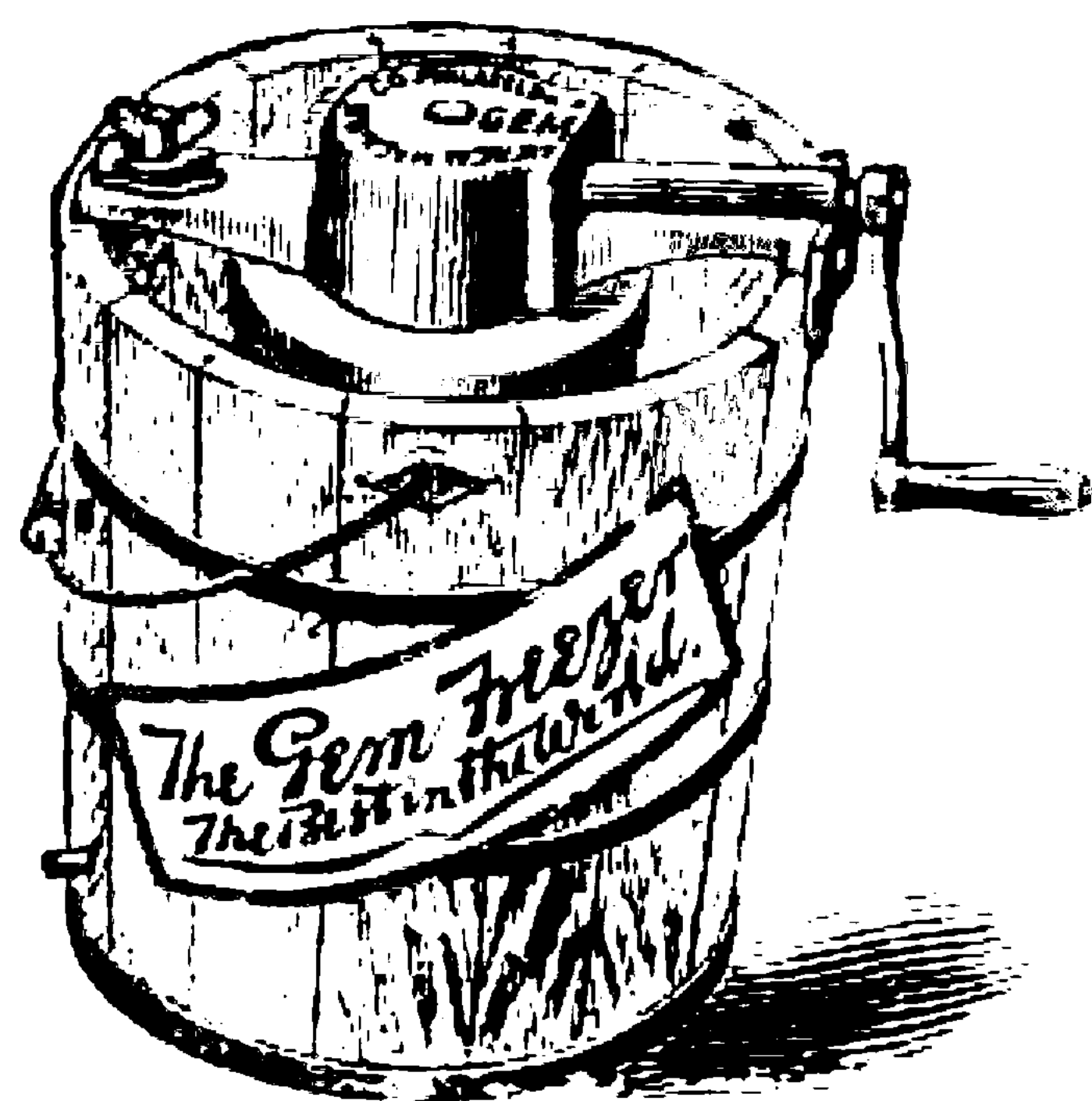
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JOHN WILBUR, Jr.,
 Palmer, Mass.

(Continued from page 375.)
 shoulder: the leg is here the best . . .
 spring lamb, when the whole hind . . .
 used; in pork, the same pieces as in mutton . . .
 and in veal, the fillet is alone in general use.
 Good beef should be bright red, well veined
 with yellowish fat, and have a good . . .
 of fat of the same color on the outside. The . . .
 should be dry and easily crumbled, and the . . .
 should be firm, and show no mark when pressed . . .
 by the finger. The first cut of beef, . . .
 the smallest, and has the least waste: it . . .
 cut off the end where the bones are cracked, and
 reserve it for the soup-pot.
 Wipe the meat off carefully, then sprinkle well
 with salt and pepper, and dredge thoroughly with
 flour: this makes a paste which keeps the juices
 of the meat within, and will become most deli-
 ciously brown and crisp. Put your beef in the
 dripping-pan with a couple of tablespoonfuls of
 lard, or, better still, beef drippings, to baste with.
Never use water: as long as there is any vapor the
 meat will not brown. The fat you put into the pan
 will suffice until that of the meat commences to
 drip. Baste often, at least once every ten minutes.
 frequent basting enhances the natural juiciness
 of the meat. The oven must be at its hottest
 when the meat is put in, so as to sear the outer
 surface and prevent the escape of the juices.
 For beef, if liked rare, allow ten minutes to the
 pound; if to be well done, allow about twelve
 Dredge once again with salt, pepper, and flour,
 after roasting has commenced. Be sure to have
 a good hot oven: a slow one dries and toughens
 the meat; if too hot, it will burn without cook-
 ing.
 Mutton comes next in value in the nutritive
 scale. Wipe well, then dredge with salt, pepper
 and flour. The membrane which is often wrapped
 around the leg should be thrown away, and a
 little of the kidney-fat used for basting purposes.
 Mutton should be served better done than beef,
 and never eaten very rare, it being dangerous to
 health. One hour will be required to roast a
 leg of mutton if liked red, allowing from ten to
 twelve minutes a pound. Lamb should be served
 thoroughly done, allowing fifteen minutes to the
 pound.
 Veal is the least nutritious of our meats. It is
 at its best in the spring. The fat should be a
 clear white, and the flesh a light pink: *never* buy
 it when it looks white. It should be *thoroughly*
 cooked, never eaten when pink. Prepare for
 roasting in the same manner as the other meats.
 baste very freely, and season highly, as it is nat-
 urally dry and tasteless.
 Pork should also be eaten only when thoroughly
 cooked, and during cold weather. The flesh of
 good pork is light red, young and firm, the fat a
 pure white. Rub well with pepper, salt, and flour,
 and allow twenty minutes to the pound. The
 oven should not be quite as hot as is required for
 other meats. Pork is preferred cold by many, and
 is then much more wholesome.
 In boiling meats, have your water boiling and
 salted, plunge the meat into the water allow it to

(Continued on page 378.)



YOU WANT THE BEST, THE MOST CONVENIENT AND ECONOMICAL.
 INSIST ON HAVING THE GEM AND SEE THAT IT IS LABELED IN RED:

DO NOT BE IMPOSED UPON BY
 DEALERS WHO MAY TRY TO SELL
 YOU OTHER FREEZERS BY TELLING
 YOU THEY ARE "JUST AS GOOD"
 OR "JUST THE SAME AS THE GEM."

The Gem Freezer
The Best in the World.

"Dainty Dishes FOR ALL Year Round" By
 THE MRS. S. T. RORER
 A BOOK OF 104 PP., CONTAINING RECIPES FOR 120 ICE CREAMS, SHERBETS, FROZEN
 FRUITS, ETC., IS PACKED IN EACH GEM FREEZER. SAMPLE COPY MAILED ON RECEIPT OF 6C.
 IN STAMPS IF NAME OF THIS PUBLICATION IS GIVEN, ON APPLICATION TO THE

FOR SALE BY ALL
 LEADING HARDWARE AND HOUSE FURNISHING
 STORES EVERYWHERE.

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MAGIC LANTERNS WANTED AND FOR SALE
 OR EXCHANGE,
 HARBACH & CO. 809 Filbert St. Phila. Pa.

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GENUINE FLAX FIBER-WARE

Water and Dairy Pails, Wash Baskets,
 Pitchers, Milk Pans, Spittoons, Soap
 Jars, Mats, etc. Guaranteed. Light,
 durable. Plain and Decorated.
 Always bears this Trade-Mark. Ask your dealer for it.

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