DEMOREST'S FAMILY MAGAZINE.

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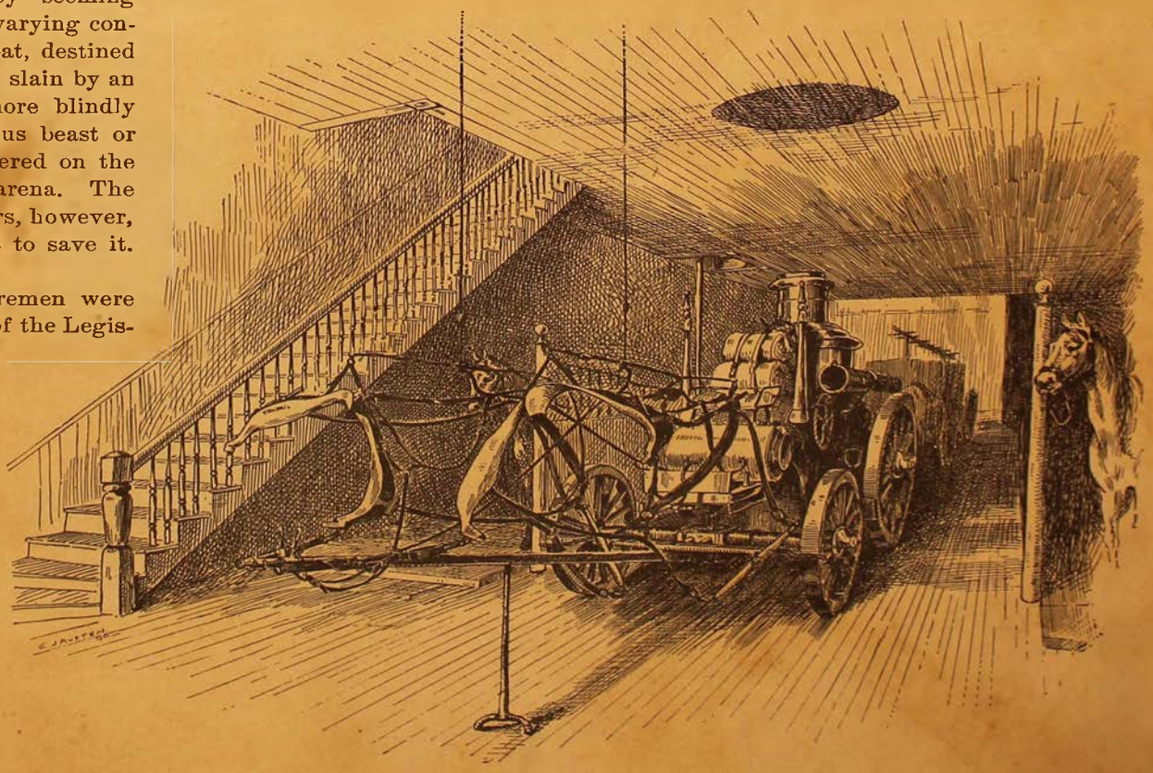
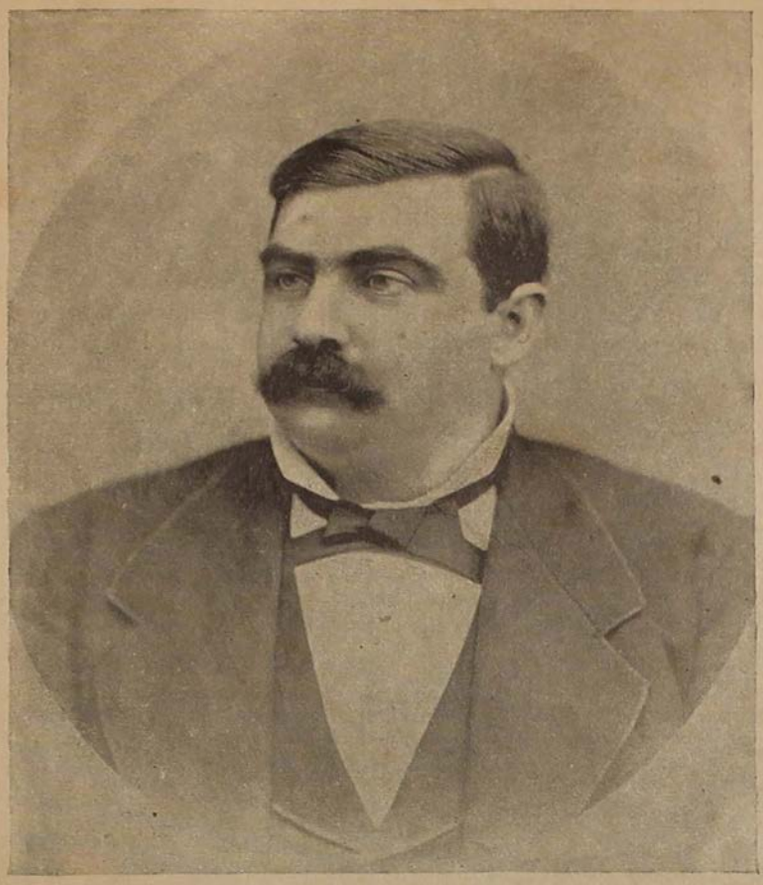
NEW YORK, not less than ancient Rome, maintains her gladiators,—men trained, like those of old, to fight for their lives, held in momentary readiness for battle, assigned by seeming chance to sudden and varying conditions of mortal combat, destined all to conquer or to be slain by an enemy stronger and more blindly cruel than any ferocious beast or adversary ever encountered on the bloody sands of the arena. The mission of our gladiators, however, is not to take life, but to save it. They are—our firemen.

Prior to 1865, the firemen were volunteers. By an act of the Legislature, passed March 30th of that year, the present paid department was established; but no reform was ever more vigorously combated, and it was not until 1870 that the new system was brought to satisfactorily good working order. The old volunteers, retentive of the social importance and political influence their former service had given them, bitterly resented being relegated to obscurity, and even went so far as to endeavor to maintain their position by force. But practical considerations of the public interest were against



INTERIOR OF AN ENGINE-HOUSE.



HENRY D. PURROY, PRESIDENT OF THE BOARD OF FIRE COMMISSIONERS.

them. Property owners developed a prejudice against seeing their property consumed by fire while rival companies of firemen, instead of exerting themselves to quench the flames, beat each other's heads with trumpets and spanners, or upset each other's engines to settle the mooted question of which were "de best fighters." And even when those customary *divertissements* did not happen to occur, the best applied efforts of the volunteers, daring and skillful as the men often were, lacked the co-ordinate system requisite for attainment of the best results.

By 1870 the volunteers had given up the contest for recognition and faded from sight, except in such sentimental existence as is still maintained by two rival societies of veterans. From that time until the present, the history of the Fire Department has been one of continuous progress in effectiveness and extension of resources to meet the growing requirements of our constantly enlarging city.

It is not easy to obtain enrollment as a New York fireman. The applicant must have five feet seven inches of height, one hundred and forty pounds weight, be physically sound, pass a Civil Service examination, and make at least a creditable showing in the gymnasium. If thus far satisfactory, he is taken on probation for a month. During that time new vistas of possibilities for the breaking of his neck are opened up to him in training for the Life-Saving Corps, and he is experimentally sent out with some engine-company in actual service, to get practical experience in fire fighting. At the end of that probational time he is put through another physical examination, to ascertain if the vigorous training he has undergone has broken him up in any way. If found all right, he is enrolled, uniformed, and assigned to duty as a fireman of the third grade, but his training is continued until he has developed into a good all-around gymnast, and his education as a life-saver is complete.

The advisability of having a Life-Saving Corps had been talked of and tacitly admitted by the Fire Commissioners for years, without any steps toward it having been taken; but the appalling loss of life at the burning of the Potter Building crystallized the talk into action, and on February 10, 1883, mainly at the instance of Commissioner Henry D. Purroy, the service was organized upon the lines of the French "Pompier" system. The corps, composed at first of volunteers from other companies in the department, was equipped and trained by Christopher Hoell, who introduced the system in this country and had already caused its adoption in nineteen American cities and towns. On May 5, 1888, the Commissioners issued an order requiring all men in the Department, under the age of forty years, to go through the Life-Saving training. Capt. H. W. McAdams, successor to Christopher Hoell, is the instructor, and has a class, generally of about twenty-five in number, in daily practice at the back of the Headquarters building on Sixty-seventh Street near Third Avenue.

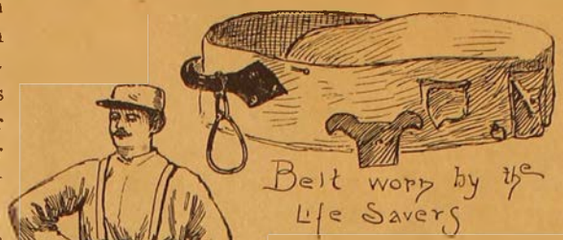
A severer training than that required for this service it would be difficult to imagine; but anything less would fail in the object sought, which is not only the instruction of the men in what to do under all possible contingencies of their service, but developing in them the ability to do, confidently and surely, whatever may be necessary to save their own lives and those of others in the extremest emergencies. Each man must acquire the sure-footedness of a mountain goat, the jumping ability of a kangaroo, the agility of a panther, the balancing power of a funambulist, the climbing skill of a monkey, the strength of a mule, and withal the lightness of a squirrel,—all in addition to natural clear-headed coolness and self-reliance in the face of the greatest dangers; and, just in proportion as he fails to reach any of these extremes of perfection in his physical and mental training, by so much he diminishes his usefulness and increases the measure of his personal peril in actual service.

The life-saver's equipment consists of one or two scaling-ladders, a very strong belt fitted with a peculiar hook, a life-line hung in a coil upon the belt, a light axe, and some spikes carried in a pocket. The scaling-ladder is a strong

HUGH BONNER, CHIEF OF NEW YORK FIRE DEPARTMENT.

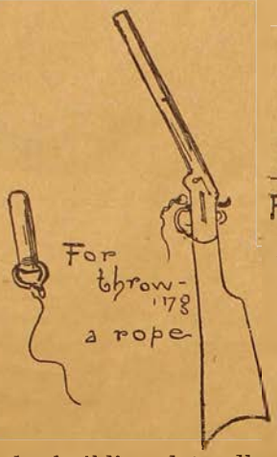
Raising the Scaling-Ladder.

hickory pole, fifteen or twenty feet long, with rungs thrust through it, and one end armed with a great, wide, steel hook, dentilated on the under side, to catch over window-sills or cornices. The life-line is strong enough to bear the weight of three or four men safely. By the use of two ladders, alternating them, the man can go straight up the front of a house, from window to window, and even clamber up to the cornice and get upon the roof; or he can traverse the front of the building laterally, swinging from window to window to change his upward course when his line of straight ascent may be impeded by an outburst of fire. Fastening his life-line to some secure hold,—making one, if necessary, with his axe and the spikes,—and taking a turn of it about the hook on his belt, to serve as a brake, he can safely glide down to the ground, carrying one person, or even two if they are able to cling to him, or can lower them while himself remaining aloft.

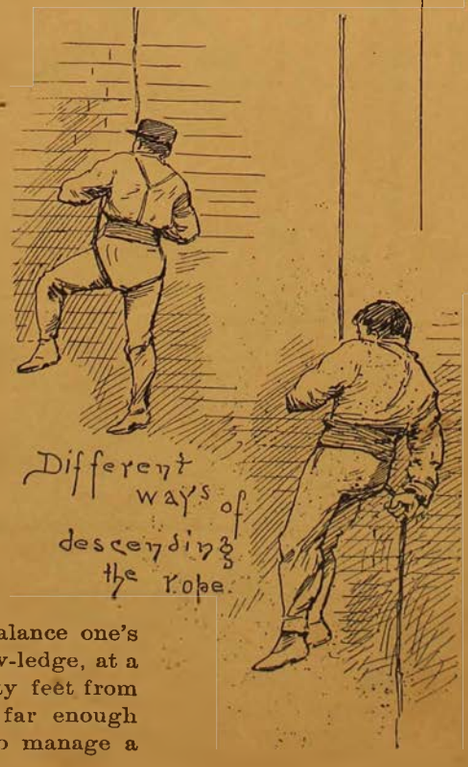


Belt worn by the Life Savers

Ready for practice



For throwing a rope

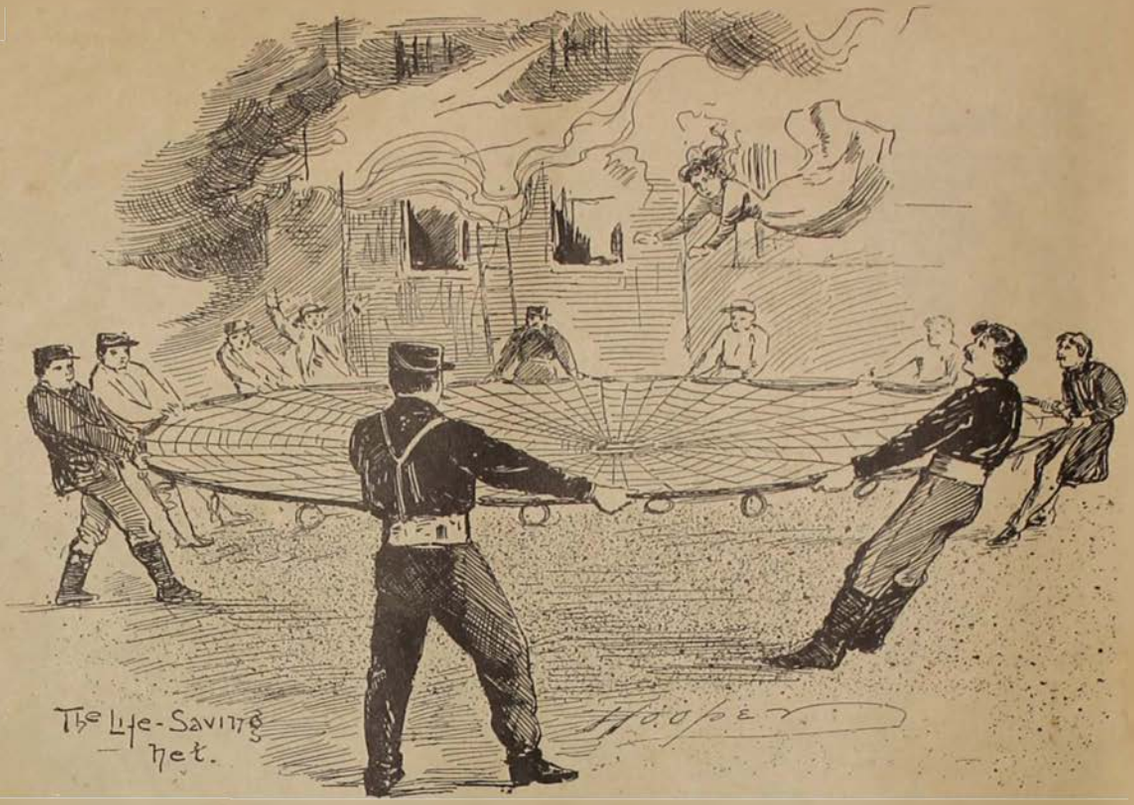


Different ways of descending the rope.

All that he can do with two ladders, practically he can also do with but one, only not so quickly, and with more exertion and risk. It is no small feat to balance one's self on a six-inch window-ledge, at a height of sixty or seventy feet from the sidewalk, lean out far enough to guide upward and to manage a fifty-pound ladder, thrust its long hook through a window of the next story above, climb up it and repeat the operation still higher; but that is what a man working with only one ladder has to do. The accompanying illustrations show what these men accomplish constantly and easily in their daily practice, and what they are liable to be called upon to do, at any moment, at a fire, to reach imperilled people and save their lives.

In a vast majority of New York houses, whether office buildings, tenements, or flats, a central staircase well is likely to serve as a chimney for a fire, and to become impassable in a very few minutes after the flames break out. The only avenue for relief and the escape of imprisoned inmates is then by the windows. Hence the importance of the ladder-climbing service to which the men are trained. But, sometimes, flames bursting from windows cut off the fireman's descent after he has lowered to safety those he ascended to reach. In some such cases men have had to make long leaps of ten or fifteen feet, across gulfs of flame, or at dizzy heights, to the narrow tops of parapet walls or window-ledges, even taking such desperate chances when the already sufficiently insecure footing was made still more hazardous by a coating of ice. They have even been required to cross still wider spaces, to effect escape, by fastening one end of the life-line, tossing the other in coil to a comrade at the point to be reached, and, when it was made taut and secure, making the transit swinging by their hands. Still another resource is leaping down into a net held by comrades in the street below, a thing that would not be particularly dangerous were it not always the unforeseen that is most likely to happen. If the falling man strikes one of the holders instead of the net, there are liable to be two dead men;

SAVED!



if he only bounces off into the street, he may only break one of his own limbs, or his neck; but if all goes well, nobody may be hurt. A great deal of practice is given, in training, to the use of the net, both by tossing dummy figures from a great height to be caught by it, and with men jumping into it.

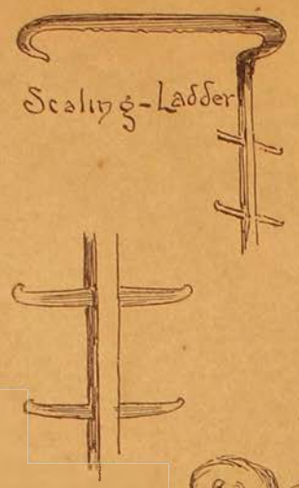
All tenders and trucks now go to fires carrying full equipments of life-saving apparatus, and so accustomed have the men become to its use that they very frequently employ the scaling-ladders to quickly carry a line of hose to an upper story of a building where there may be a fire, even when there is no question of saving life. Another thing that they all carry is a gun arranged to throw a projectile, which, before firing, fits over the end of it like a cap, and to which a light line is attached. This enables the throwing, over the tallest building, of a line by which a heavier rope or a line of hose may be hauled up.

There is considerable difference between the way an alarm of fire is given in London and in New York. In London, when a fire breaks out, somebody who feels himself interested hunts up a policeman and mentions it to him; the policeman steps around to the nearest engine-house and formally reports the occurrence; a fireman is sent with a portable extinguisher to the scene of the conflagration; if he finds himself unable to cope with the flames, he returns to the engine-house and suggests the propriety of adopting more radical measures; if sufficient reliance is put in his judgment and veracity to make further investigation and report seem unnecessary, steps are taken to get the engine to work.

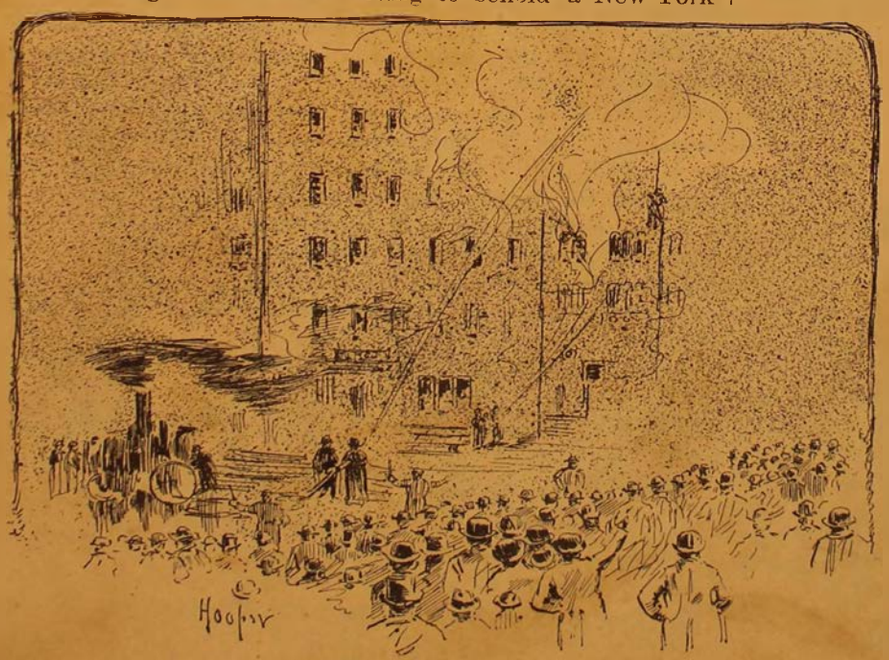
In New York, there are three separate systems of electric circuits for receiving and sending out fire-alarms, all centering at Headquarters. [We have in all twelve hundred and ten miles of fire-alarm telegraph-wire. London has one hundred.] The first are the alarm circuits, each of which includes fifteen to twenty-five of our twelve hundred "alarm boxes," severally bearing serial numbers, irrespective of the circuit.

USING THE BATTERING-RAM.

Pulling the handle in the alarm-box sends in that number, automatically, five times in succession. The first electric impulse drops, in the telegraph room at Headquarters, a shutter disclosing the circuit waked up, and registers the alarm; and by the time the box number is rung in, the alarm is transmitted over the second and third systems, to the engine-houses in that district. By one system the great alarm-gongs are rung, and the horses are released in their stalls; by the other, the number of the box whence the alarm comes is transmitted. That number has hardly sounded, when the horses are hitched up before the engine and its tender, ready to start, and the men of the company are also in their places and ready, in all the engine-houses signaled. To each signal ten or more engines or trucks are assigned for response. Of these only a certain proportion—say three engines and two trucks—go out on the first alarm, the others to a second and a third call, these successive summonses only being sounded as the magnitude of the fire seems to render them necessary. The apportionment is not arbitrary, the allotment depending upon the probable needs in different parts of the city: more engines and trucks being assigned to a given space in the lower part of the city—where buildings are big, crowded together, and filled with valuables—than in the residence section, uptown.



It is a sight well worth seeing to behold a New York engine-company responding to an alarm. At one second, some of the men may be reading, chatting, or playing dominos in the company room, others asleep in the bunk room,—with their trousers spread open before them and the legs of their boots already standing in them,—the horses, bare of harness, placidly munching hay in their stalls, and an air of slumberous calm pervading the entire establishment. The next second, at the first "bang" of the big gong, the horses, with a thunderous clattering of hoofs, are dashing out of their stalls and taking their places before the engine and the tender; the men, already dressed, come flying down the "sliding pole" and instantaneously spring into their places; the harness, held aloft by an ingenious device over the places where the horses stand, drops upon them and is instantly secured by spring catches operated by nimble fingers; the front doors are open; and all are actually waiting for the completion of the electric announcement of the box number whence the alarm comes. The best "hitching time" yet made is the recorded performance of "Charley" and "Joe," the famous team of No. 7 Engine (located at Chambers and Center

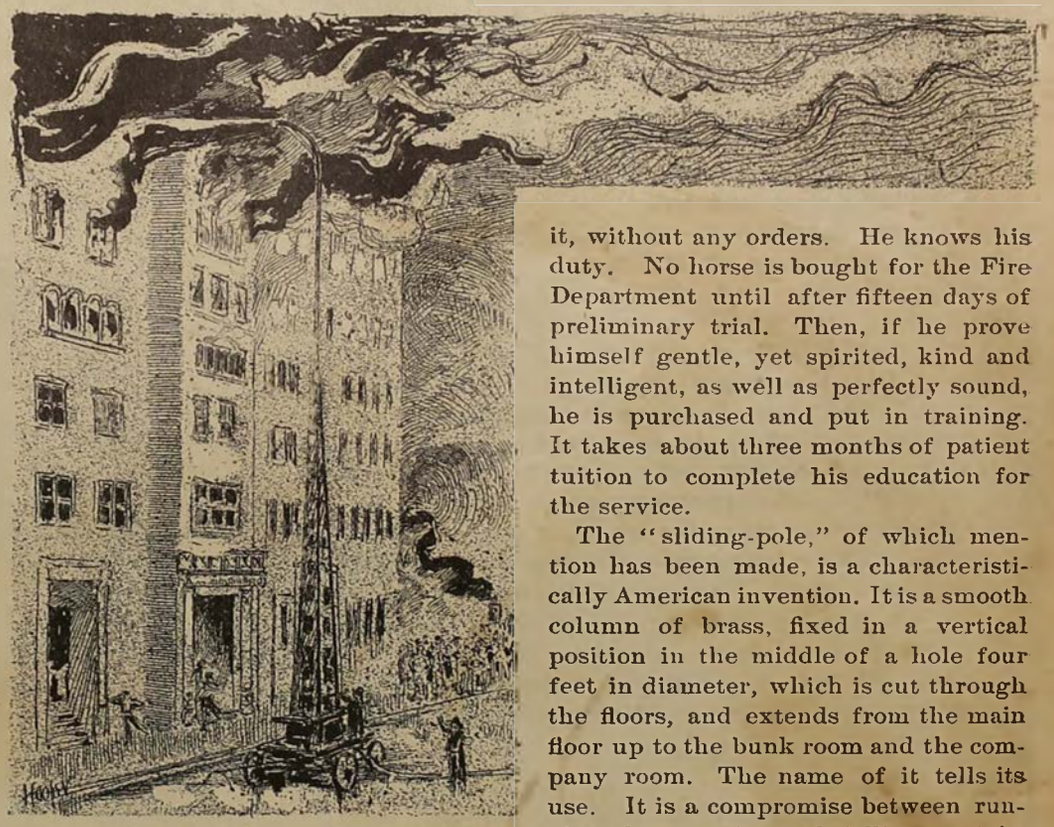


KEEPING THE FIRE LINE.

Streets). They have got out of their stalls, reached their places, and been completely harnessed and ready to start in $1\frac{5}{8}$ seconds.

The horses, the men affirm, count the strokes of the box-call, know when the alarm is one to which they must respond, and, when it is so, are almost mad with impatience to get away. They need no whip, and on their way to a fire will dodge obstructions, go without direction to the hydrants from which they know by experience their engine will take water, and put themselves in position there, with scarcely a suggestion by voice or rein from the driver. As for the tender-horse, when the engine goes out he will follow it and never be more than a hundred feet behind, no matter whether the driver is on the seat or not. He has no time to look for anybody or wait to get orders; and at the fire, when he has delivered the hose where it is wanted,—in the flames if called upon,—he may be

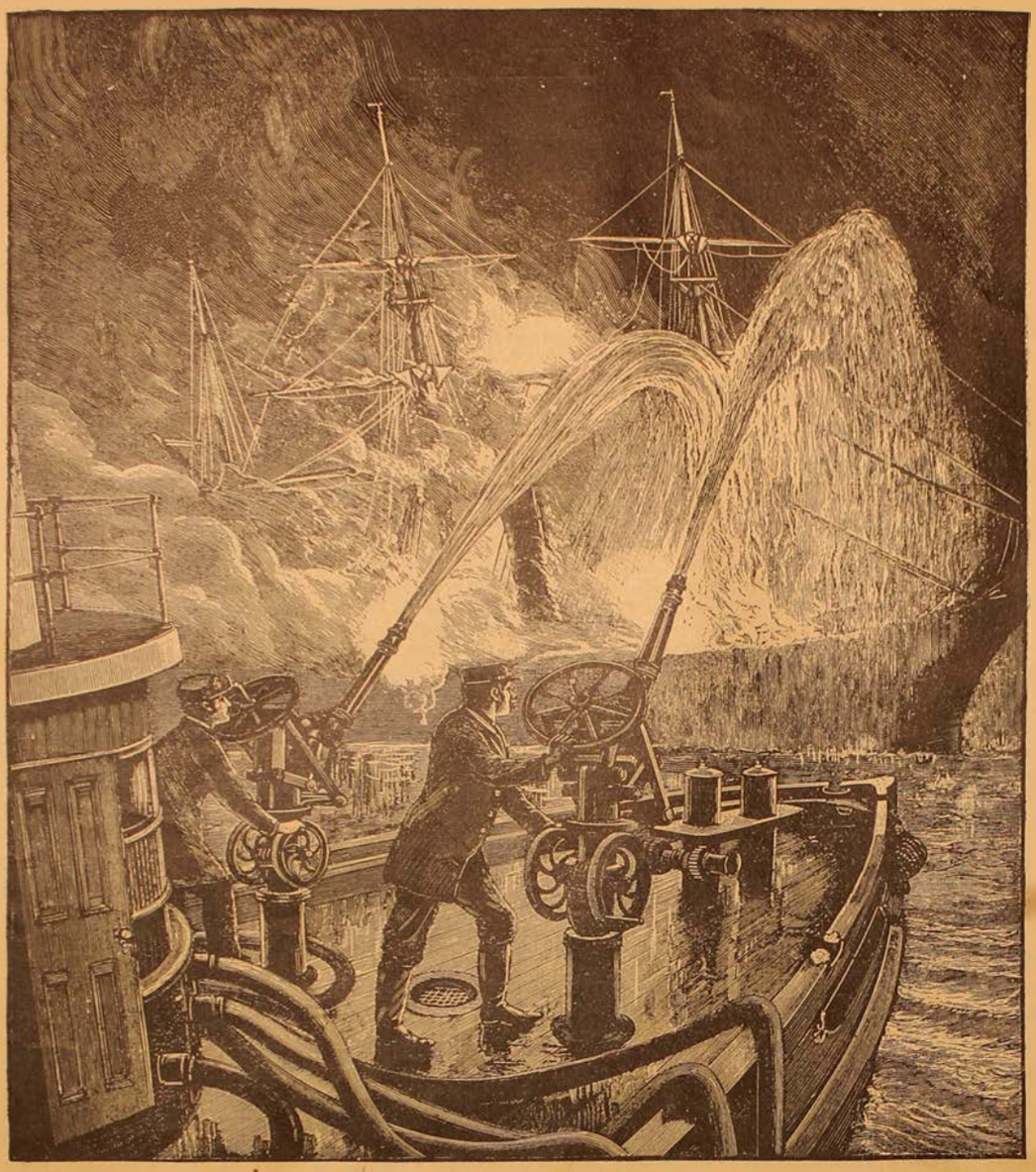
trusted to jog off by himself, hunt up the engine to which his tender belongs, and put himself in proper position behind it, without any orders. He knows his duty. No horse is bought for the Fire Department until after fifteen days of preliminary trial. Then, if he prove himself gentle, yet spirited, kind and intelligent, as well as perfectly sound, he is purchased and put in training. It takes about three months of patient tuition to complete his education for the service.



A WATER-TOWER.

The "sliding-pole," of which mention has been made, is a characteristically American invention. It is a smooth column of brass, fixed in a vertical position in the middle of a hole four feet in diameter, which is cut through the floors, and extends from the main floor up to the bunk room and the company room. The name of it tells its use. It is a compromise between running down stairs and falling straight down a hole, but rather more like the latter than the former. Men accustomed to it make the descent in surprising ways. Some can slide down touching it only with their hands and holding their bodies straight beside it; others habitu-

Training horses to start at the sound of the GONG.



A FIRE-BOAT.

ally only crook one arm around it and let themselves go; and there are not a few who are so expert as to glide down it head foremost. Handy and expeditious as it is, the great open trap by which it is surrounded is a constant danger. Doors close the opening, but they shut from below, are merely to keep the draught out, and give way to the lightest touch. Men have frequently been hurt, and one was killed by falling through accidentally. In only one engine-house, that of Engine Co. 53, on One-Hundred-and-Fourth Street, is an intelligently constructed safe system of trap doors, the invention of Capt. H. M. Jones. These close from above, can be safely walked upon, yet are thrown open by springs, counterweights, and an electric shock, synchronously with the loosing of the horses in their stalls.

The Fire Department, among its other efficient apparatus, includes fire-boats, or floating engines, for fighting fire along shore. The "Zophar Mills" and the "Wm. F. Havemeyer" are powerfully efficient boats, and upon numerous occasions have proved invaluable for the protection of the shipping in the harbor and property on streets near the water-fronts. The new fire-boat, the "New Yorker," launched April 5, 1890, will be by far the most powerful floating fire-engine in the world, and is expected by sanguine persons to be capable of making, under full steam, a speed of nineteen knots per hour. At that rate she will be able to go from her berth at Pier 1, North River (where she will lie with fires banked, but with sufficient steam always in her boilers to start with), to a fire above Forty-second Street, and be at work there in twenty-five minutes, throwing, if necessary, a five-inch solid stream to a distance of five hundred feet, or about forty smaller streams. An ingenious arrangement of metal screens, for protection of the boat and her crew, will permit her fire-fighting to be done at the shortest range desirable,—in the fire, indeed,—and her effective service will practically cover a belt two thousand feet wide all along the water-front. This stupendous geyser-producer will afford a new assurance of protection for the "dry-goods district."—a source of constant anxiety by reason of the enormous values there gathered in a small space that is now very inadequately supplied with water,—since, even should she not be able to play directly upon a fire there, she could serve several land-engines, and at the same time keep Commissioner Purroy's great portable tank filled for others to draw upon.

For fighting fire in the upper part of tall buildings, the water-tower, another modern invention, is often invaluable. The principle of these towers, of which there are several devices, is very simple. A metal tube, the upper end terminating in an adjustable nozzle, is so arranged over one end of a truck that it may be raised to a height of sixty feet above the street pavement, and at the bottom is connected with a very large hose which is supplied with water by two or four engines. The nozzle is controlled by a man on the truck, and the stream of water can be thrown upward, downward, or in any direction needed, with ease and certainty, even through the upper windows of the highest buildings.

The Fire Department is managed by three Commissioners, Henry D. Purroy, President, and is divided into four Bureaus. The Bureau of Chief of Department, Hugh Bonner, Chief, does the real work of fire-fighting. There are over thirteen hundred paid employés in the Fire Department, in all its branches, of whom about one thousand are uniformed. The pay of firemen runs from $1,000 to $1,200 per annum. If a man is crippled in the service he is provided for out of the pension fund. If he is killed, his widow gets $1,000 at once, and a pension of $300 per year as long as she does not re-marry. There are in present service fifty-six engine-companies, of which nine are double; twenty-one hook-and-ladder companies, one of them double; and two water-tower companies. An engine company comprises a foreman, assistant foreman, two engineers, and eight men; a hook-and-ladder company, a foreman, assistant foreman, and ten men; the double companies each have two foremen, two assistant foremen, four engineers, and twelve firemen; and a water-tower company, a foreman, one assistant foreman, and three men.

J. H. CONNELLY.

THE RIVER OF PEARLS.

By Réné De Pont-Jest.

Part I. A Drop of Water.

(*Continued from page* 223.)

SYNOPSIS OF PREVIOUS CHAPTERS.

Ling-Ta-Lang, the eldest son of a wealthy Chinese mandarin, had just married the beautiful Liou-Siou, or Embroidered Willow, and at the conclusion of the wedding-feast was about retiring to the apartments of his bride, whom he had not yet beheld, when he was followed down an alley of his garden by a sinister individual who had been shadowing him, and in the meantime had stolen a fan from another guest, a literary man attached to the pagoda of Fo. The bride was admiring her wedding-jewels, when the attendants announced her bridegroom. As she heard his approaching footsteps she fainted, and knew no more until morning, when her father-in-law dragged her from her rooms to behold the murdered body of her husband in the garden, and accused her of the murder. The police-prefect Fo-Hop was sent for, a fan was discovered under the body of poor Ling-Ta-Lang, and Embroidered Willow recognized it as belonging to her cousin I-té, the literary man above mentioned; whereupon the prefect declared I-té to be the murderer and the young bride his accomplice, and ordered Embroidered Willow carried to prison. In recalling the circumstances which led to the poor little bride's misfortunes, we are introduced to Tchou, a butcher of repulsive aspect, who had fallen in love with Liou-Siou before her marriage, fancying that a drop of water which fell in his eye from her watering-pot, as she was tending her flowers at her window, was intended as a love-token. In this fancy, Rose, or Me-Koui, the maid of Embroidered Willow, encouraged him, pretending to carry notes, etc., until he saw the notice of Liou-Siou's marriage to Ling-Ta-Lang posted on the wall of her house, as is the Chinese custom, and knew that he had been duped. Then he became furious and vowed a fearful vengeance. Embroidered Willow, however, had no suspicion of Tchou's affection, and was, besides, in love with I-té. Mrs. Liou had told I-té when he spoke of his love for her daughter, that she had more ambitious views for the beautiful girl; so the self-sacrificing I-té, overhearing Ling-Tien-Lo, father of Ling-Ta-Lang, praying in the Pagoda Mi that he might find a suitable wife for his son, suggested Embroidered Willow, and the match was concluded. The fan being found under the murdered body of Ling-Ta-Lang, and the fact that I-té had confessed his love to the father of the bridegroom, were sufficient excuse for I-té to be put to torture to make him admit his supposed share in the crime. He refused, and Embroidered Willow, after having languished in prison two weeks, also refused to confess the crime of which she knew nothing, although cruelly tortured in the open court; but when I-té was put to torture in her presence she broke down, and said that she had killed her husband, which statement her mother, who was in court, immediately denounced as a lie, forced from the lips of an almost crazy girl. Nevertheless, both I-té and Embroidered Willow were sentenced to die in one month's time, and I-té was taken to the hospital. Mrs. Liou was preparing to return to prison with her daughter, when Captain Perkins, an American, who had witnessed the proceedings, came to her, and offered to assist her in proving Embroidered Willow's innocence. He prepared a petition to the viceroy, Prince Kong, showing how unjustly the law had been administered in this case by Ming, the presiding judge. Mrs. Liou intercepted Prince Kong on his way to the temple and presented the petition, which the viceroy immediately promised to look into, and requested the poor mother to remain at the palace until he could do so. In the meantime her house at Foun-si was entered and robbed, and the servant Rose bundled up like a bale of goods and carried off.

CHAPTER XI.

The Abduction of Rose.

"COME! We will go now," said the leader.

The two wretches lifted the servant, while the other went before them into the street to make sure that it was deserted. There was no one passing, nor was there even a light in the neighboring dwellings. He called his men in a low voice, and after softly closing the door he took the lead of this sinister group and they all went down an alley close at hand, which led directly to the river. After having confided to his friend his share of the stolen goods, one of the sailors had flung Rose upon his back, and, tied up as she was, she looked like a bundle of fish-nets. They soon reached the river. The night was dark: there was no moon, and the sky was starless. The waves of the River of Pearls, lapping mournfully upon the almost indistinguishable shores, made the boats, tied to piles, bump against each other with dull-sounding collisions. The leader of this strange expedition pulled in one of these boats, and after having made sure that it had oars in it, he made the rest get in; then cutting the rope which held it, he launched out with a vigorous stroke of the oar.

The current was rapid, but the abductors soon reached the opposite side, where the waters were more tranquil. At that point the River of Pearls divides into three branches, two only of which are navigable and come out above the forts of Boca Tigris. The third, full of rocks and shallows, is, besides, interrupted in its course by a fall of water, whose roar, multiplied by the echoes, may be heard three or four miles off. It was towards this dangerous arm of the river the boatmen went; but they had not proceeded far, when their pilot uttered a cry, startlingly resembling that of the *guamala*, the devil-bird. A similar cry replied to him, and a man appeared upon the rock against which the waves broke. The sailors lifted their oars, and the skiff grated on the beach.

"Is it you, Woum-pi?" asked the man, who seemed to have just been cast up by the waters.

"It is I, master," replied the fisherman.

"Is it done?"

"Yes: the woman is here."

"Then get to work, you!"

These words were addressed to a dozen individuals, whose heads could scarcely be discerned among the tall grasses. They evidently were expecting this order, for they immediately went down into the river, where several of them disappeared up to the shoulders, and began to work vigorously. Divided into groups of three, they seized the ends of heavy ropes attached to buoys, and united all their efforts to raise something which seemed to be at the bottom of the river. Soon this unknown object emerged: it proved to be a long boat, painted red, either a racer or a pirate, for its bow was very sharp, and it would carry twenty rowers. It could instantly be sunk, by means of a large valve upon one side, and consequently put out of the way of anyone seeking it.

In a few minutes the grim workers raised the boat and turned it over to empty it of water, closed the valve, put it on the river, and took their seats in it. Woum-pi put Rose in also, who, when he removed the veil from her face, watched these preparations in terror. All at once the boat shook violently. The chief of the fishermen jumped into it with a tremendous leap, and seized the long oar which served him as a rudder.

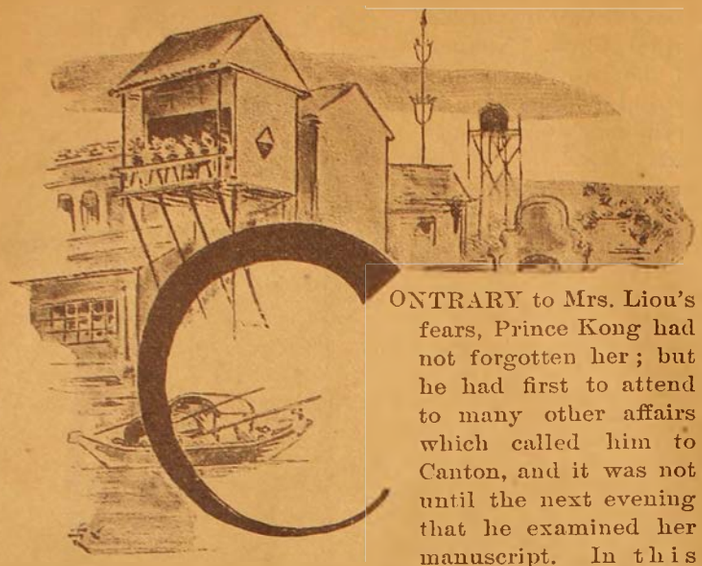
"Tchou!" muttered the poor servant, her scream stifled by the gag. She recognized the butcher of the Street of the Gold-beaters.

"Yes, Tchou!" the latter repeated, bending over her as if to revel in her terror. "Tchou, whom the falseness of your mistress has made an assassin; Tchou, the 'Red Spider,' who will avenge his tortures upon you, as he has already done upon Embroidered Willow."

Brutally kicking aside the poor wretch, he gave a brief order: the twenty pirates bent to their oars, and in an instant the yawl gained the arm of the river, where it soon disappeared amid the shadows of night, and only the cadenced sweep of its oars could be heard in the distance.

Chapter XII.

The Viceroy's Justice.



CONTRARY to Mrs. Liou's fears, Prince Kong had not forgotten her; but he had first to attend to many other affairs which called him to Canton, and it was not until the next evening that he examined her manuscript. In this document Captain Perkins exposed the facts with such analytic skill, and drew such logical conclusions, that the viceroy was immediately struck, not so much by the innocence of Embroidered Willow and her cousin, as by the lack of effort on Ming's part to get at the truth.

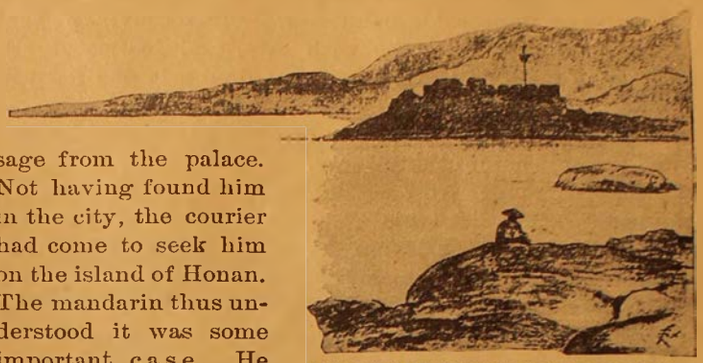
The smuggler, who had visited the scene of the crime and sought information of Ling-Tien-Lo, explained how twenty witnesses had been ready to swear that the young I-té had not left the villa for a single moment, and that he only went outside of the rooms when the guests left after the entertainment was over. As for Embroidered Willow, against whom the judge had not made a direct accusation of murder, it was not reasonable, according to the merchant of opium, to believe her the accomplice, for her mother, who adored her, had not compelled her to marry Ling-Ta-Lang. She then had no interest in putting her husband out of the way before she even saw him.

Again, they had not found any of the stolen jewels with I-té, continued the report; and without considering the idea that the young priest was not robust enough to have overpowered Ling, since it appeared that this unfortunate had first been poisoned, it was none the less evident that neither the footprints on the sand in the garden, nor the impression of a bloody hand found upon one of the pillows of the bed, could have been made by the accused, for these footprints were long and large, and the hand that of a tall man. I-té was frail and delicate, and had feet and hands like a woman.

Ming had not given these considerations a thought. Concerning the meeting of I-té with the father of Ling at the Pagoda Mi, it was certainly wholly fortuitous. If the young man had made this proposal of marriage—which to the judge seemed an infernal premeditation—to the rich merchant, it only proved the good feeling of the one who so soon was regarded as a criminal. As to the professor's fan found under the body of Ling-Ta-Lang, the captain affirmed that it was, on the contrary, an irrefragable proof of his innocence; for this convicting piece of evidence had been discovered too readily not to have been placed there intentionally. It seemed indisputable that the assassin knew I-té, as well as his relation to the mother of Embroidered Willow, since he had so easily been made an object of suspicion, and thus diverted attention from the real culprit. It was, then, concluded the defender of the two innocents, if not among Mrs. Liou's friends, at least among her acquaintances or people who knew her habits, that the murderer must be looked for. To this end information which might be given by the servant Rose would be valuable.

The result of all these observations was, that, although he had not finished reading the report until late at night, Prince Kong sent word to the mandarin Ming to appear before him early the following day. He also ordered one of his aids-de-camp to go to Foun-si at daybreak, and fetch Mrs. Liou's domestic, whom neither the prefect of police nor the magistrate had thought to question.

Ming, whom, as yet, we have only seen upon his seat as President of the Criminal Court of Canton, was greatly excited when he was awakened by the announcement of a message from the palace. Not having found him in the city, the courier had come to seek him on the island of Honan. The mandarin thus understood it was some important case. He questioned the officer vainly. He knew nothing, but the order was decisive: the viceroy looked for him in the morning.



ONE OF THE FORTS OF BOCA TIGRIS.

Ming passed the rest of the night asking himself what the cousin of the Emperor could want of him. The worthy magistrate, in fact, like his colleagues, had a few peccadilloes on his conscience, above all those apropos of his recent duties at Boca Tigris, where his secret treaties with the smugglers had doubled his fortune; but these perquisites were so much a part of the usual custom of officials in his station, that this could not be the motive of the prince's order. Whatever it might be, it disquieted him. He had a foreboding that his hitherto calm and happy life was about to be disturbed.

Ming at this time was a portly, good-looking man, educated, indeed, since he had attained a high position, but of very ordinary intelligence. He was, above all, a sybarite in the complete acceptation of the word. His table was one of the best in the province. It was whispered, also, that his gondola had even been seen at night in the waters of Canton in the neighborhood of the flower-boats, and that he was not a stranger to the influence of the smuggled narcotic in which Captain Perkins dealt.

AT THE THRESHOLD OF THE PALACE.

It cost Ming, then, some inconvenience to leave his luxurious couch at dawn ; but he knew that the governor of the three provinces would stand no nonsense from his subordinates : therefore, at the appointed hour his palanquin was at the threshold of the palace. The promenade, the fresh morning air, the homage of which he had been the object *en route*, had calmed him a little, and he responded to the military salute of the guard with his usual smile. But as he approached the door of the gallery which led to the reception-hall of His Highness, he found himself suddenly confronted by Mrs. Liou, for whom the prince had sent. He immediately comprehended that he was wanted in regard to the case of Embroidered Willow, and became perfectly tranquil. In his fatuity of impeccable counselor, he was convinced that he had conducted this case with care, and justice to all, and he said to himself that, without doubt, it was only to answer a few last questions that he was sent for. It was therefore with the air of an irreproachable man that he presented himself before the viceroy.

It was only when, after having made the three customary genuflections, he raised his eyes to the prince, that he was struck with the latter's severe look, and began to fear that he might be deceived in his agreeable suppositions. Prince Kong, indeed, had scarcely replied to his salute. Bending over his writing-table, and surrounded by his secretaries, he was turning over the leaves of a voluminous folio, which Ming recognized as that of the Ling case, and for a quarter of an hour he did not pay any more attention to the mandarin than if the latter was still in his villa at Honan. Mrs. Liou was introduced at the same time as Ming, and at a sign from the prince sat down. All this greatly disturbed the ex-mandarin of Boca Tigris, who was timidly examining his conscience, when the Emperor's cousin suddenly raised his head and said :

"Mr. President, I have attentively examined the papers relating to the assassination of Ling-Ta-Lang, and I have not found all the documents which the solution of an affair so grave exacts. This is why I have had you come ; for, before sending these papers to Pekin, I need some information which only you can give me."

"I am at Your Highness's orders," said Ming, forcing himself to appear calm.

"I do not find," pursued the prince, "that the facts bearing upon this case have been studied with all the care desirable. I regret, above all, that the prefect of police and you thought it necessary to submit this young bride to a very painful imprisonment, although of course your first suspicions fell quite naturally upon her. A savant such as you ought not to be ignorant of the fact, that women of a certain class, accused of a delinquency or a crime, may be left in charge of their nearest relatives, who will answer for them. Mrs. Ling has a mother. In the absence of any motives which you may invoke to explain your severity towards her, I think you might have confided her to her mother's surveillance."

"The crime of which this person was guilty," replied Ming firmly, "appeared to me of such an exceptional nature that I thought it my duty to have her sent to prison to satisfy public opinion."

"A judge should never allow himself to be influenced by rumors from without. It is with deaf ears that he should accomplish his task."

"The accused confessed her crime."

"She confessed it under torture. But let us pass to another point. Did you compare the tracks of the steps in the villa garden with those made by the sandals of I-té?"

"I must confess I did not."

"Well, in that you committed a fault ; for you should have seen that this young priest, whose feet are extremely small, could never have left such tracks. They are those of a large, tall man. It is the same with the bloody mark seen on one of the pillows of the bridal couch. Neither of the two condemned could have made it : it is the mark of an enormous hand. Did you make any inquiries at Foun-Si, the town where Embroidered Willow lived before her marriage, before the crime?"

"'NO,' MURMURED MING."

"No," murmured Ming, more and more disturbed.

"You have not found out whether Mrs. Liou had some enemy, whether her daughter had not been sought by someone besides Ling-Ta-Lang?"

"Certainly, by her cousin I-té. That is what led me to suppose that this jealous suitor was the assassin."

"It is false!" said Mrs. Liou, who did not lose a word of this interrogatory. "My nephew did, it is true, manifest a desire to become my son-in-law, but it was enough for me to tell him once that this marriage was impossible, and he submitted."

The prince motioned to the poor mother to be silent, and resumed :

"You have not even thought to summon and question the servant Me-Koui. She might have given you some valuable information concerning people she may have seen hanging about the house."

"It is true," acknowledged the mandarin, beginning to lose control of himself. "I did not think of it. The confessions of the accused, the discovery of the fan of one of them under the corpse of the victim, the interest which I-té alone had in the death of Ling, appeared to me sufficient proofs."

"I think that girl ought to be questioned, and I have sent for her." The viceroy gave an order to one of his aids-de-camp. The latter went out to execute it, but he returned almost immediately with one of his colleagues, whose countenance was comically expressive of dismay.

"What is the matter?" asked the prince. "Why do you not bring the person in question?"

"Because I could not find her, my lord," replied the officer.

"You could not find her?"

"No. When I reached Foun-Si, this morning before daylight, with my four police-officers, I knocked in vain at the door indicated. Then I opened it to see the house. There was no one there. I ransacked it from top to bottom : it was empty. The rooms were stripped of nearly everything, the furniture was broken. The burglary could not have been committed many hours before, for a lamp still burned in the dining-room."

"Did you question the neighbors?"

"I did not neglect to do so. None of them had seen or heard anything."

The chief of three provinces, visibly irritated, had risen and was pacing up and down the room. Ming did not dare say anything; Mrs. Liou, overwhelmed by this new misfortune, also kept silence.

"You see, Mr. President," said the viceroy, all at once stopping in front of the mandarin, "here is a second crime, which certainly is the consequence of your negligence. This is enough to convince me of the innocence of those whom you have condemned; for it is evident to me that the real assassins of Ling, to keep the servant from telling tales, have caused her to disappear, if, indeed, the girl herself is not their accomplice. Whichever it may be, you have failed, it seems to me, to fulfill your duties, and in the most grave manner. This is what I have decided: The documentary evidence in this case is about to go to Pekin with the annotations I have judged proper to add to it. It cannot return to me under thirty days. You have therefore a month before you. If in a month you discover the real culprits, the innocent will be justified, and you will have repaired your fault; but if at the expiration of that time matters are still in the state we find them, and if our august sovereign sends me the order to let justice take its course, Mrs. Ling and I-té will be executed. First of all, I must give the example of respect to the law; but you, the judge, will receive one hundred blows with the bamboo."

"'One hundred blows with the bamboo'?" said Ming falteringly, "'one hundred blows with the bamboo'?" He hoped that he had not understood aright.

"One hundred blows with the bamboo!" repeated His Highness.

"It is death!"

"Perhaps. Two innocent persons will die also. Go, and may Lao-tsu come to your aid!"

And without paying any further attention to the great President of the Criminal Court, Prince Kong immediately went out.

Ming was paralyzed: he sank upon a seat. When he at last was able to drag himself to his palanquin, his servants were obliged to lay him down in it.

"One hundred blows with the bamboo!" the poor man incessantly repeated all along the way, "to me, Ming, a mandarin of the third class!"

When he reached the quay where his boatmen waited to take him back to Honan, his face was really convulsed, and he had to be helped into his boat by two of the porters.

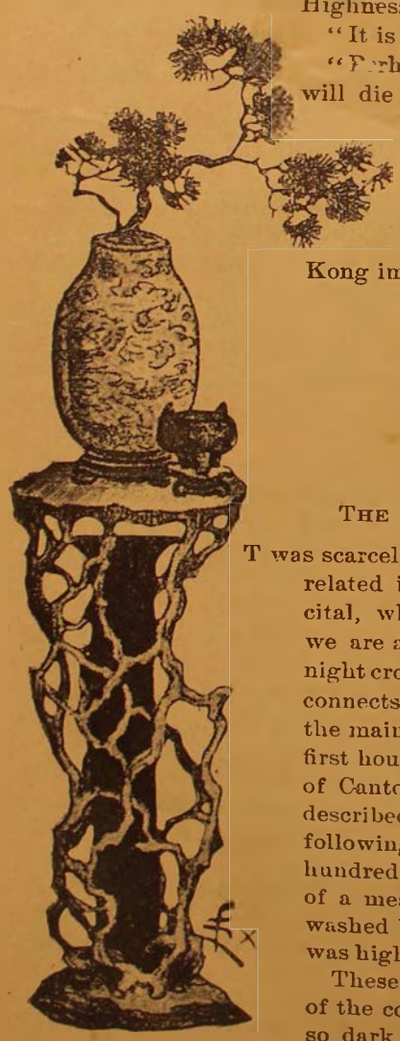
"What is the matter with you, my dear sir?" a foreigner asked him as he was about to step into the boat. "You seem annoyed. Has any misfortune happened to you?"

"ONE HUNDRED BLOWS WITH THE BAMBOO?"

Ming turned and saw Perkins.

"What is the matter with me?" repeated the unhappy judge, recognizing his old friend of Boca Tigris. "What is the matter? I am dishonored, lost, dead! One hundred blows with the bamboo! One hundred blows with the bamboo!"

And he fell into the boat, unable to say more.



PART II.

The White Water-Lily

Chapter I.

The Price of a Hanging.

It was scarcely eight days after the events related in the first part of this recital, when two men, with whom we are already acquainted, at midnight crossed the stone bridge which connects the island of Honan with the mainland. Having come to the first houses of that horrible quarter of Canton which we have already described, they took to the right, following the shore for about a hundred feet, and stopped in front of a mean hut whose walls were washed by the waves when the river was high.

These two men wore the costume of the country, and although it was so dark they almost had to grope their way, they had pulled the wide brims of their felt hats well down over their eyes.

"It is here," said one of these men, designating the miserable house to which they had come. "It is time, for I can go no further. What a filthy place!"

"The fact is that those of your colleagues who are charged with the welfare of our streets do not take much trouble about it," replied his companion. "You are sure that this is the place?"

"Perfectly sure," answered the other, who seemed to be in a very bad humor. As he spoke he struck twice on the door with the hilt of his saber, and as only echo responded he knocked a second time, grumbling, "That beast of a Roumi is not home. This is too much, Captain!"

"Have patience, President. Here comes someone."

A faint ray of light gleamed through the cracks of the doorway, and almost immediately the door was opened very cautiously, but not wide enough to admit those who presented themselves so unexpectedly at such a late hour.

"Who are you? What do you want?" asked the proprietor of the place gruffly.

"Confound it!" exclaimed he whom the other had called "president," "here is a difficulty we have not foreseen. I do not wish to have my name cried over the housetops."

"Will not Roumi immediately recognize you,—you, his official purveyor?" observed his companion, shrugging his shoulders.

"Why of course!" said Ming, for it was he; "I am actually growing stupid!"

Captain Perkins, who was the companion of the honorable magistrate, expressed by a gesture that such a transformation would not be very difficult, and followed his friend, for the door of the mysterious house had opened at once on the mention of the president's name.

The proprietor showed his visitors into a miserable, vile-smelling little room, the only furniture of which consisted of a large black wooden chest, in which the inhabitant of this den kept his clothes, and a bed, near which still smoked a pipe of opium. At the sight of this proof of transgression of the ordinances relating to the use of the dangerous narcotic, the mandarin all at once remembered his high function, and, pointing with his finger to the convicting evidence, he was about to reprove the smoker severely, when the smuggler stopped him, saying in English,

"WHO ARE YOU?"

"You are not going to bring process-verbal against this poor wretch?"

"Why not?"

"Simply because it is possible that I have sold him this opium, and that you have let it pass."

"That is true," said the ex-inspector of customs at Boca Tigris, with a forced smile. "Besides, we have other matters on hand."

Then, turning toward Roumi, who, bent nearly double, was humbly awaiting his visitor's questioning, he asked,

"You are the one who, day after to-morrow, will execute, at Hong Kong, the pirates condemned last week to death?"

"Yes, sir," the man replied, looking up.

If the unfortunate Embroidered Willow had been there she would have recognized this individual: he was the executioner who had led her to her cell, and who so cruelly tortured her to make her confess a crime which she had not committed.

"Are you to decapitate or hang these men? I understand the viceroy was waited on for his orders."

"I received them to-day. As you know, the law only condemns those to be beheaded who have rebelled against sovereign authority. The pirates only attacked and robbed Englishmen: they will be hung."

"Only Englishmen! What a flattering distinction for the British standard!" murmured Perkins.

The executioner of capital punishments spoke the truth. Decapitation was then an exceptional law in China; for although the Celestials profess the most profound contempt for human life, they at least wish to die without being mutilated. They carefully preserve upon the top of the head a lock of hair for the Angel of Death to carry them away by, and therefore dread the penalty that divides their body and thus leaves part of it on earth.

"You know these men?" pursued Ming.

"Yes," replied Roumi, beginning to wonder what all these questions meant.

"One of them is called Peï-ho. He is the chief of the band."

"I know him. He's a tough one! No one could make him speak."

"Where are the condemned now?"

"At Hong Kong. The governor ordered them left there until the execution. They will be brought out under an escort of English soldiers."

"Well, I came to buy the body of the one who is called Peï-ho."

"The body of Peï-ho?"

"Yes: what is that to you? You need not deliver it until you have hung him."

Roumi continued to stare at his interlocutor as if he did not comprehend.

Impatient, Ming went on:

"Well, how much do you want? See: is this enough? If it is too little, make your own price." As he spoke he flung upon the bed a heavy purse which held more money than the wretch could earn in a year; but the executioner did not reply.

"What more do you want?" angrily demanded the mandarin.

"Tell me why you want to make this trade?"

"That is none of your business. You are very insolent to dare to ask such a question!"

"But, my lord, you know, as well as I, that the law punishes with one hundred blows with the bamboo, anyone who gives up a dead body."

"Ah! Then you think I am a body-snatcher for the surgeons," brutally retorted the magistrate, in whom the words "one hundred blows with the bamboo" had aroused most melancholy reflections. It is nothing of that sort. Accept or refuse. If you accept, you will receive double this sum after the delivery of Peï-ho's body; if you refuse, I shall remember to-morrow that I surprised you smoking opium."

"All right, I accept," the terrified wretch hastened to reply.

"Then listen, and pay attention to my instructions. In the first place, take care to hang Peï-ho yourself, but be very careful to hang him gently, without hurting him, and when you have hung him, leave him quietly at the end of his rope."

"Well."

"Half an hour afterward, you will come as usual to take the bodies down. It will be night, and you will be alone with your men. You will put the bodies on a cart to carry them away, but you will forget that of Peï-ho, and leave it at the foot of the gallows. I ask nothing more of you."

"All shall be done exactly as you say."

"The same evening you shall be paid.—I have not forgotten anything?" inquired Ming, turning to Perkins, who had remained a silent witness to this scene.

"No, nothing," said the captain. "Self-interest and fear will keep this man to his bargain. Let us go, or I shall not be able to get back into the factory,—the gates will be closed."

He went out ahead of the president, to whom Roumi expressed his gratitude in an obeisance which bent him to the

"THE PRICE OF PEÏ-HO'S HANGING."

earth, and then seized the smoking lamp to light his guests out. As soon as the door was closed upon them, he hastened back to count over the price of Peï-ho's hanging, and to resume his pipe of opium.

Perkins and Ming hurried back over the bridge. When they were well over, the mandarin gave a complacent sigh, and stopped his companion, saying:

"I have done all that you wished, although I do not understand your scheme. I hope that now you also will keep your promise."

"My promise! What promise?" asked the American with a surprised air.

"What promise?" exclaimed the unhappy judge. "Why your promise to help me discover the real murderer of Ling, since it seems that it is not I-té. I can find no clue."

"Ah! true, pardon. I really had forgotten about it. How are you getting on?"

"Not at all. I have employed agents, visited all the prisons, interrogated a hundred prisoners, had twenty bastinadoed. No use."

"Did you make inquiries at Foun-si, among Mrs. Liou's neighbors?"

"Yes; but unfortunately her servant Rose has been kidnapped, and the people around knew almost nothing. If you do not help me I am lost."

"Oh, not yet! Have you no trace of the abductors of Rose?"

"No—yes: at the water's edge, where the bandits who carried her off must have stolen a boat which was missing, a sailor's hat was found."

"Chinese or European?"

"Chinese, like those worn by fishermen, or your friends the pirates of the Ladrone Islands."

"Ah! this is a clue; for if these are really pirates who carried away Mrs. Liou's servant, we may suppose that it is one of them who assassinated Ling-Ta-Lang."

"Perhaps so, indeed."

"Now I should conclude that if we can get proof that it was they who carried off Rose, we will be upon the track of the murderer. It may be that this very evening, in buying Peï-ho's body, you have done yourself a greater service than you have done us."

"Ah? I cannot make that out at all."

"If I am not mistaken, you will understand it all very soon; but you must come to Hong Kong the day after to-morrow."

"The day that the pirates are to be executed?"

"The same. It will be quite natural for you to come to the colony. Accept my invitation to dinner; perhaps I may learn something interesting to you. Keep up your courage. Good-night."

During their conversation the two friends had reached the American factory, where Ming's porters waited for him outside the gate.

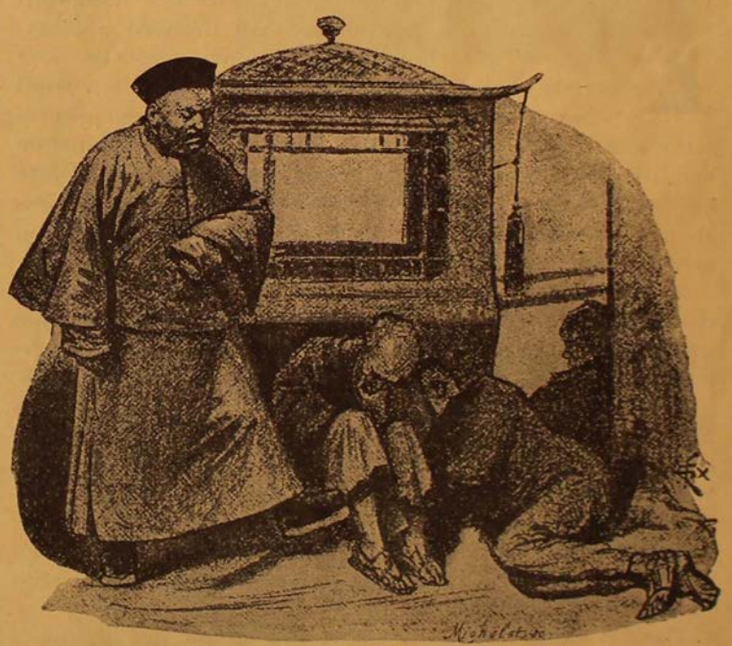
"Well, good-night. I will see you the day after to-morrow then," sighed the mandarin, waking his servants with kicks; "but I assure you I cannot surmise what your plan is." And he stretched himself out in his palanquin, a fatalist, resigned to the worst.

Perkins went straight to the apartment that he occupied with Sir Arthur Murray when they were in Canton, which was about twenty days every three months.

"Well?" queried the Englishman, who had been sitting up waiting for him.

"It is done," said the captain joyously. "Ming has been very clever, and almost intelligent."

"Then they will give us Peï-ho?"



"WAKING HIS SERVANTS WITH KICKS."

"As soon as he is let down from the gallows: that is to say, about half an hour after he is hung."

"Good enough! I have been to Hong Kong and seen my old comrade Doctor Clifton. He will do all that we wish, and he is a skilled practitioner. You will see to the work. And Peï-ho? Did it cost you much?"

"Very cheap: forty dollars before the rope, and a hundred after."

"For nothing, really."

"Nothing but a rascal of some five feet eight inches,

who would go to his execution blessing his sovereign the 'Son of Heaven' because he was not to have his head cut off."

"Then all is well. We can say, like Titus, that we have not lost our day."

And with this philosophic reflection, not very flattering to the memory of the Roman emperor, for it is doubtful if the eldest son of Vespasian ever bought a hung malefactor, Perkins wished "pleasant dreams" to Sir Arthur, and retired to his bed-chamber.

"PLEASANT DREAMS."

Chapter II.

The Two Condemned to Death.

IMPRISONED in more comfortable quarters than at first, and constantly attended by her devoted mother, Embroidered Willow suffered less physically than she did mentally. The wounds in her tiny hands had scarred over, but her heart was broken; and Mrs. Liou exhausted her own strength in efforts of tenderness to quiet her daughter. The gentle creature drooped rapidly, her cheeks grew hollow, and she wept unceasingly. For whole days not a word could be got out of her: she seemed a prey to some secret grief, the avowal of which seemed arrested on her discolored lips. Twenty times she flung herself into her mother's arms sobbing, and the latter thought she was about to speak; but she fell back again into her silence and prostration.

Mrs. Liou knew not what to think, and she feared for her child's reason; so one morning, seeing her even sadder than usual, she took her daughter upon her knees, and said, caressing her tenderly:

"Tell me, my darling, have you no longer any affection for me, that you keep silence when I question you? Your condemnation need not alarm you: the assassin of your husband will be discovered, and soon we will return to our little house in Foun-si, where we shall be happy and peaceful, and only remember these sad days like a bad dream. Heaven will recompense you for the trials inflicted upon you. Speak to me, I beseech you!"

The prisoner dropped her icy brow upon her mother's bosom.

"Is I-té dead, that you never speak of him?" murmured Liou-Siou without raising her eyes.

"No indeed," replied her mother, quickly; "your cousin, though very feeble, is much better."

"Truly?" said the girl, with an ineffable smile.

"I swear it! I hear from him every day. This morning I had very good news. They feared for his reason because——"

"Oh! I know, I know!" interrupted the poor child, with a shudder. She could not forget the terrible torture to which the young priest had been subjected.

"But he has recovered his intelligence, and he at least is courageous."

This last reproach was made with an accent of infinite tenderness.

"I wish I could see him," said Embroidered Willow in a voice so low that Mrs. Liou guessed rather than heard it.

"To see him?" repeated her mother.

"Yes: am I not the cause of his sufferings? Is it not I who have caused him to be arrested and condemned? Is it not for me and by me that he will die like a murderer? If I could ask his pardon!"

At these strange words, uttered with increasing exaltation, the poor woman comprehended that which passed in her daughter's heart, and said to her softly,

"You love him, then?"

"I do not know; only I wish that he would pardon me before we both die."

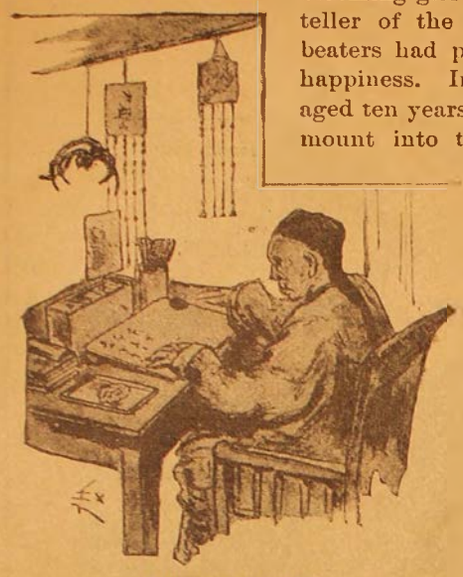
"But neither of you will die, I am certain of it. And you shall see I-té to-day."

She carried Embroidered Willow to the bed, gave her a last kiss, commended her to the cares of the attendant mute, and went out. In less than fifteen minutes she returned, and the poor girl, whose anxious gaze never left the door of the chamber, immediately read in her mother's face that she had succeeded in her mission. The governor of the prison had immediately accorded her the desired authorization. Fearing that he himself, as well as President Ming, might become the object of the viceroy's anger, on account of the severity with which he had treated his prisoner upon the first day of her arrival, he was delighted to have an opportunity to show himself humane and generous.

When Embroidered Willow heard that she was free to visit her cousin, she felt her heart almost cease beating, for

MOTHER AND DAUGHTER.

very joy; and, in spite of her weak state, she was ready to set out at once. But, alas! she was no longer the fresh and blooming girl to whom the fortune-teller of the Street of the Gold-beaters had predicted wealth and happiness. In one month she had aged ten years. She could scarcely mount into the sedan-chair that was sent to carry her to the hospital where I-té was detained.



FORTUNE-TELLER.

This hospital is one of the most remarkable establishments in Canton, and is situated in the midst of superb gardens in the Tartar city, a little distance from Prince Kong's palace. When they arrived, Mrs. Liou led her daughter to poor I-té's bed, which was, even in this place of suffering, a scene to touch the heart.

In a little chamber apart, watched night and day by two police-officers, the young priest, pale and suffering, was extended on a low pallet. His wounds had not wholly healed, but his reason had returned; for when Ming in person, directly interested to procure all the information he could concerning the murder, wished to question I-té, the latter responded,

"You have condemned me to death: you no longer have the right to torture me. Let me die in peace."

Still, when he saw someone enter his room, usually only visited by physicians, he did not at first understand what it meant. As he saw Embroidered Willow and her mother he thought he beheld a vision, and thanked Buddha for sending it to cheer his loneliness; then a light broke in upon his mind. Murmuring a beloved name, he extended his arms. Embroidered Willow was already kneeling by him, and pressing her lips to one of his wasted hands she murmured:

"It is I who have ruined you, I-té. Can you ever pardon me?"

The invalid only responded by a smile, and tears of joy welled from his eyes. He comprehended that he was loved: his sufferings no longer existed; he even blessed his pain. For a moment both were silent. Mrs. Liou never dreamed of disturbing them. I-té spoke first.

"But, you see," said he, "all that was to be, and I have nothing to pardon. It was written above, that not being able to live together, we should be united in death. Let us not rebel against fate. You are here near me, I feel your hand press mine. I no longer suffer, I only ask now for a little strength that I may go to execution as a man should whose conscience is without reproach. Oh! I should give you courage by my example. Why have I not two existences? I would offer them in exchange for yours."

"But we shall not die, I-té. You do not know what has happened?" She hurriedly told him all that she had learned from her mother.

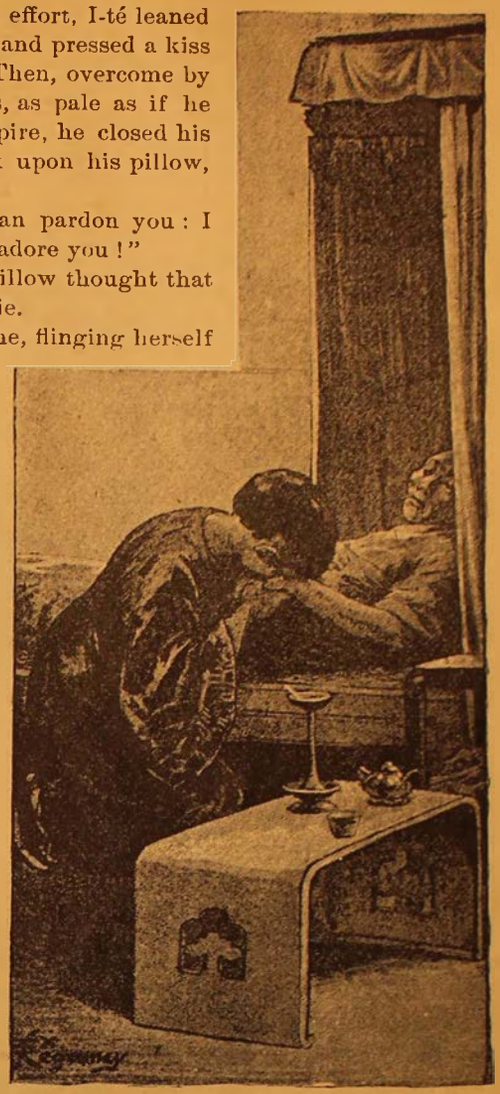
"You are dreaming!" the young man said when she had concluded. "As for me, I do not desire release, because the certainty that I am to die soon, gives me the right to say I love you!" The daughter of Mrs. Liou felt a thrill of delight run through her being, and dropped her head.

"Yes, I love you!" repeated the young priest; and making a superhuman effort, I-té leaned toward his cousin and pressed a kiss upon her brow. Then, overcome by all these emotions, as pale as if he were about to expire, he closed his eyes and fell back upon his pillow, murmuring:

"I do more than pardon you: I thank you, and I adore you!"

Embroidered Willow thought that he was about to die.

"I-té!" cried she, flinging herself upon him.



EMBROIDERED WILLOW AND I-TÉ.

"Do not be alarmed, madame," said the hospital physician, gently raising her. "Your friend is subject to these fainting attacks. This is sufficient fatigue for to-day: you had better retire."

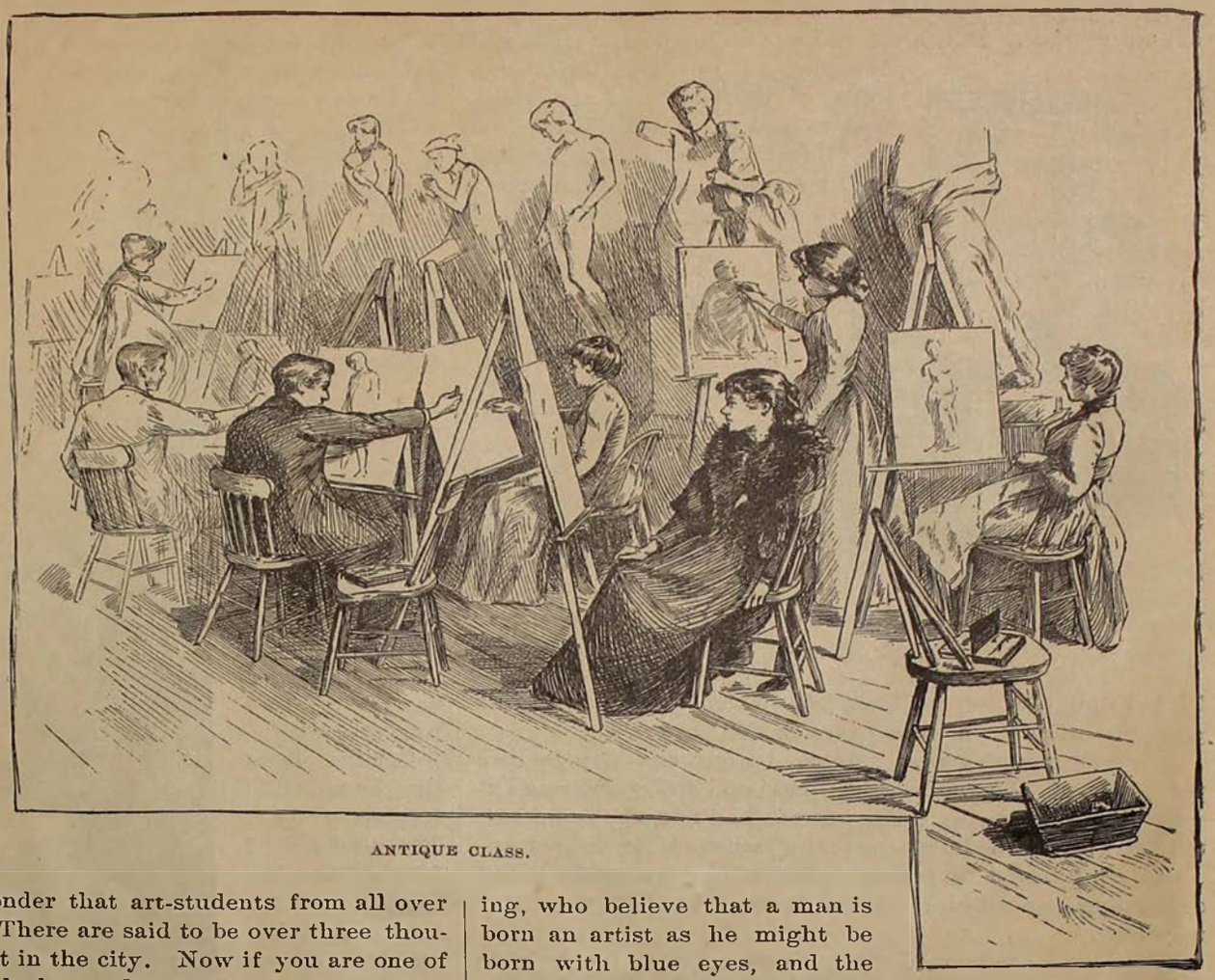
Coming from the doctor, this was an order. The widow of Ling comprehended. She bent over her relative, gave him a last kiss, saying, "I will come soon again," as if he could hear, and beckoning to her mother, she left the little room which held all her heart.

(To be continued.)

The Art Schools of New York.

NEW YORK is undoubtedly the art center of America. Here are museums, picture-galleries, private and public, where you may see the masterpieces of European art, ancient and modern, which have found their way over the sea. Here are the exhibitions of the "National Academy of Design," the "Society of American Artists," the "Water-color Society," the "Architectural League," the "Salmagundi Club;" exhibitions of pastels, etchings, engravings, bronzes, tapestries, rare ceramics. Is there any form of art that does not exhibit? From across the ocean, Verestchagin's, Munkacsy's, Whistler's works are brought and shown, presumably at a profit, in spite of the tariff. Then there are the establishments (I

can't find the right word for them, "shops" is an impossible name for those select museums of art) of Knoedler, Schaus, Cottier, Keppel, Wunderlich,—it is invidious to name a few and stop, when there are so many others; but if you are a New Yorker you know the advantages you enjoy, and if you are not, this to you is an unmeaning catalogue.



ANTIQUE CLASS.

Yes: to live in New York is a liberal education in art. As for the practical education, here are five or six large and well-equipped schools of art; here are to be had the teachings of such artists as William M. Chase, J. Alden Weir, R. Swain Gifford, and others of equal eminence: no wonder that art-students from all over the Union flock here. There are said to be over three thousand of them at present in the city. Now if you are one of those persons who think that to draw and paint "comes by nature," as saith honest Dogberry anent reading and writing, who believe that a man is born an artist as he might be born with blue eyes, and the matter is settled, there is no more to do about it,—why I should like you to see some of these three thousand odd, training for their profession as carefully as the lawyer and the doctor do for theirs.

HARD AT WORK.

As all art-schools have practically the same course of instruction, let us enter the oldest and one of the best of them, that of the National Academy of Design. It does not take beginners. You will have to submit "a drawing made from a cast of a head, hand, foot, or other part of the human figure." If you have done so, and are approved by the dread "Council of Three" that meets weekly in the little room at the foot of the stairs, you will receive a *matricule* card, and, on payment of the mere nominal fee of ten dollars, are entitled for a year to all the advantages of this excellent school, except the Painting and Modeling Classes, which are "extras."

Now you are one of some two hundred young men and women who flock daily to the basement of the Venetian palace on Twenty-third Street. Enter with them the suite of lofty halls. Old Homer and Julian de Medici, the "Discobolus" and the "Fighting Gladiator," noble Venus and sweet Hermes, "they watch from the wall,"—a goodly company that grow to be dear familiar friends.

You will find the students steadily (well, pretty steadily) at work, reproducing upon paper the white plaster shapes. Some of them will be measuring with a plumb-line or with outstretched, perpendicular crayon-holder, muttering to themselves the while, "Five, six, seven and a half heads!" before a statue that to your unenlightened eye bears but one head; some are advancing and retreating before their easels as they compare the drawings thereon with the originals; some are using what look like cigar-stumps, others prefer their fingers or the corners of their coats. Both sexes work harmoniously together in this class. There is a little eccentric dressing—believed to be æsthetic—on the part of

the women; an occasional odd and would-be picturesque cut of hair among the men. The girls generally wear aprons and long sleeves to protect them from the charcoal, but it does not do much good. The very air is impregnated with charcoal-dust, and frequently aromatic with alcohol. This does not come from strong drink, but from "fixative." There is a good deal of talk going on,—some of it very bright talk. You become familiar with the popular airs of the day, whistled or sung by the students over their work. Sometimes there is quite a noise of hammering, which means that fresh sheets of paper are being tacked to the stretchers.

The arrival of the master hushes all this. If you are a new student, your heart sinks into your boots. Perhaps the pretty girl next to you leans across her easel to whisper the saucy encouragement, "Remember, after all, he's human."

You hardly think he is, as he stops a minute or two before each easel, criticising unsparingly and in odd language. He finds fault with the "action," the "character." It is not "well treated:" perhaps it is "woolly," perhaps it is "wooden." He says it is not "simple" enough," it is "too much cut up;" or he says it is "monotonous," it has not enough "variety;" or the "tones" or the "values" or the "accents" are amiss. All the time, the students' work reveals to you more beauty than you had ever seen in the famous statues they are copying. Perhaps the master commends highly a "blocking-in" that seems to you all ugly angles.

Twice a week the students receive this criticism of about five minutes each: on the strength of it they work faithfully three or four hours a day. Some work all day, but the greater part give the morning to the Antique Class, and the afternoon to painting, modeling, or drawing from life. How long you may remain in this class depends upon your own industry or talent. There is no set term of apprenticeship to be served here. At any time a student may apply for admission to a higher class, and if his work satisfies the examiners he will be advanced.

If you have the curiosity of most novices you will not await promotion to look into the Painting Room. It smells of oil and turpentine. There will be a group of "still life" making a harmonious bit of color with plush drapery behind it; or perhaps on the platform sits an old man with strongly marked features and flowing silvery beard; or it may be a young girl, whose modest white cap and kerchief bring out the lovely flesh-tones of her face. To the absorbed students it seems all one: human beings and *bric-à-brac* present alike the pleasure of solving delicious problems of color, form, and texture. Here, too, an exacting master utters enigmatic criticisms: too "hot" or too "cold" or too "sweet" in color.

A peep into the Modeling Room shows that it is smaller. There are not as many students, and they do not stick as closely to their work: perhaps because it is an expensive "extra," perhaps because they lack the inspiration there certainly is in numbers. You may find the room quite empty, wet cloths covering the clay, odd little tools scattered upon the light revolving-tables, and a cold, damp air like a cellar.

Only the instructor and the members of the class are allowed in the Life Room. Here the sexes are separated: the young men working in the morning by themselves, and the young women by themselves in the afternoon. The

FINISHING TOUCHES.

highest study in every art school is that of the living model. Let us suppose that you have progressed far enough to be admitted to the Life Class. The room presents the same spectacle as the others: the neutral-tinted walls, adorned with specimens of the work of former pupils, the unsunned north light, the pervading sense of bread-crumb and charcoal-dust, the wilderness of easels, the lively, dingy-aproned students. In addition to these staples, it usually possesses some tall screens, a clock, a circular, revolving platform for the model, and a thermometer. Dear me! what high degrees that thermometer often marks! The room must be kept warm enough for the model, though all the students suffocate.

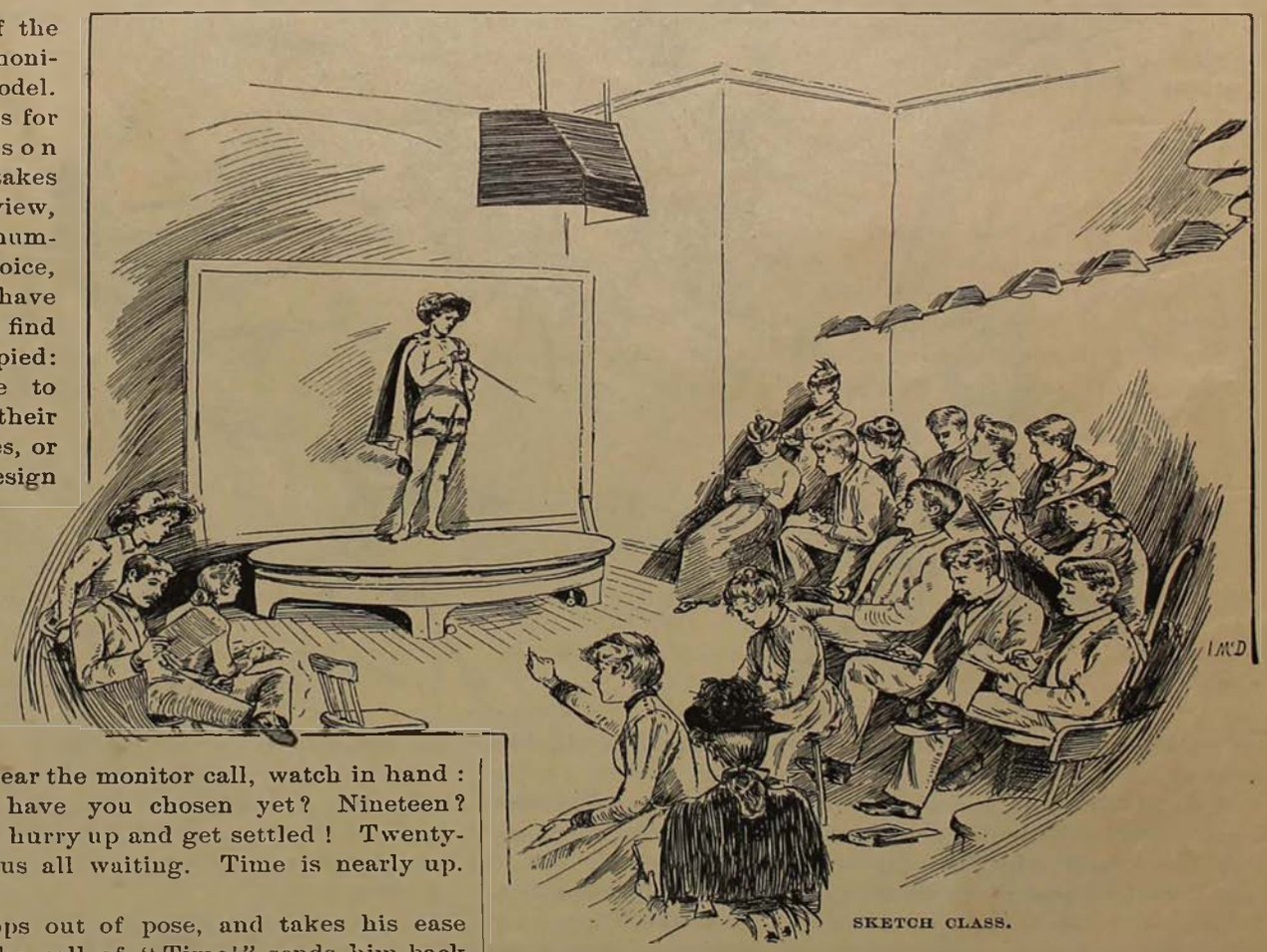
Usually one or two of the older students act as monitors and pose the model. The class then draw lots for their seats. The person drawing number one takes front view, back, side view, whatever he desires; number two has second choice, and so on. Those who have drawn high numbers find all the best places occupied: they must contrive to squeeze in between their more fortunate comrades, or take high stools, or resign themselves to standing so that they can see over the heads of the others. This standing to draw for a week at a time is fatiguing, but you get used to it, as you do to everything. Still it is never pleasant to hear the monitor call, watch in hand:

"Number eighteen, have you chosen yet? Nineteen? Twenty? Twenty-one, hurry up and get settled! Twenty-two, you are keeping us all waiting. Time is nearly up. Ah! Rest!"

Then the model drops out of pose, and takes his ease until in five minutes the call of "Time!" sends him back to his attitude on the platform for twenty-five minutes of immobility. This goes on for three hours a day during a week. Each week sees a new model and a new set of drawings begun in the Life Class.

"The Sketch Class is the dessert, the recreation, the play after the work of the day," says an enthusiastic student. On this recommendation you remain to it. You see two or three students in the big empty room: these are the Sketch Class Committee. Very busy, they, posing the model, who is also a student, for in this class there is neither teacher nor hired model. The students pose for each other in turn. They usually make some attempt at a costume, and it is surprising how the plainest of them is transformed by the help of a little added picturesqueness of dress, a graceful attitude, and the strong, effective shadows caused by "the fierce light that beats upon the"—platform, from the big gas-jet and reflectors above it. Anything but agreeable is the heat from that same "fierce light," as it pours upon the head of the martyr for the day, and increases the discomfort of holding a position motionless.

When the committee is satisfied, the doors are thrown open and quite a little mob of young men and women rush in, seat themselves as quickly and as advantageously as possible, and fall to rapid work. At the end of fifteen minutes a short rest is called, and conversation flourishes. Sometimes the rests come as often as every five or six minutes, if the pose is a hard one: once in a while the whole thing is brought to an untimely end by the model inconsiderately fainting away. A more frequent and less serious interruption occurs when in the stillness a mouse makes bold to skurry across the floor in search of crumbs. Then even the influence of Art cannot prevent the girls from jumping upon their chairs in quakings and terror, while the men and a few stronger-minded females pursue their work with jeers. For one hour this class lasts: then, at the call of "Time's up!" the students disperse.



SKETCH CLASS.

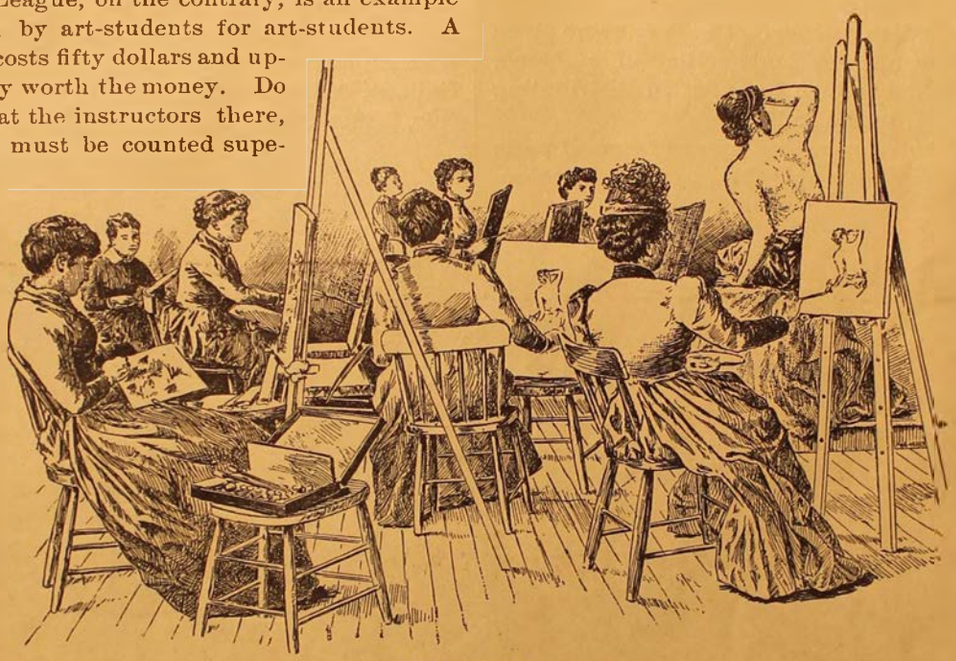
In the evening, if a faithful student, you will attend lectures on Perspective, a dry and difficult science, as exact as mathematics. You will take notes and work out the problems through the week. Then there are lectures on Composition, when original designs, on subjects previously announced, are handed in and publicly criticised. All the pictures are pinned upon the wall, in front of which the instructor takes his station and points out their merits and defects to the assembled class. You will hear talk of "dec-

orative effect," of "unity," "variety," and "balance." You will learn the difference between being able to draw and being able to compose a picture,—as great as the difference between being able to spell and being able to write a poem. In the lectures on Artistic Anatomy, the position and movements of the principal bones and muscles are taught by the aid of drawings, the anatomical figure, articulated skeleton, or living model. The upper bone of the arm is called the *humerus*. No student ever forgets that. No lecturer ever fails to make the evident joke upon the word. Or perhaps he quotes the punning English poet:

> "They cannot be complete in aught
> Who are not humorously prone;
> The man without a 'merry-thought'
> Would scarcely have a 'funny-bone.'"

The Academy has the reputation of being very conservative in its methods,—somewhat old-fogyish. Its watchword might be "Thorough." It teaches slowly, carefully, conscientiously. I do not believe that anywhere in New York, or out of it, is better work done from the antique. It is governed—somewhat arbitrarily, the students think—by a Council of National Academicians.

The Art Students' League, on the contrary, is an example of a school managed by art-students for art-students. A season at the League costs fifty dollars and upwards, and is certainly worth the money. Do not infer from this that the instructors there, excellent as they are, must be counted superior to the artists who teach at other schools; but the oldest and cleverest students drift to the League, and it has been my experience that you learn as much from your fellow-pupils as from your masters. The good work that you see done around you is inspiring; so is the prevailing spirit of wide-awake youth and progress and enthusiasm. This school, more than any other, keeps in touch with art in Europe: its younger instructors are fresh from foreign study, its older pupils are constantly going and coming between New York and Paris or Munich.



LIFE CLASS.

Unlike the Academy, it has a preparatory class for which no examination is required. The League takes no weekly holiday on Saturday. In fact, I believe that Thanksgiving and Christmas are the only days on which its doors are closed. It is situated a couple of blocks east of its ancient rival, on Twenty-third Street.

Just at the beginning of the historic Bowery stands the big brown building dedicated to Science and Art by Peter Cooper, who has a monument in the heart of every New Yorker, if no visible one in the city of his benefactions. During the lifetime of that good old man, there was no drawing from the nude done at Cooper Institute: he had a very intelligible, old-fashioned prejudice against it. Now, however, it has fallen into line with the others, and possesses that crowning glory of every art school, a Life Class.

Unlike the League or the Academy, Cooper is for women only, and the instruction is free to all intending to make a profession of art. Beside the usual studies it has classes in retouching photographs, crayon portraits, wood-engraving, remunerative if not artistic employments, and the Normal Class in which young women are trained for teachers. This course only occupies a year. To appreciate the results that may be obtained in that short time, one must see the fine work entered in competition for the prizes offered in this class, such as designs for silk, for stained glass, for wall-paper, etc.

The free evening-classes for young men at Cooper Institute hardly constitute an art school. The class in modeling in clay, for instance, teaches marble-cutters, workers in terra cotta, stucco, etc. The worthy confectioner who occupies the ground floor of our flat said to me, the other day, "I, too, am an artist;" and he pointed proudly to the astonishing sugar palace that adorned his window, adding, "I learned to do that in the modeling-class at Cooper Union!"

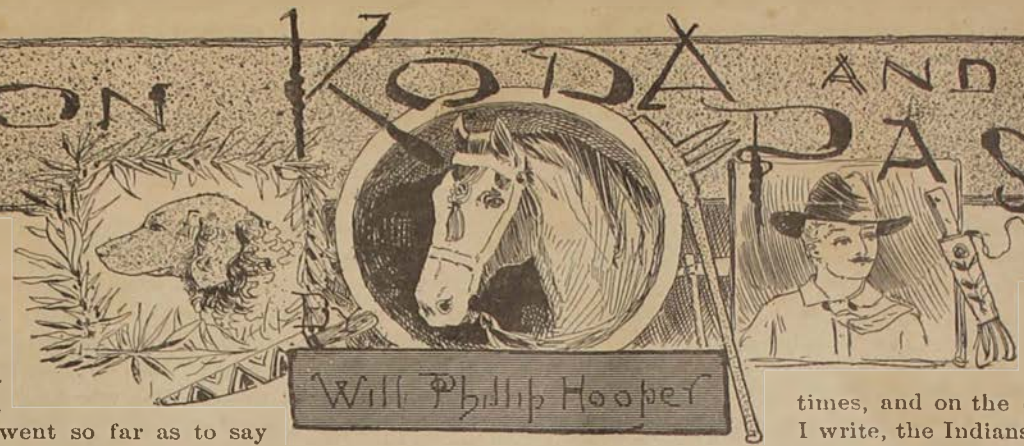
No account of the art schools of New York would be complete that did not include those of the Metropolitan Museum and the Institute of Artist-Artisans. Like the night-classes of Cooper, these teach architectural, decorative, and mechanical drawing, as well as the higher branches: recognizing the fact that we are in the midst of an art revival which demands the application of taste and training to buildings, to furniture, to draperies, to every manufactured article.

The length of this article forbids more than a passing mention of many smaller schools of art, or of the Ladies' Art Association, which has a position peculiarly its own, launching into a professional career art students who have gone through other institutions. It was the pioneer in 1867 of schools for painting and life study. It established technical instruction in painting on porcelain, and other art industry. The education of teachers, lecturers, and writers on art, is its specialty, also the summer and winter course of landscape painting under the supervision of Robert C. Minor, A. N. A. It receives international art information from its foreign secretary and European members.

It only remains to add, for the information of those who may not know it, that there is little discipline, little regularity, about art schools. Cooper alone has a slight flavor of those qualities usually inseparable from the idea of a school. I do not know whether to say because of this fact, or in spite of it, Cooper is perhaps the pleasantest place for a young girl to pursue her studies. At the other schools no care is exercised over the students in other than school hours, and not much then. No remunerative employment is furnished, nor advice given as to board or residence. The students come and go as they please: no one takes any account of them. If they come, the gain is theirs; if they stay away, it is their own loss. It is taken for granted that having chosen their career they will seize every opportunity for progress in it.

ISABEL MCDOUGALL.

DON, KODA AND PASKA

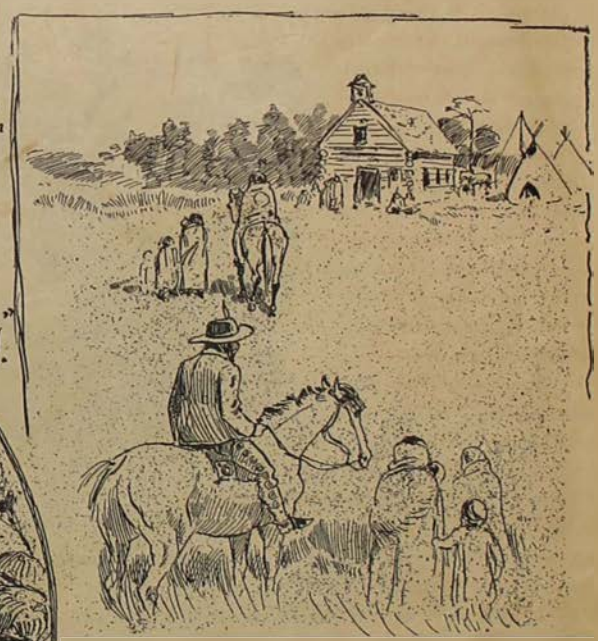


THERE were three of them, and they were the best of friends. To be sure, Koda was a trifle irritable, —some people even went so far as to say ugly; but he was quick in action, and, though excitable, could be relied on in cases of emergency. Don was very observing, and really had a remarkable brain: he was well disciplined, and kept himself under good control. Paska was the ruling spirit, and both of the others gave themselves up to his management; so it was seldom that any disagreement arose among these good friends.

They were all at an Indian Agency. Paska (a name given him by the Sioux) was a New England boy of eighteen, engaged as a government employé to assist in distributing provisions, clothing, etc., to the Indians.

About the first of the month, the Indians from all parts of the reservation gathered around the government warehouse, waiting for their supplies. They brought their tents, their ponies, their wives and children, and enjoyed a real picnic while waiting. If the provisions, etc., were all ready, everything passed off smoothly; for Indians are a good deal like other people: easy to get on with when everything is pleasant. But disappointment is apt to make the best of us cross at times, and on the occasion of which I write, the Indians with their hungry families had been waiting three days, and the government had failed to deliver the supplies at the appointed time.

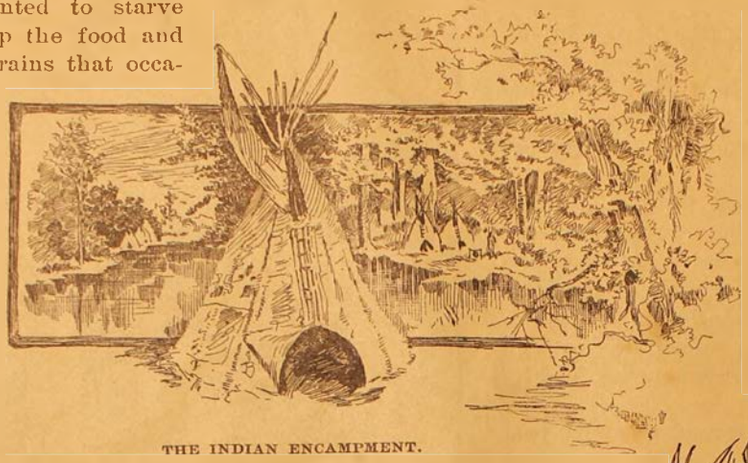
Now these Indians were divided into two parties, much like the political parties in any country: one party, called the "Church Party," sided with the government, believed in the religion taught by the white missionaries, tried to imitate civilized ways, cultivated the land after a crude fashion, and was peacefully inclined. The other party of Indians, called the "Dancing Party," was the reverse of all this. The members were continually trying to arouse a feeling of discontent among the tribes: they scorned work, encouraged the continuation of all the heathen customs, such as dog-feasts, sun-dances, etc., and nourished a murderous feeling against all white men.



Now on this memorable occasion,— memorable to Don, Koda, and Paska,—all the Indians, some fourteen hundred, had been waiting, as I said, three days for their rations. The small supply of food they had brought with them was exhausted. Hunting and fishing were poor in that locality; so you can see that when they heard their little papooses crying for food, even the most patient chiefs would naturally begin to feel ugly. Threatening murmurs were heard on all sides. Councils were held almost every hour, and there was a great deal of "bad talk." The agent with his dozen white employés did all that he could to pacify them, dis-

tributing what little food there was in the government warehouse, and explaining that the trains were on the way and must soon arrive with the promised supplies.

Now this was a great chance for the Dancing Party to excite trouble. They whispered around to the other Indians that there were barrels of pork, bags of flour, boxes of coffee, etc., in the storehouse, but that the agent wanted to starve them so as to keep the food and sell it to emigrant trains that occasionally passed through the country. The Church Party, as well as most of the other Indians, knew there was no truth in this rumor, for the agent had taken the headmen and chiefs through the cellars and proved that there was nothing there; but hungry people, as we know, are apt to be unreasonable, and perhaps some really believed that food was concealed in holes and cellars around the buildings.



THE INDIAN ENCAMPMENT.

At last it was tacitly understood that if the promised train did not appear by sunset of the fourth day, the Indians would break into the government buildings; and then, of course, when the savages were once started, the houses of the employés would be looted: and all this meant bloodshed and murder. The agent, with the aid of the interpreter, used his best energies to check the rising meeting, at the same time quietly preparing for the worst. In the warehouse there were just twenty old-fashioned Burnside carbines, and not enough ammunition for the whites to defend themselves for half an hour.

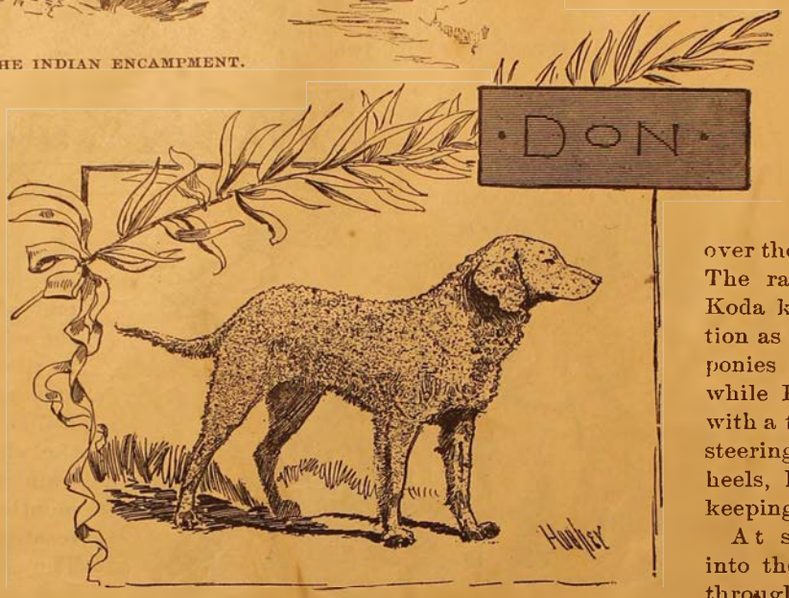
All the reservations have an army post attached, but in this case the soldiers were thirty-four miles from the agency building. There was no cavalry, and the infantry would require some time to march that distance; and not anticipating this delay in the coming of the supplies, the agent had not sent to the post till the third day. Then, as luck would have it,—or design on the part of the evil-disposed Indians,—the messenger's horse mysteriously died on the road; though of this we of course knew nothing at the time.

Imagine the sensations of these dozen white men, some with their wives and children, with those relentless savages camped all around their defenseless homes. An Indian in war paint is frightful enough; but compared with an infuriated squaw, he appears like a peaceful dude. Of course it would never do for the white men to show any fear. We all attended to our work as well as usual, apparently, mingled with the Indians, visited the tepees, gave them tobacco, smoked from their long-stemmed pipes, admired their ponies, and tried to appear as unconcerned as usual.

On the afternoon of the fourth day the agent was holding a council with the headmen, and proposed to send a dozen of them to the valley, some twelve miles away, to find out if we could hear from our promised train. The chiefs he selected were most of them ringleaders in the Dancing Party. The agent calculated there would be no uprising while these men were absent, and in the meantime, if the provisions did not come, the soldiers from the fort would no doubt arrive.

Wa-kin-yan-ci-qa-dan (Little Thunder) was one of the chiefs of the Church Party who was selected to join in this trip. He was a really good man, sincere in his liking for his white friends, and Don, Koda, and Paska were among his favorites.

Late in the afternoon we started. Some of the party, I noticed with a shudder, were painted in regular war style. The whole tribe were out to see us start, and with whoops, shouts, and blood-curdling yells, we dashed down the slope, through the ravine, and off over the undulating prairie. The rate was rapid, but Koda kept up his reputation as one of the swiftest ponies on the reserve, while Paska guided him with a firm hand; and Don, steering clear of the pony's heels, had no difficulty in keeping pace.



At sunset we galloped into the valley, and there, through a cloud of dust and camp-fire smoke, we recognized our provision train and the Indian drivers. Not a sign of joy or disappointment was manifested by our stolid Indian party, but before joining the teamsters, a short consultation was held. Not being an adept in the Sioux tongue, their conversation was to us unintelligible; their significant gestures, however, made us feel uneasy.

KODA AND PASKA.

"THEY WHISPERED AROUND."

Wa-kin-yan-ci-qa-dan was one of the Indians who, though he could speak but a few English words, could write in his own tongue; and after the council, when we were all mingling with the teamsters and looking with hungry eyes on the loads of flour and bacon, he quietly passed Paska, pushed a piece of paper into his hand, and whispered, "Run! Agency! Interpreter!"

Paska felt a thrill of fear and excitement; but, controlling himself, he led Koda as if to water him at the brook, followed of course by the faithful Don; then, thinking he was attracting no particular attention, he thrust the paper into his pocket, and, bounding onto the pony, kept close to the bushes for a few moments, then struck out through the twilight across the open prairie.

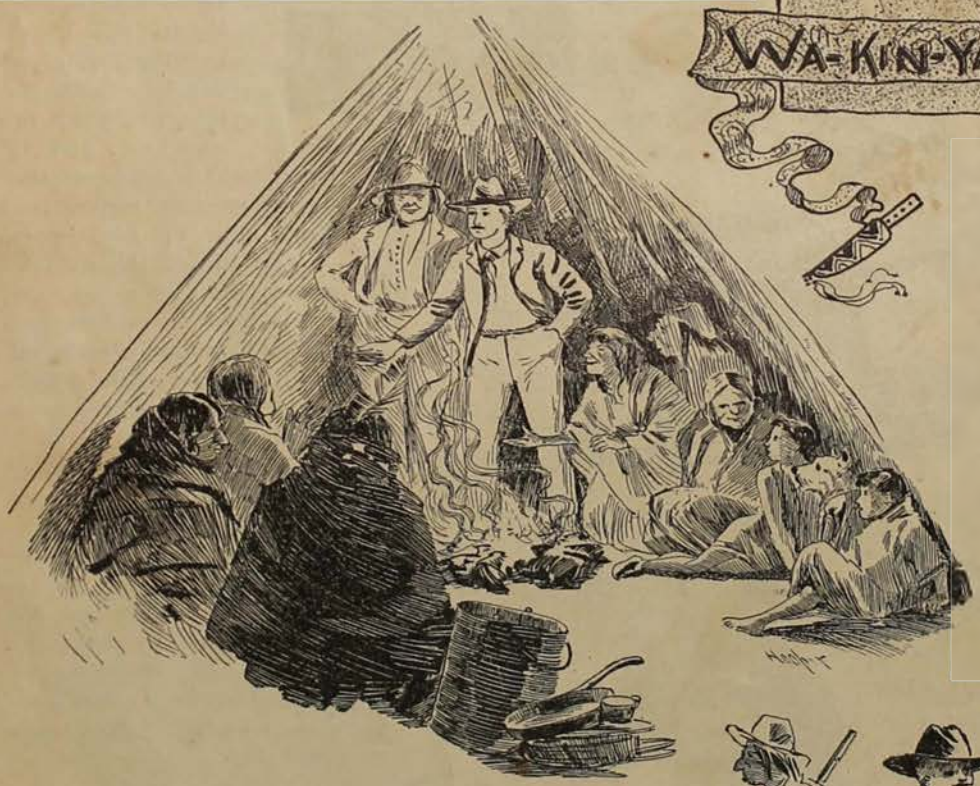
Koda, Don, and Paska put in their best work. The first had been known to run a mile in less than two minutes, and to-night he seemed to outdo himself. Not a word of encouragement was needed; but Paska, leaning a little forward in the saddle, while holding the rein in his left hand, with his right gently tapped on the pony's side,—a sign which Koda had been trained to understand meant for him to make his greatest speed.

Through the twilight the ground seemed to swim past like the current of a rushing river. Suddenly the saddle slipped. Finding it impossible to arrange it at the mad pace they were flying, Paska hauled up the foaming pony, sprang off, and re-adjusted the straps; but in that moment of delay he suddenly heard, above the panting of the pony, the sound of flying hoofs in the distance. Don, too, was on the alert, and showed signs of great uneasiness at the delay. What with the impatience and excitement of Koda and Don, it was almost impossible for Paska to remount; and before he was half in the saddle they were all tearing down the road, Paska regaining his stirrups as best he could.

Now this was the plot which the chiefs had hastily made, and of which Wa-kin-yan-ci-qa-dan had given warning on the piece of paper that Paska was taking to the government interpreter:

The government generally sent the main provisions, flour, pork, coffee, sugar, etc., to the Indian Agency twice during the year, and these were divided and dealt out to the tribe at the end of every month. The scheme of the wicked chiefs was to return at once to the agency, announce that no provisions were coming, excite the desperate Indians to revolt, kill the agent and all the white employés, and then, when the train arrived, they would divide the six months' provisions at one time, and feast and dance and hold high revels. The Indians, like some children, don't look far ahead. They did not stop to ask themselves what they would do after the supplies were exhausted.

Now Wa-kin-yan-ci-qa-dan knew if the news of the coming train could only



"WE VISITED THE TEPEES."

"LATE IN THE AFTERNOON WE STARTED."

reach the agency first, and the plot of the bad Indians be exposed, the Church Party would assert themselves and faith in the agent would be restored. Paska, though not understanding the full import of the piece of paper he carried, still realized it was a case of the greatest emergency; and over the prairie grass, through rushing streams, up hill and down ravines, on they flew.

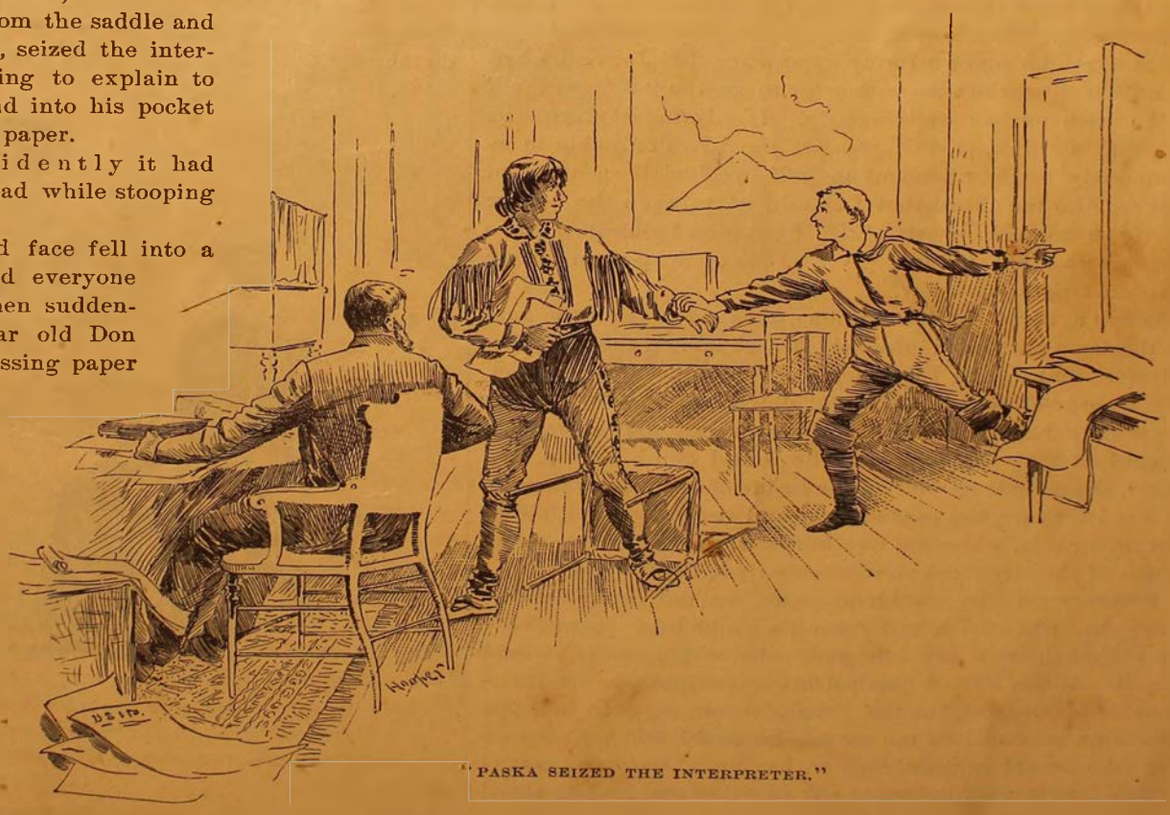
"KODA, DON, AND PASKA PUT IN THEIR BEST WORK."

Ah, what a relief! There were the camp-fires, there were the lights in the warehouse, and the sound of the Indian drivers faintly reached him. One more hill to climb, and Koda, trembling in every fiber, covered with one mass of foam, galloped madly to the door of the warehouse, while Paska reeled from the saddle and rushed into the office, seized the interpreter, and while trying to explain to the agent, put his hand into his pocket for the precious bit of paper.

It was gone! Evidently it had dropped out on the road while stooping to fix the saddle.

Paska with a pallid face fell into a chair. For a second everyone seemed paralyzed; when suddenly, with a bound, dear old Don rushed in with the missing paper in his mouth.*

In a shorter time than it requires to write this, the interpreter read the torn and dust-stained paper, and accompanied by the agent he stood on the warehouse steps and explained all to the Indians, who had rushed around the doors on the arrival of the flying messenger.

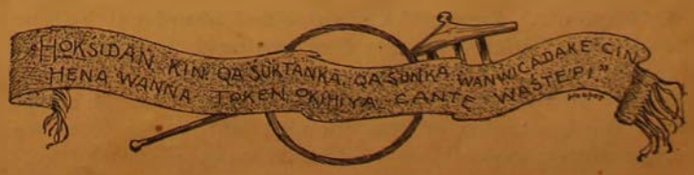


"PASKA SEIZED THE INTERPRETER."

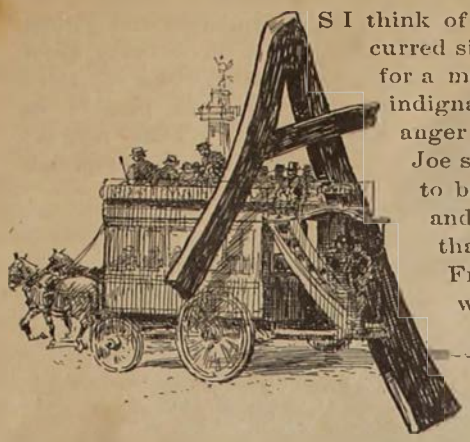
There is nothing slow about an Indian intellect: it was all understood in a moment, and the news of the approaching train had its effect, and good-humor once more reigned. The conspirators evidently got wind of all this before they had a chance to instigate the planned revolt. On their arrival they separated and joined their companions in a very quiet and unostentatious way. But they were not as passive as they seemed. That night poor Wa-kin-yan-ci-qa-dan was shot in the back; but the wound was not fatal, and he recovered after weeks of careful nursing.

And dear old Don! The superstitious Indians looked upon him with a great deal of respect from that time, and he was treated with great consideration, not to say awe, ever after.

* Don was a carefully trained retriever. Paska had educated him to pick up any article that was dropped. Day after day, when Don, Koda, and Paska were out together, the latter would continually drop one article after another,—a glove, a stick, a letter, anything,—to get him thoroughly trained to observe and to retrieve, never dreaming that we should all owe our lives to this useful education of dear Don.



An Adventure in a Paris Omnibus.



AS I think of it now, though it occurred six months ago, I grow for a moment quite red with indignation and righteous anger at the thought that Joe should have caused me to be the laughing-stock and amusement of all that crowd of grinning Frenchmen and Frenchwomen.

This feeling soon disappears, however, and the ludicrousness of the whole situation comes over me. I can see the puzzled conductor and the highly amused countenances of the whole 'busful, and I just lie back in my chair and laugh until the tears roll down my face.

It is no more than a just compensation that I should be able to laugh at it now; for I am sure that at the time, while others evidently thought the occurrence very funny, I could not see anything but that I had been frightfully outraged, and that others were making sport of me,—all through Joe's forgetfulness, too: that was the hardest part of it all.

I am not going to exaggerate or color my account of what took place, a single bit,—it is not in the least necessary; and though to some it may seem that I have done so, I want to state that such is not at all the case: the following is simply a literal rendering of a funny experience that Joe and I had in a Paris 'bus when we were over to see the "Exposition."

We were on our wedding-trip. I only mention this as showing, I think, that J. was all the more culpable to so completely forget all about me; if we had been married longer, I do not think that I should have taken the matter nearly so much to heart. Still, I suppose I ought to have remembered that Joe was given to fits of deep abstraction; he is an artist, you know.

It was a Porte Maillot omnibus, that starts near the gate of the same name and proceeds straight down the Champs-Élysées, that J. and I boarded one lovely morning in June. We were in a great hurry to get down into the city, and as there only happened to be one seat vacant downstairs, J. suggested that I take it, and he would climb on top. In Paris, the outside as well as the inside of the conveyances is utilized for carrying passengers; and very novel and pleasant riding it is, when the weather is warm, as you can see so much of the city from your elevated position.

Pretty soon the conductor came around to collect the fares, and when he asked for mine I told him, in my very best French, that my husband, who was upstairs, would pay it. When he had finished his collections downstairs he mounted "*en haut*," as the French would say, but in a few moments returned to me saying he could find no man on top who would acknowledge to having a wife downstairs whose fare it was his duty to pay: he declared he had asked everyone in turn.

Suddenly it came over me that of course poor J. did not understand what the conductor had said to him, as a thorough knowledge of the French tongue was not one of his accomplishments. I opened my purse and found a five-franc piece, which I offered for my fare, saying I thought it possible that my husband did not comprehend his demand. Whether it was that the sight of my five-franc piece appalled the conductor at the thought of having to make change to that amount, or whether it was the spirit of gallantry that they say is inherent in every Frenchman's breast, I never knew; but he suddenly turned on his heel, at the same time saying, loud enough for everybody in the 'bus to hear him:

"Madame, you do not look like an impostor. If you say you have a husband upstairs, I believe you, and will find him and compel him to pay your fare: it is his duty. The idea of a husband deserting the little Madame in this way! It is a shame! Put away your money, Madame, I will not have it: it is the money of Monsieur I want." And before I could utter a word of explanation he had darted up the stairs at the back of the 'bus.

Pretty soon everybody in the 'bus was conscious of a tussle going on on these same stairs, and we could see the conductor forcibly pulling along a most irate little Frenchman, who was gesticulating in the wildest manner, at the same time giving vent to his feelings in the most expressive French. He declared he would have both the conductor and the woman who was trying to palm herself off as his wife arrested by the very first *gendarme* he saw. He would find out whether there was no protection for a respectable father of a family riding to his place of business in a public conveyance: it was an outrage of the most audacious kind, and somebody would have to suffer for it.

The conductor appeared just as calm as the old gentleman was excited, and never said a word in return, only tightened his grasp on the coat-collar he was holding, and never stopped his pulling and tugging until he had the old gentleman standing right in front of me; then he inquired in a loud voice, "Madame, is this man your husband?"

"Oh, dear! No!" I replied, in a shaking voice, almost ready to cry. "You have made a dreadful mistake! Please do take my fare out of this!" again presenting my five-franc

"MADAME, YOU DO NOT LOOK LIKE AN IMPOSTOR."

piece. "My husband certainly does not understand you: that is all."

My evident distress must have mollified the old gentleman somewhat, for he slipped away quietly, only stopping once on the stairs to shake his fist at the conductor and call him "an old fool," which I certainly thought he richly merited; for why in the world would he not take my fare as I was begging him to, and thus have no more fuss about it?

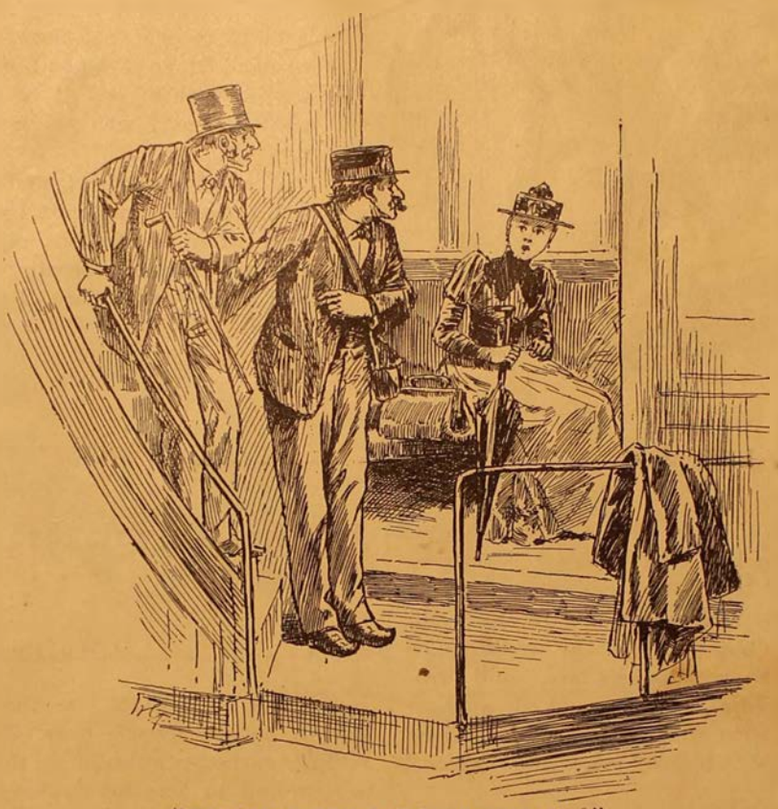
By this time everybody in the 'bus was intensely interested in the proceedings. Old gentlemen laid aside their morning

papers as if they had no further interest in them, and gave their glasses an extra rub so that they might have a better look at me; while fat old ladies nudged each other and chuckled. Even the babies stopped crying suddenly, to see the fun, for everybody seemed to feel that more was coming. As for myself, my face kept growing redder and redder, until I knew from the burning sensation that it must be a flaming scarlet; while instead of wanting to cry, I felt possessed of a strong desire to shake somebody,—whether the conductor or J., or both, it did not much matter.

As soon as the old gentleman had escaped from him, the conductor, nothing daunted, and taking no notice whatever of my outstretched hand with its appealing five-franc piece, started for the stairs, repeating, "I go to search the husband of Madame."

All necks were craned forward as this time he appeared in view, leading, in the same captive manner, a tall, lean, lank individual, apparently half-scared out of his wits. All this poor fellow could say was, "*Monsieur le Conducteur*, I assure you I have no wife. I assure you, sir;" while his knees knocked together, and his legs trembled so violently that he could hardly stand upright.

His feeble protest did not save him however: he also was marched up in front of me, and the same question asked in the same loud tones; and when I made the same answer, disclaiming him as my legal protector, everybody in the 'bus tittered audibly at the relieved expression that came over the young man's face as he skipped away, and the puzzled look that settled on the conductor's visage.



"MADAME, IS THIS MAN YOUR HUSBAND?"

If I had been at home and such a mistake had occurred, I certainly would have left the car at once; but I did not dare to do so here, as I could not find my way about, and the idea of going boldly up those stairs and discovering J. myself, never once entered my head, though that of course would have been the most sensible thing to have done.

The conductor, after his second failure, seemed dazed for a moment, and stood scratching his head; but in a little while he brightened up, saying, "I cannot stop now, as my honor is at stake as well as Madame's, and find Monsieur I must;" while several of the passengers cried out, "Bravo!"

Four more innocents in turn were brought before me: one, like the first old gentleman, wildly indignant, swearing dire vengeance on everybody; another was timid and scared; while two of them treated the whole thing as a huge joke, and did their best to afford the passengers all the fun possible, which of course only added to my misery.

Though we had gone some distance, no one seemed to think of getting out; consequently no one could get in, as a Paris 'bus never carries more passengers than there are seats. While the people downstairs were enjoying themselves so much at my expense, it seems that those on top were likewise having a pretty good time. J. told me all about it several days afterwards, when I had grown less touchy on the subject and could listen to him without flying into a passion.

It seems that as soon as he had found a seat upstairs, he drew out of his pocket a book in which he was very much interested, something about "the unequal distribution of wealth among the inhabitants of the globe,"—a most engrossing subject, I should say,—and when the conductor came around he handed him only three sous, having completely forgotten all about poor me. He positively declares that the conductor never asked him if he had a wife downstairs, as of course that would have recalled me to his wandering senses; also that he knew quite enough French to understand such a demand had it been made: otherwise, how would he have been able to have enjoyed the fun that followed? That he had enjoyed it, there was no doubting.

So absorbed was he in his book that he did not become aware that anything unusual was happening, until after the first two men had been led below; and as by that time everybody was laughing and talking so loud, he knew that something must be up, so asked his neighbor what was the joke. This Frenchman, by means of abundant pantomime and few words (J. always understands French when so expressed, quite readily), made him understand that there was a bold, bad woman downstairs, who was trying to make some man upstairs pay her fare; she could not get anyone down there to do it, so had declared that someone upstairs must; said she had a husband upstairs,—which of course was only a trick of hers, only the conductor, who was evidently a young innocent, seemed to believe her, and was trying to find a husband for her. This was the Frenchman's version of the affair. The conductor made several long speeches on top, only J. did not exactly catch their meaning; but, from the way everybody laughed, he judged the conductor must have said something very funny, so thought it would look smarter if he laughed, too. At last, a Frenchman with a little more politeness than the others, rose up, and said it was a shame that just for six sous a woman's fare should not be paid; he would go down and see her. If she was young and at all pretty, he would pay it himself; but if she was fat and ugly, alas! he could not: and as some of the men cheered this gallant little speech he followed the conductor downstairs.

The passengers downstairs, in the meantime, had been growing restless at the conductor's long absence on top: they were all wishing, I suppose, that they had the power to be in two places at once. How their faces did brighten when his legs first appeared in view! And as they saw the stylishly attired young man who was following in his wake, they looked at me as much as to say, "Now something interesting is surely going to happen."

Instead of the conductor leading this man before me, the

latter stood in the open doorway, and raising his glass to his eye inquired of the conductor, "Which is the lady?"

"WHICH IS THE LADY?"

"The little one in the blue dress, with the red cheeks, Monsieur," replied the conductor; and before I could protest against this new form of insult, the young Frenchman had taken off his hat, and with a profound bow said, "It would afford me the greatest happiness in the world to be allowed the honor of paying Mademoiselle's fare," and turning to the conductor handed him six sous. With another profound bow, and a broad grin playing over his face, he was off upstairs, while cries of "*Bravo! bravo! Très bien! très bien!*" went after him.

I tried to get the conductor to listen to me as I told him that he must return the money at once, as the young man was a stranger and had no business to pay my fare, and that I could see no reason why he should refuse to take my five-franc piece. But he only shook his head, and said he was *fatigué* and was very happy to have at last found a man who was jaunty enough to pay for me; he did not care any longer whether it was the husband of Madame or not; the fare was paid, and that ended it,—"*c'est fini*,"—and he shrugged his shoulders.

We had just two more streets to go before reaching our destination, the Louvre, and as I gathered up my parasol and hand-satchel, I could see that the passengers were again on the *qui vive*. As soon as I caught the very first glimpse of J.'s long legs on the top step I rushed out to the back platform; and when he had reached the bottom I grasped him firmly by the arm, demanding to know what he meant by denying I was his wife and refusing to pay my car-fare!

The most startled expression came over his face as he stammered out, "Were you the woman they were hunting for a man to pay her fare? O good Lordy!" And he commenced to laugh quite foolishly.

The conductor looked as if he was going to faint as he feebly wailed, "I demanded of every monsieur but this one, and he was reading. *Mon Dieu!* I was *bête*."

"Joseph Livingstone" (I always say Joseph when I am very angry), "you pay my fare at once!—it will probably be for the last time,—and take me away from this dreadful 'bus as quickly as you can, or I shall die!" By this time I could hear peals of laughter both from the inside and on top, as many of the passengers from above had crowded to the stairs to see what was going on below.

J., as if in a dream, slowly pulled the six sous out of his pocket and gave them to the conductor, who was looking very crestfallen. As we jumped off the 'bus, followed by the gaze of every passenger, I know they sympathized with me, for they must have thought I had for a husband "*un homme un peu toqué*."

It is needless to say that we did not go to the Louvre to see the pictures that morning, but took a cab and drove straight home instead, where I comforted myself with a good fit of crying, between my sobs insisting that I was going right home to mother, on the next steamer.

J.'s miserably dejected air, and his real penitence, had softened my heart by night, so I did not go; only ever after, when out sight-seeing, I never allowed him to become separated from me for a minute, as one funny experience, I thought, was quite enough in Paris.

ANNE C. GOATER.

American Animals that are Becoming Extinct.

V.

"OLD EPHRAIM."

"OLD EPHRAIM," as the western hunters familiarly call the grizzly bear (*Ursus horribilis*), bears a well-earned reputation as the most formidable wild beast to be found in this hemisphere. Countless stories are told of his ferocity, tenacity of life, and matchless strength. As has been well said, had he "the swiftness of foot of either the lion or tiger of the Old World, he would be an assailant as dangerous as either; for he is endowed with the strength of the former, and quite equals the latter in ferocity." Accounts, however, differ as to his courage; and it has been pretty well ascertained and established that he will not often, unprovoked, attack a mounted hunter.

Colonel R. B. Marcy, in his account of army life on the border, says: "I believe that if a man came suddenly upon the beast in a thicket, where it could have no previous warning, he might be attacked; and it is possible a large grizzly bear might attack a man on foot in the open prairie, and in some instances they have been known to make war on men on horseback; but if they get the wind of anyone approaching them, they are pretty sure to make off."

A grizzly bear has not, like the black and brown species, the power to climb trees or to hug his victim to death. He does not depend chiefly upon his great jaws armed with teeth equalling in strength and size those of a lion, but upon his paws, which are capable of leaving tracks twelve inches long by eight in breadth, with which he can strike irresistible blows, and which are armed with sickle-shaped claws fully six inches long. These claws he also uses to

good purpose in digging for prairie-dogs, esculent roots, and insects, for he does not disdain a dinner of ants and their *larvæ;* fish and fowl are both welcome, and he devours frogs, lizards, and wild berries, with equal relish. To get at the *larvæ* of insects he will roll over great logs, to the under sides of which they adhere, that would try the strength of a yoke of oxen.

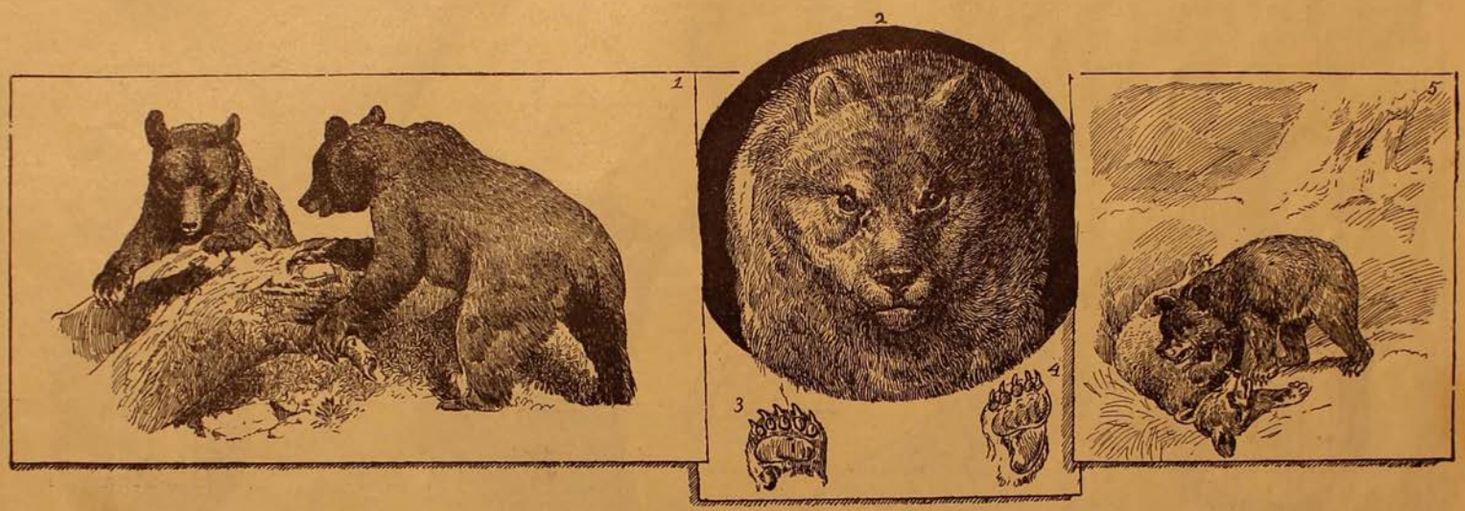
The grizzly does not, like other species, inhabit forests: he lurks among the thickets of *Corylus rubus* and *Amilanchiers*, upon the berries of which he partly subsists, along the edges of the great cañons and rocky precipices in the wildest and most remote regions west of the Rocky Mountains, and on the plains and foot-hills of the eastern slopes.

The grizzly seems to be quite an intelligent animal in some respects, and decidedly lacking in others. If a bear has been traveling against the wind, it will invariably, it is said, turn in the opposite direction when it wishes to lie down, and goes some distance away from its first track before making its bed. If an enemy comes up the trail, his keen sense of smell will apprise him of his danger. It is also claimed by old Indian hunters, that when a bear pursued has sought refuge in a cave, and an attempt is made to smoke him out, he will come to the mouth of the cave, scatter the brands, and put out the fire, and retreat into the cave again. "This," says the narrator, Col. Marcy, "would seem to indicate that Bruin is endowed with some glimpses of reason beyond the common instincts of the brute creation in general, and, indeed, capable of discerning the connection between cause and effect."

Notwithstanding the intelligence exhibited in such situations, upon others he shows himself a stupid brute indeed. For example, when he has taken possession of a cavern, and a hunter is sufficiently courageous to enter with a torch and a rifle, he will, instead of attacking the intruder, raise himself upon his haunches and cover his eyes with his paws, evidently under a delusion similar to that attributed to the ostrich, which, when pursued and run down, thrusts his head into the sand to shut out the sight of the hunter, thinking by that means to get rid of him.

A curious method of hunting this animal is sometimes practised in Mexico and California, which is so well described by Mr. J. Ross Browne that it is difficult to give an idea of it without quoting his own words; but as the account is very long, only the conclusion can be given here. The Spanish *vaqueros*, or cow-boys, of California, are by constant practice the most expert lasso men in the world, and occasionally exert their skill in this accomplishment upon "Old Ephraim" himself. Browne was at the time in the valley of Santa Margarita, when he saw a large animal coming toward him pursued by four horsemen, upon which he concealed himself in a ravine. He says: "Scarcely had I partially concealed myself, when I heard a loud shouting from the men on horseback, and peeping over the bank, saw, within fifty or sixty paces, a large grizzly, no longer retreating. He had faced his pursuers and now seemed determined to fight."

After describing how the animal was skillfully lassoed by one of his fore paws and jerked down on his haunches; how, in spite of the strain, he regained his feet and began hauling in the spare line with his fore paws, so as to get within reach of the horse; how, after an unsuccessful throw to catch one of his hind feet and spread him out, he had succeeded in getting within ten feet of the nearest horsemen, when he was caught by the loop of one of the lariats around the neck, and brought, half-choked, again to the ground, and a hitch caught around one of his hind legs, and another, with a wide loop, around his entire body, the writer goes on to say: "It was apparent that his wind was giving out, partly by reason of the long chase, and partly owing to the noose around his throat. A general pull threw him once more upon his back, after he had regained his feet. Before he could recover himself, the horsemen, by a series of dexterous maneuvers, wound him up completely, like a fly in a spider's web, so that he lay perfectly quiet upon the ground, breathing heavily, and utterly unable to extricate his paws from the network of lassoes with which he was entangled. One of the riders now gave the reins of his horse to another, and dismounted. Cautiously approaching with a spare *riata*, he cast a noose over the bear's fore paws, and wound the remaining part tightly around the neck. This done, another rider dismounted, and the two succeeded in binding their victim so firmly by the paws that it was impossible for him to break loose. They next bound his jaws together by means of another *riata*, winding it all the way up around his head, upon which they unloosened the fastening around his neck, so as to give him air. When all was secured, they freed their lassoes and again mounted their horses. The bear was secured and subsequently hauled away for a grand bear and bull fight."



1. GRIZZLY BEARS SEEKING ANT NESTS. 2. "OLD EPHRAIM," FORMERLY OF CENTRAL PARK, NEW YORK (A PORTRAIT SKETCH). 3. FORE FOOT OF BEAR. 4. HIND FOOT OF BEAR. 5. BEAR CUBS.

As civilization advances, the grizzly retreats: his habitat narrows daily, and fewer years than we think may elapse before he takes his place with the cave-bear of Europe, as an extinct species.

J. CARTER BEARD.

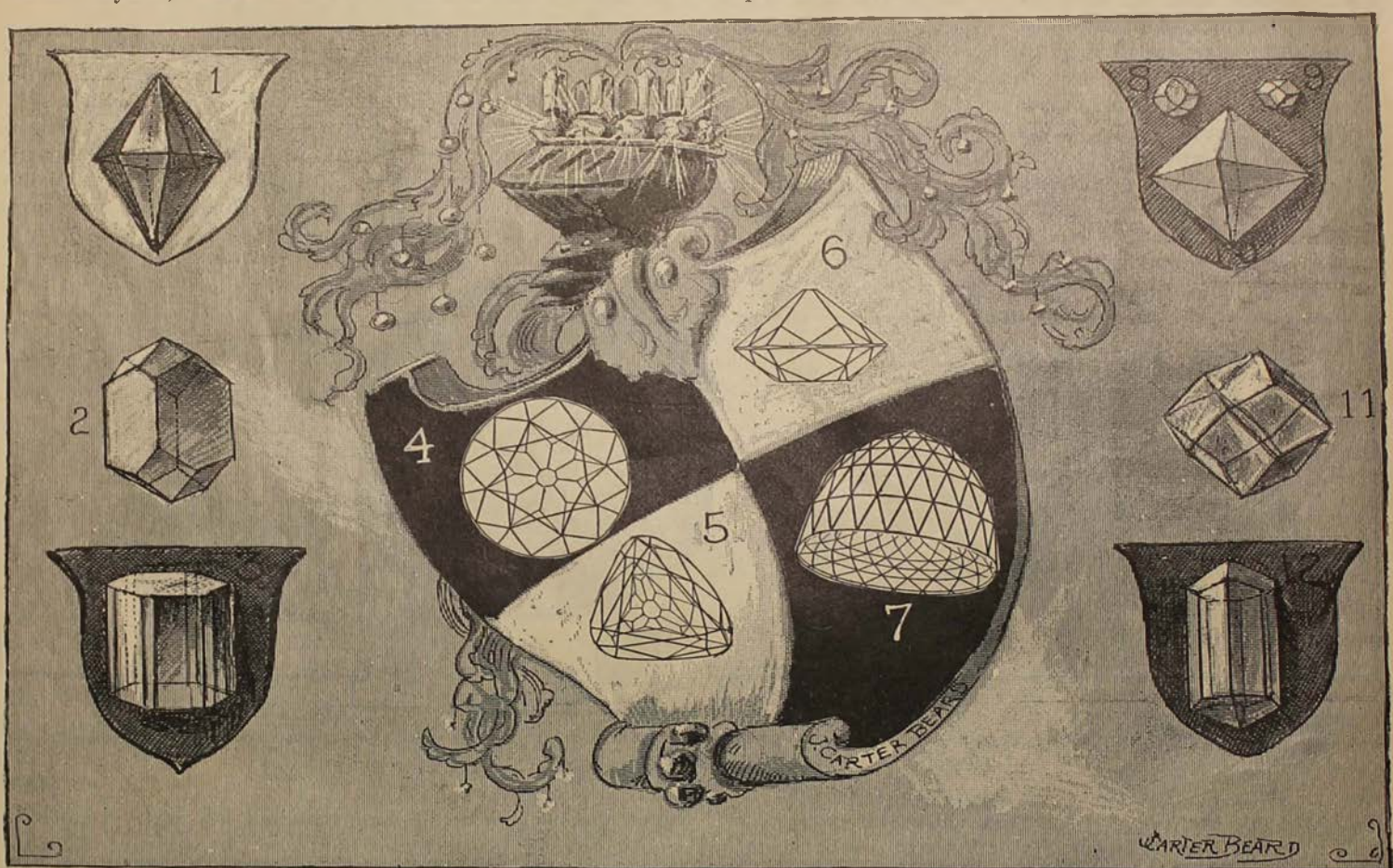
Crystallization.

WHEN the air grows chill at sunset after a day of thawing, the roadside puddles become fringed with long, slender needles of ice. They shoot from the margin to the center, and lengthen under one's very eyes. They interlace, and at last grow so numerous that they form a crust all over the surface of the pool. Jack Frost is juggling with the liquid and turning it into a solid as hard as glass. Soberly speaking, the water is being crystallized.

Long ago it was supposed that all crystals, like these needles of freezing water, were formed by cold. Frost was thought to be the lapidary who cut and polished all the gems in the world. This belief is commemorated in the term "crystal," which is derived from a Greek word meaning ice. According to a theory generally accepted by scientists, every substance, solid, liquid, or gas, is composed of innumerable molecules, too minute to be seen even by the aid of the most powerful microscope. "Take a drop of water," says a standard writer, "and divide it into two parts: the parts will be like the whole in every respect except size. Now divide each of the halves into two, each of those halves into two, and so on. We shall soon arrive at a stage in which the separate portions are too small to be seen or handled; but, no doubt, were our eyes and instruments finer, the process might still be carried on."

For how long? Forever? According to the accepted theory, after a certain number of divisions the drop could not be halved again. Further division would separate the water into the two gases of which it is composed, and it would be water no longer. So a "molecule" is the smallest portion into which a substance could be divided without resolving it into its elements, and thus changing its nature.

These molecules, or particles, are the bricks with which nature does some wonderful building. When circumstances are favorable to the fairy architecture, a force seizes upon them and arranges them as skillfully as the mosaic-worker arranges his bits of glass and shell. The resulting forms are "crystals," and the process of building them up is "crystallization." But the unseen artificer who puts the particles into their places is an original genius, and instead of copying some one else's picture, as the Roman and Florentine mosaic-makers do, he works out his own ideas. Most of his designs are mathematical figures of perfect symmetry, but in some instances the particles are grouped into exquisite flower-forms.



GEM CRYSTALS.

1. Crystal of Corundum—Ruby, Sapphire.
2. Crystal of Silicate of Zirconia—Jacinth.
3. Crystal of Silicate of Alumina and Glucina—Chrysoberyl, Emerald, Aqua Marine, Beryl.
4. "Koh-i-noor," 103¾ Carats.
5. "Nassuck," 78¾ Carats.
6. "Regent," 136½ Carats.
7. "Great Mogul," 280 Carats.

CUT DIAMONDS.

8, 9, 10. Crystals of Carbon—Diamond.
11. Crystal of Silicate of Alumina, Magnesia, Lime, and Iron—Garnet, Carbuncle.
12. Crystal of Fluo-silicate of Alumina—Topaz.

Crystallization takes the substance just as it is and works with the materials already at hand. It neither adds nor subtracts a single element. It only re-arranges the molecules, and yet when this is done the substance is changed as if by enchantment. Mist, for instance, is the most yielding of all things. Crystallization groups the molecules of vapor into lovely six-pointed stars, and the vapor becomes snow, able (as we learned at the time of the blizzard in New York) to withstand the onward rush of a locomotive.

Water yields to the gentlest breeze, or to the lightest touch of baby fingers; but when its molecules arrange themselves in crystalline forms it becomes ice, hard enough to offer stout resistance to all the tools of the ice-cutters.

Charcoal is carbon in workaday guise. Lampblack, opaque, dull, black, and soft, is another familiar form of carbon. But crystallized carbon is the diamond, clear,

sparkling, shot through with rainbow light, and so hard that only another diamond can make a mark upon it. If the carbon molecules arrange themselves after another plan, the resulting substance is graphite, the so-called "lead" which is put into pencils.

So the diamond is humbly born, but she is not more meanly related than are her sister gems. Most precious stones are of very lowly origin indeed. Alumina as an ingredient of clay is scarcely good enough to feed a crop of cabbages; but let crystallization re-arrange its molecules, and it is transformed into rubies, topazes, and sapphires.

"Other highly esteemed precious stones," says a recent writer, "such as the emerald, the aqua-marine, and chrysoberyl, on the one hand, and the hyacinth on the other, contain earths chemically related to common clay: these earths in themselves are neither rare nor precious, so that in some countries the streets are paved with the impurer brothers of the emerald. The same is true of all other precious stones, including pearls: in the main, they are formed of substances of no value whatever, and to be found everywhere. Their only superiority consists in the fact that the common substance in them has reached an extraordinary degree of crystallization."

The New Jerusalem, we are told, is paved with gems and gold. Well may it be so, when in the dirtiest of terrestrial cities the drays rumble over the base materials from which precious stones might be made! The mud, the paving-stones, and even the flakes of soot are as full of beautiful possibilities as are the sinful or sordid men and women who tread upon them.

About twelve years ago, two eminent French chemists discovered a method by which some base and cheap substances could be made to crystallize, and thus assume their beautiful and perfect forms. By this process it was possible to manufacture rubies, sapphires, and emeralds by the pound. A watch would run on their artificial rubies as well as on natural ones, because they were equally hard. The dealers in precious stones said that it was "sinful to imitate nature's work in that manner," and that "the government ought to prohibit it."

Almost all the elements of our globe are, in their perfection, crystals. Every one of the metals will crystallize "if it gets a chance." The atoms which compose the solid rocks have felt blindly after the order which is heaven's first law, and sometimes they have succeeded in arranging themselves into masses of crystals. Long, gentle heat, not strong enough to melt the rocks, was a great help towards this process. The earth has grown old and cold now, and the rocks which she holds "get no heat," or at least they get very little.

But there was a time, long ago, when palms grew where "Greenland's icy mountains" stand to-day; and there was a time, longer ago, when the globe was so warm that the stone imbedded in it was quietly baked through and through. Some of the rocks subjected to this slow and gentle heat were of fossiliferous limestone. They were made of shells and bones, massed together,—the shells and bones of long-dead animals which had lived in the warm waters of primeval seas. The little particles of lime, when they got heated, began to stir about and arrange themselves into masses of crystals, and the limestone was changed into white statuary-marble, pure and glistening. Rocks thus altered by mild heat are called, in geology, "metamorphic rocks." They have been baked in a slow oven.

It took severer methods to make the world's most precious things. The earth was once, as the sun and stars are now, in a fiery liquid condition. All mineral substances were fused together. The globe was an immense chemical laboratory. The fervent heat, like the alchemists' fires in mediæval story, turned common materials into things beautiful and rare. Gradually there separated from the molten mass, now valuable metals, now grains of gold, and still more frequently minerals which were ennobled by crystallization. The alumina as it slowly cooled was transformed into rubies, topazes, and sapphires, and some other "earths" crystallized into beryls, garnets, and emeralds.

These gems would all be colorless if they were not tinted by mineral dyes. "The proof metals," says Carus Sterne, "took upon themselves the task performed by aniline in modern dye-works. Long before there were colored plants and animals, metals played the parts of pigments in nature, and thus produced in stones, colors almost surpassing in brilliancy those of flowers and butterflies."

Lava, granite, and, indeed, all the solid materials of the globe are "crystalline in grain,"—largely composed of minute, imperfectly formed crystals, massed together. The dwarfed and distorted crystals tend to range themselves in parallel rows, and the rock splits along these rows much more readily than it splits across them. Workmen in a granite quarry find it easier to break the blocks off in one direction than in others. This property of splitting along certain lines is common to many minerals, and is called "cleavage." It is very marked in mica, which can be separated into thin sheets, even by the fingers. Crystals generally possess this property of cleavage in a marked degree. Some break smoothly at a tap of the hammer; others, if first heated and then plunged into cold water, will separate as suddenly and cleanly as if they were cut by an invisible knife.

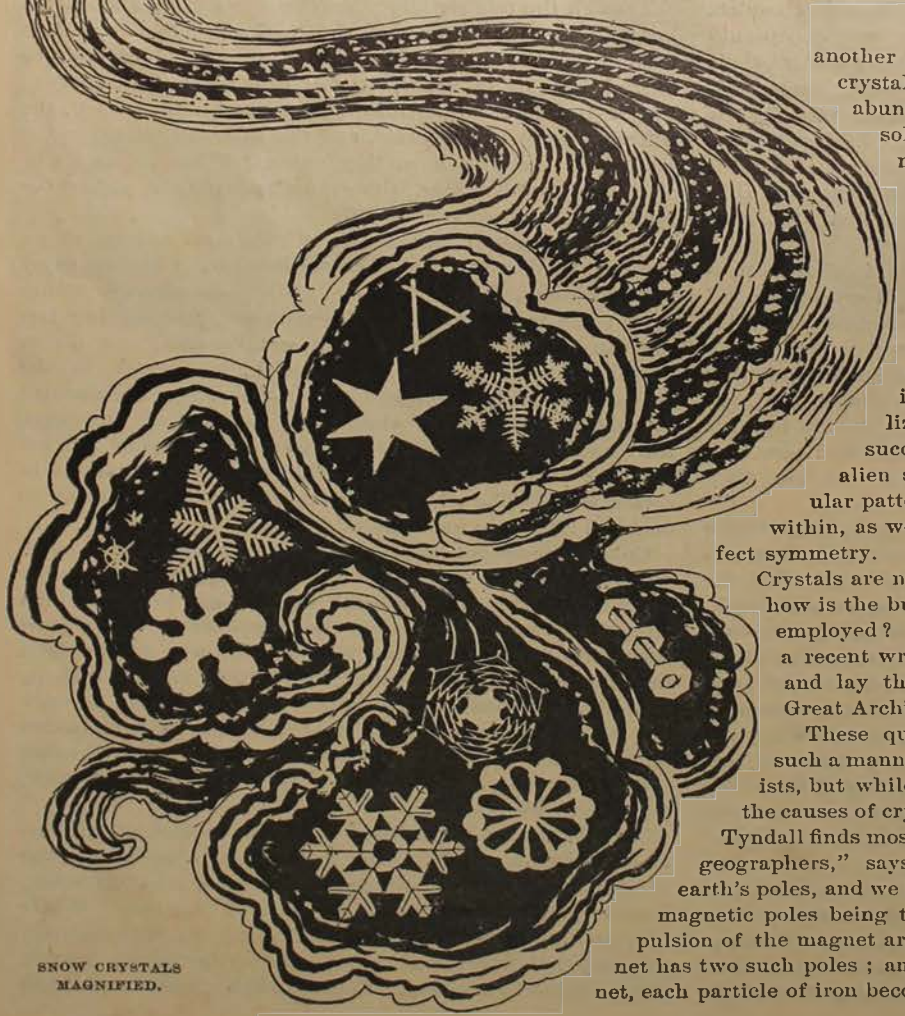
Though the mighty and venerable force of crystallization has laid the foundations of the earth, it does not disdain to work with very humble materials. If common salt be stirred into warm water, it will dissolve and disappear; but if the solution be allowed to stand undisturbed, the water will slowly evaporate, and the salt will collect on the bottom of the vessel, in tiny cubes. When sugar is dissolved in warm water, the syrup as it cools yields the familiar crystals of sugar-candy.

The pretty alum baskets, sometimes seen at fairs, afford another familiar instance of crystallization. Children enjoy making these, or looking on while someone else makes them; and in the interest of jewel-manufacturing they forget the tedium of a hopelessly wet Saturday. A tin or porcelain-lined saucepan, filled with hot water, is the witch's caldron in which gems are to be made. We dissolve into the water as much alum as it will take up, and when the alum has all melted into the water, we suspend into the contents of the saucepan a little wire basket wrapped in cotton wool. The whole affair must now be set away to cool and left quite undisturbed.

Cold water cannot hold in solution as much alum as warm water holds. As the water cools, the surplus alum separates slowly from it, and small crystals are formed, which cling to the rough surface of the cotton wool. They grow constantly as the separation goes on, and next day we shall find the wire vessel covered with glass-like, transparent, glittering crystals. If the inside of the saucepan be worn and rough, the crystals will cling to it also, and the basket will go bare. If the alum contains an admixture of other salts, they will remain in the water and crystallize later, "on their own hook."

As a substance crystallizes, it strives to cast off all foreign admixtures. The better it succeeds in doing this, the clearer are the crystals and the more perfect are their forms, so that purity and beauty are attained together. Water may contain several substances floating together in free-and-easy fellowship, but as soon as crystallization begins, they become exclusive. Each particle seeks and joins

ONE OF THE RESULTS OF SNOW CRYSTALS IN A MASS.



SNOW CRYSTALS MAGNIFIED.

another particle of the same nature. The first crystals formed will be of the substance most abundant in the solution, or of that which dissolves least readily in water. The substance next in order then begins to crystallize. Thus each crystallizable substance separates itself from all the others, and the water, as it dries away, deposits several kinds of crystals, all perhaps differing in form and nature, and every one pure, or nearly so. Sea-water, evaporated slowly, deposits first gypsum, then common salt, and then magnesian salts. This is what scientists call "alternate crystallization." If the forming crystal does not succeed in casting away all impurities, the alien substances appear in lines, forming a regular pattern, so that it is evident that the particles within, as well as those without, are disposed in perfect symmetry.

Crystals are nature's first attempts at building. "But how is the building carried on? What are the tools employed? Where are the bearers of burdens," says a recent writer, "that bring and prepare the pieces, and lay them together according to the plan of the Great Architect?"

These questions have not yet been answered in such a manner as to satisfy all mineralogists and chemists, but while they await more perfect knowledge of the causes of crystallization, the "polarization theory" of Tyndall finds most favor among them. "Astronomers and geographers," says that great authority, "speak of the earth's poles, and we have also heard of the poles of a magnet, magnetic poles being the points at which the attraction and repulsion of the magnet are, as it were, concentrated. Every magnet has two such poles; and if iron-filings be scattered over a magnet, each particle of iron becomes also endowed with two poles. Sup-

pose these particles were devoid of weight, and floating freely in water, what must happen when they come near each other?

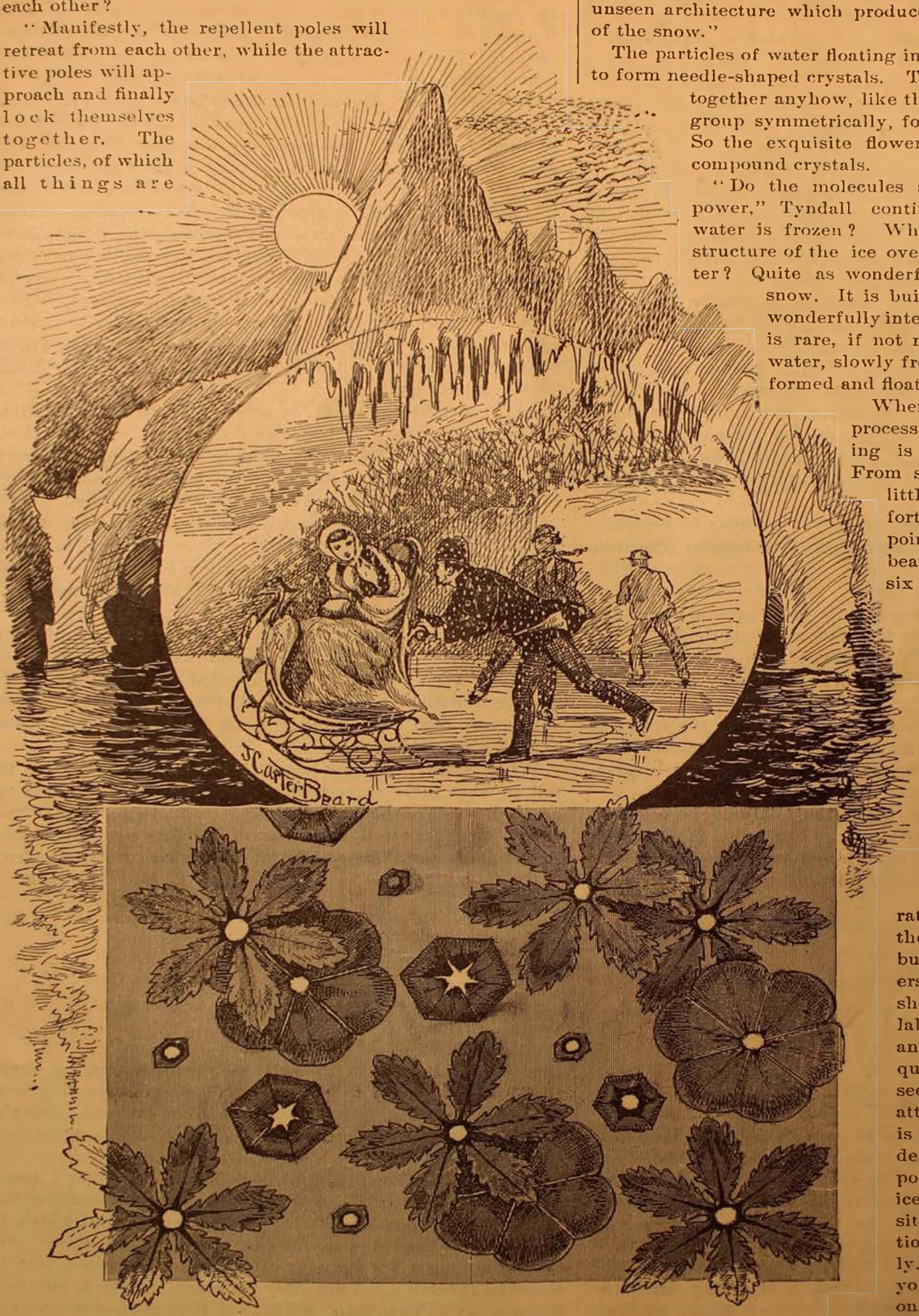
"Manifestly, the repellent poles will retreat from each other, while the attractive poles will approach and finally lock themselves together. The particles, of which all things are composed, inconceivably small as they are, show themselves possessed of attractive and repellent poles, by the mutual action of which the shape and structure of the crystal are determined. Imagine the molecules of water, in calm, cold air, to be gifted with poles of this description, which compel the particles to lay themselves together in definite order, and you have before your mind's eye the unseen architecture which produces the beautiful crystals of the snow."

The particles of water floating in the upper air unite so as to form needle-shaped crystals. These, instead of massing together anyhow, like the straws in a hay-mow, group symmetrically, forming six-pointed stars. So the exquisite flower-shaped snow-flakes are compound crystals.

"Do the molecules show this architectural power," Tyndall continues, "when ordinary water is frozen? What, for example, is the structure of the ice over which we skate in winter? Quite as wonderful as the flowers of the snow. It is built up of six-rayed stars, wonderfully interlaced. The observation is rare, if not new; but I have seen in water, slowly freezing, six-rayed ice-stars formed and floating free on the surface."

When ice begins to melt, the process is reversed. "The melting is not uniformly diffused. From separate spots in the ice, little, shining points sparkle forth. Every one of these points is surrounded by a beautiful liquid flower with six petals. But what is the central spot? A vacuum. Ice swims on water because, bulk for bulk, it is lighter than water; so that when ice is melted it shrinks in size.

"Can the liquid flowers then occupy the whole space of the ice melted? Plainly, no. A little empty space is formed within the flowers, and this space, or rather its surface, shines in the sun with the lustre of burnished silver. Such flowers are formed when the sun shines upon the ice of every lake: sometimes in myriads, and so small that one requires a magnifying glass to see them. They are always attainable, but their beauty is often marred by internal defects of the ice. Even one portion of the same piece of ice may show them exquisitely, while a second portion shows them imperfectly. Try the experiment for yourself, with a pocket lens, on a sunny day. You will not find the flowers confused: they all lie parallel to the surface. In this exquisite way every bit of the ice over which skaters glide in winter is put together."



NATURE'S ICE-PALACE, AND THE FROST-FLOWERS OF WHICH IT IS FORMED.

Geographers find it convenient to pretend that there is an equator drawn around the center of the earth. Mineralogists and chemists give more scope to imagination, and

fancy that three, or in some cases four, lines are drawn through the center of each crystal. These are called axes. In the simplest crystalline forms there are three axes, all of equal length, and all crossing each other at right angles. Such crystals are called "isometric," from two Greek words meaning "equal measure." (Three strings stretched across the inside of a perfectly square box might serve to represent the imaginary skeleton of these crystals. One string goes from the top to the bottom of the box, one connects the sides, and the third stretches from the front to the back. Each passes exactly through the middle of the box, and at the very center they all cross. Around an invisible frame-work like this, Nature builds the isometric crystals; but she can produce numberless variations upon one very simple theme, and hence there are many forms in this system, differing widely from one another).

The isometric crystals of borax and of sugar are perfect cubes. Those of alum are cubes with edges, as it were, sliced off, and with corners cut away. A perfect diamond or octahedron can also be built around the three equal axes of the isometric system. Diamonds are sometimes found in this form, and hence the figure has its popular name. If the edges and corners of the octahedron were cut away, it would reproduce another and very beautiful isometric form.

The best authorities recognize six systems of crystallization, differing from one another in the length, direction, and even number, of their axes. Each system has three, four, or more, ponderous names. The true inwardness of these systems can be grasped only by a person possessing mathematical ability: to the non-mathematician, "that way madness lies." Two, at least, of the systems, resemble one another so closely that even when a crystal is perfect in form, there is often some difficulty in determining the class to which it belongs. Perhaps the question can be settled only by nice measurement of its lines and angles. For this, scientific men use a mathematical instrument called the "goniometer."

But most of the crystals which the mineralogist or chemist has to examine are irregular. Perfection is not easily attained, even in the mineral kingdom. Regular crystals are only formed under a combination of favoring circumstances which is not likely to occur very often. The particles must have freedom to glide about, so that each can find its way to its proper place. This is the reason why the alum is dissolved as a preliminary to making the pretty jeweled basket. The water separates the alum particles from each other, and gives them a chance to move unrestrainedly.

A crystallizing substance must not be stirred up or interfered with in any way, and it must cool very slowly and gradually. Hence, imperfect crystals are far the most common in nature. They have striven after an ideal, but they have not reached it after all. Sometimes after crystals are formed their angles change with a change of temperature, so that in accurate measurement the temperature also must be noted. Sometimes they are inclined to crumble and must not be touched, so that their measure can be taken only by aid of a specially adapted instrument, the reflecting goniometer. Sometimes they are curiously curved and twisted. Sometimes their forms are imperfect, owing to the presence of impurities, and often they are very small,—even microscopic.

Yet the chemist must overcome all these difficulties somehow, for many substances are known only by close observation of the forms they take in crystallization. Hence the study of crystals is an important and practically useful branch of science, and it is called "crystallography."

Professor Tyndall has shown that the force which makes particles of matter build themselves into symmetrical forms is closely akin to the magnetism which keeps the compass-needle forever pointed to the North. It also bears some uncomprehended relation to electricity.

"When arsenic acid crystallizes out of its solution in hydrochloric acid," says an excellent authority, "the formation of each crystal is accompanied by a flash of light, doubtless due to an electrical discharge." Several other substances "after passing from a liquid to a solid state exhibit electrical conditions."

When crystallography is a little older, it may be able to tell us what these three wonderful forces of nature have to do with each other: electricity, magnetism, crystallization,—we cannot tell how near of kin they are. It is one of the many questions which the coming century may solve.

E. M. HARDINGE.

INEXPENSIVE HOMES.

I.

COTTAGES FOR LESS THAN $1,000.

I DO not believe myself to be of an envious disposition, but I confess to much coveting of my neighbors' cottages,—not, let me say at once, of those palatial residences, styled in mock humility "summer cottages," built in some lofty position, overlooking perchance a vast panorama of river, plain, and valley, or gracing by their stately presence an avenue of Newport or Bar Harbor. No: for such I have no envy; but when traveling amid the mountains, or through the valleys of some of our glorious rivers, my eyes behold, glistening in the summer sunshine, snug, trim little dwellings, each in its own special lot, belonging, not to millionaires, but to hard-working individuals like myself, who perhaps have as much ado to make both ends meet, yet, by dint of energy and economy, have become possessors of their own homesteads, built thereon their own cots, and dwell year by year therein, free from considerations of rent (or board), then, let me openly admit, my envy rises; I, too, yearn to possess; I deeply resolve that ere another spring has fled, I, also, woman of business though I may be, shall have my own home, built according to my own ideas, and called by a name of my choice.

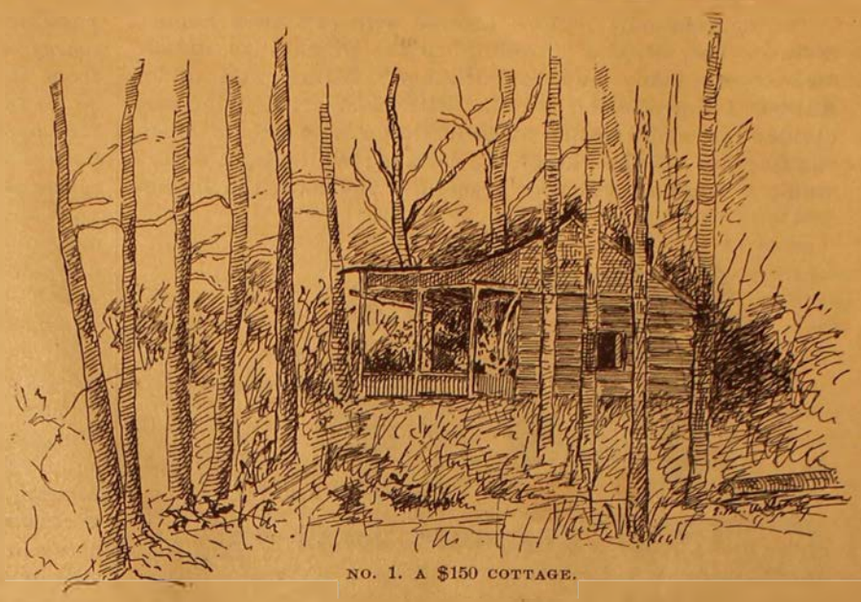
And at length the dream of such a home becomes a fact, and I am in practical possession of all the necessary details for its perfect development. The lowest price of which I have actual knowledge as the cost of a house, is $150; but of course that is for summer use only, and in this article I desire to furnish data, not only for summer homes, but for cottages so substantially built that they shall answer for dwellings all the year round.

First, let me advise enterprising builders (amateurs) of one great truth, which is rarely insisted upon, namely, that the cost of building a house varies in different parts of the country, and is mainly dependent upon two things: the price of labor and the cost of lumber. Two almost equally important items for thoughtful consideration are the begin-

ning, or foundation, and the end, or finish. In this article the question of the land or lot itself will not be considered, though many may think it the most important item, because land for building purposes in many parts of the country is actually offered for the mere cost of conveyance, upon promise of "breaking ground within a twelvemonth," and in some neighborhoods is as low as $5 an acre.

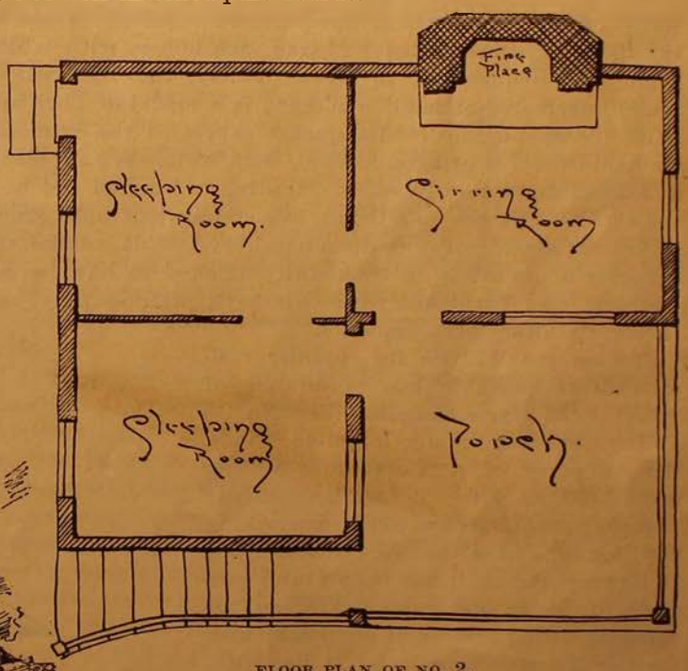
One word, too, as to the vexed question, "Is it cheaper to buy and restore an old house, or to start a new one?" This depends altogether upon circumstances; but, unless such are unusually favorable, it is certainly, in my opinion, better to construct than to restore. "Making over" is uncertain work, estimates are unreliable, and items mount up alarmingly.

The house to which I have referred as the cheapest known to me was built, as all such houses should be, by contract, and cost, exclusive of chimney, $150. (See No. 1.) It is situated in the Adirondack region, and is built half-way up a hill, so that the entrance is from the back, and the front boasts of a broad piazza raised upon pine logs, under which all the possibilities of cellarage are found. In a similar cottage I have seen the space between the logs filled in, so affording a kitchen and wash-house; but the little home in question originally had simply one long room with two doors and six windows, and was divided by portières. The house is 12 x 24 feet, and the piazza 6½ feet broad. A chimney has recently been added, at a cost of $40, and it also now boasts a kitchen extension, which entailed a further outlay of $15. The roof has also been painted red for $5.



NO. 1. A $150 COTTAGE.

The walls are protected by boards and clapboards, with sheathing of waterproof paper between them, and the floors are of well-matched pine boards.

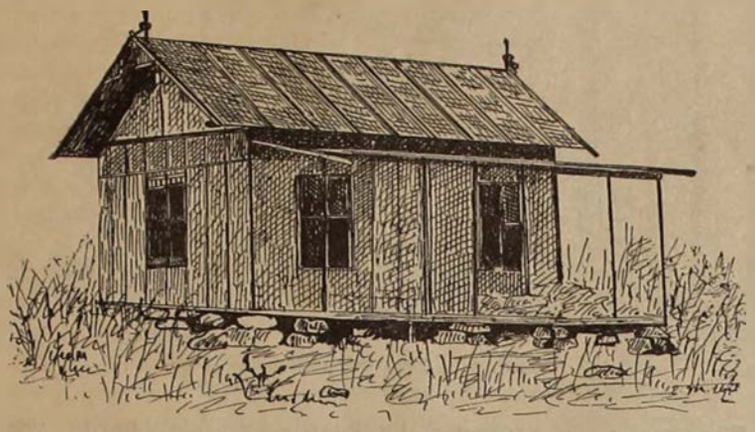


FLOOR PLAN OF NO. 2.

NO. 2. A $350 COTTAGE.

Illustration No. 2 is also of a cottage in the Adirondacks, the cost of which, complete, was $350. The floor plan enables us to judge of its interior. This little home stands on high ground and covers 19 x 19 feet, and the sleeping-rooms are severally 8 x 9½ feet, the sitting-room and porch 9½ x 11 feet. The addition of a chimney for the sitting-room raised the price another $50. The house is a light frame one, roughly boarded and then covered with bark slabs so arranged as to give the effect of logs, and the gables are shingled. The sitting-room runs up to the roof, but the sleeping-rooms and porch are roofed over, so that a large attic room runs over them under the slanting roof. Small as it is, this house possesses great possibilities for comfort, and two or even three persons bent on enjoyment would find such a building a true economy for summer outings.

The mountainous regions abound with just such homes, more or less artistic according to the proclivities of the owner. In many modest buildings, costing well under $1,000, I have seen studios with wonderful windows, divided into small lattice panes having a most artistic effect, running up the height of the cottage; while back of the studio a winding stairway gracefully indicates the living-



NO. 3. PORTABLE HOUSE.

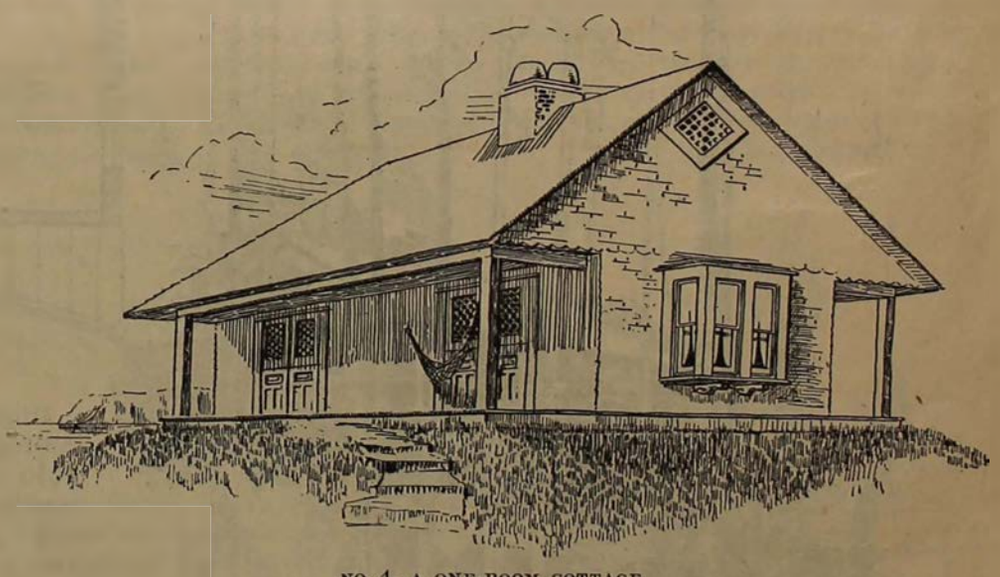
rooms of the home, which appear upon a gallery overlooking the spacious room below. One such house, with which I am well acquainted, in Keene Valley, the first cost of which, exclusive of land, was $800, is a model of taste and skill. Deep porches lend a quaint aspect to the exterior; the main room is octagon-shaped, with wide, open fireplace, and doors in various directions, leading to kitchen and bedrooms. One passes up a broad, low stairway to more sleeping-rooms above, opening upon a gallery. This cottage, the property of an artist, is beautifully finished in hard wood, and has been furnished with chimneys, water-supply, and the best sanitary arrangements.

Among possibilities for summer residences are portable houses, of one of which I can give a sample. (See No. 3.) In it I have spent many delightful hours. The property of a friend, and costing from $150 to $200, it has been finally placed upon a rocky bluff overlooking the Sound, and, although circumscribed in its proportions, it has been found possible to utilize one room as kitchen, the other as sitting-room and bedroom; and, frail as the structure looks, it has withstood the fiercest storms of two winters, upon an exposed portion of the shore.

In the same locality I made familiar acquaintance with the long, low cottage, which directly faces the ocean, and which was built at an original cost of $350. (See No. 4.) It consisted then of one long room, which, by help of portières and other contrivances, is divided into bedroom, sitting-room, and kitchen. Large closets afford delightful possibilities for storage, and the little home boasts two piazzas, from either of which charming views of the dazzling waters are obtained. Certain additions have since been made to the original structure, and this winter the family has resided there.

But interest in our subject depends rather upon the possibility of securing for less than $1,000 a home which shall be at once artistic and habitable all the year round, as, for example, Nos. 5 and 6. Being wise in our generation, having secured land, we shall build as far back from the road as possible, that is, if in so doing we are not placed at the mercy of neighbors' back yards; for a house well set back from the road commands an approach, and at once takes on an air of superiority. The site being chosen, the next point for consideration will be, Cellar or no cellar? For my own part, I abominate cellars,—damp, dark, noisome, untidy places, affording all sorts of possibilities for secret rendezvous and other undesirable things; therefore I should eschew one, and have my house, on its area of four hundred and fifty square feet, built upon piers of brick or stone, upon which the sills and floor-beams shall rest. Such posts shall be two and a half feet above ground, and the foundation sunk well below the frost line. The cheapest are of locust wood, which will last from fifty to seventy years without rotting, depending on the character of the soil; but the best are of stone or brick. The cellarage itself shall be supplied in an outside shed, back of the house. Double flooring, with layers of felt or waterproof paper between, is necessary, especially when there is no cellar, and a little care can make the assurance of warmth and dryness greater still by an extra air-space, which can be easily obtained by nailing, length-wise, shingle laths along the floor-beams, then filling in crosswise with short, refuse boards, and covering the same with a thin layer of rough cement and mortar. The house rising from such a foundation will be healthy, dry, and warm, the space below being filled in with trellis-work, through which the air can circulate freely.

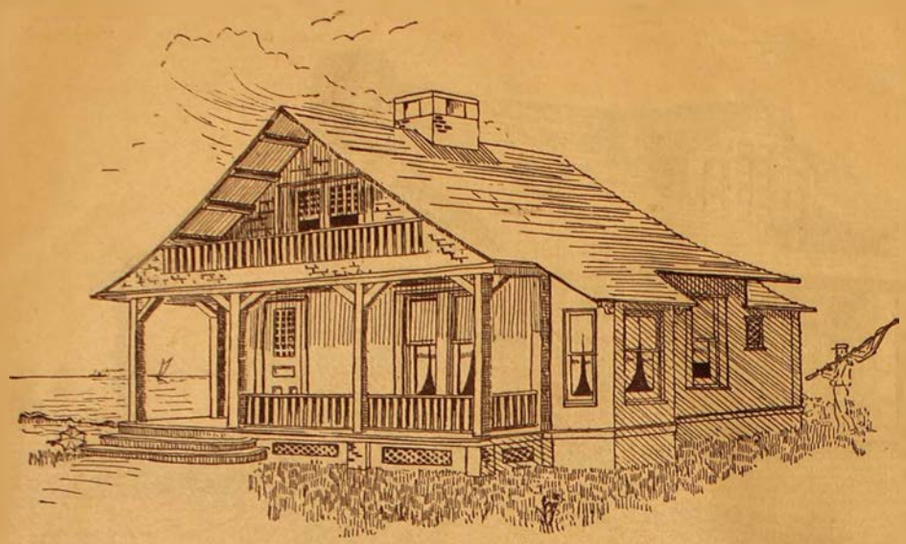
Among the costliest portions of a house are its openings: the more doors and windows, the greater the expense. Here, then, economy becomes a virtue; but, on the other hand, wide porches, piazzas, and upper stories need never be cut down in width or height upon such a score, as foundation and roof are in any case the same, and the extra cost of lumber is very small. Let the piazza (both back and front if possible) be at least eight feet wide (ten would be



NO. 4. A ONE-ROOM COTTAGE.

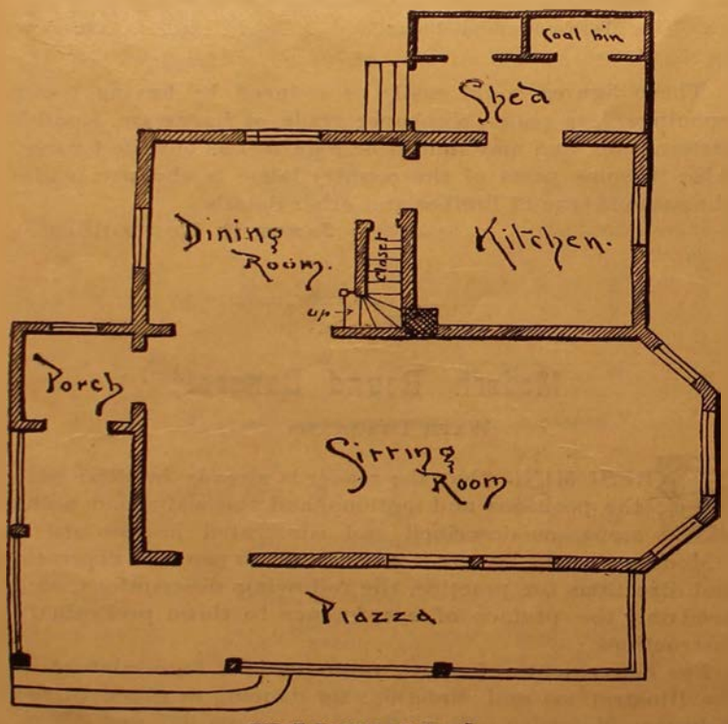
better, but if for winter residence the location of piazza should be such as not to shut out the sun); and as a narrow hall is of all things the most detestable, a mere pretence and draught-trap, let us economize space by selecting some more artistic style, and insist upon a porch sufficiently deep to hold a seat and leave comfortable standing-room, and let our front door open directly into the principal room, which can be either our best parlor or general sitting-room. The porch can be easily arranged to be open in summer, and roofed or glassed in the winter.

Our house is to boast five or six rooms, shed, and store-



NO. 5. A $1,000 COTTAGE.

room. The division of the lower floor must be effected by wide folding doors, not sliding ones, which if cheaply hung are the most unsatisfactory of things, but wing doors, opening well upon hinges, and allowing us, if we wish it, to throw open the whole lower floor. The back room (dining-room), opening through these doors, is somewhat smaller



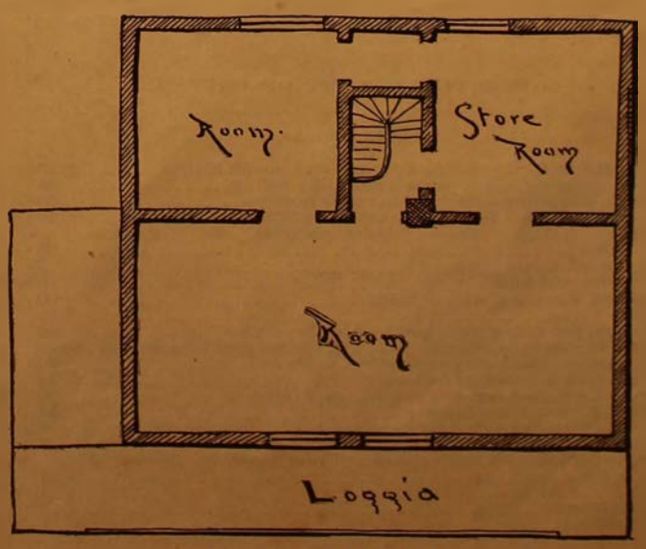
FIRST FLOOR OF NO. 5.

than the parlor, as the kitchen is taken off its width, and behind the kitchen we have a shed to replace the cellar, wherein we store our coal and wood, and within which, in these days of sanitary knowledge, we have our earth-closet. The sitting-room boasts a bay-window, and is altogether an apartment to rejoice the heart.

The upper floor is reached by a stairway cunningly insinuated between dining-room and kitchen, affording beneath it an excellent closet; and above we have again a large room, capable of division, a smaller one, and a store-room. Moreover, a broad piazza, or *loggia*, on the second floor, is a joy in summer and a protection in winter. Another cunning stairway leads us to a roomy attic above; and for a six-roomed house, we may well commend it. Every room shall be provided with hanging-closets, and the attic affords possibilities for storage, not to be disregarded.

Here, then, we have the outline or shell of our house. But how much remains? Just here it is that common sense must decide many questions: "How to finish?" "Of what material shall our roof be?" "How shall we manage our sink drainage?" "How about our water supply?" "Where is our chimney accommodation?" For the roof, we can speedily settle the matter. It shall be either of cedar or pine shingles, it shall slope with an artistic "slopeness," and, as time passes, it shall take on the loveliest tones of silver and of gray. Our walls we must finish either in mortar, or, as is now so much the fashion, in wood; and if we decide upon this latter method, North Carolina pine must content us, for hardwood finish requires so much labor that it is far beyond our limitation. Wood-finished walls have much to recommend them: first, the speed with which they are completed, and again, their dryness; against them, the facts that they crack, are not as warm, and do not shut out sound. For warmth, every house should be double-boarded; that is, rough sheathing should be nailed on the outside of the studs, then two thicknesses of paper, and then, outside, "novelty sidings," clapboards, or shingles. For the same reason, the outer walls when built should be filled in over the beams, for the double purpose of keeping out draughts and getting quit of rats, whose favorite nesting-place appears to be there.

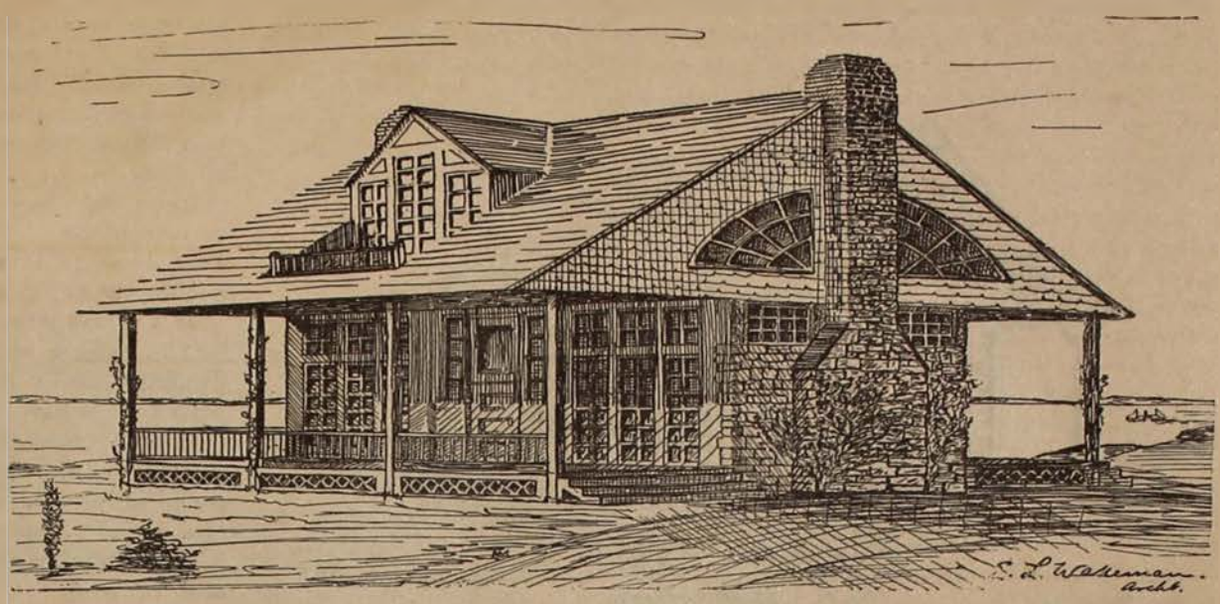
I have alluded above to a very important question, that of building by contract. I will add a word of warning upon that score. Of course, the less detail there is about a cottage, the easier it would be to build it one's self; and, in the same way, the more details there are, the more careful it is necessary to be about the wording of the contract, as, without precautions, any change made in course of construction may add heavily to the expense. A clause should be inserted in the contract providing for any such question, and also one exacting a forfeiture payment if the building



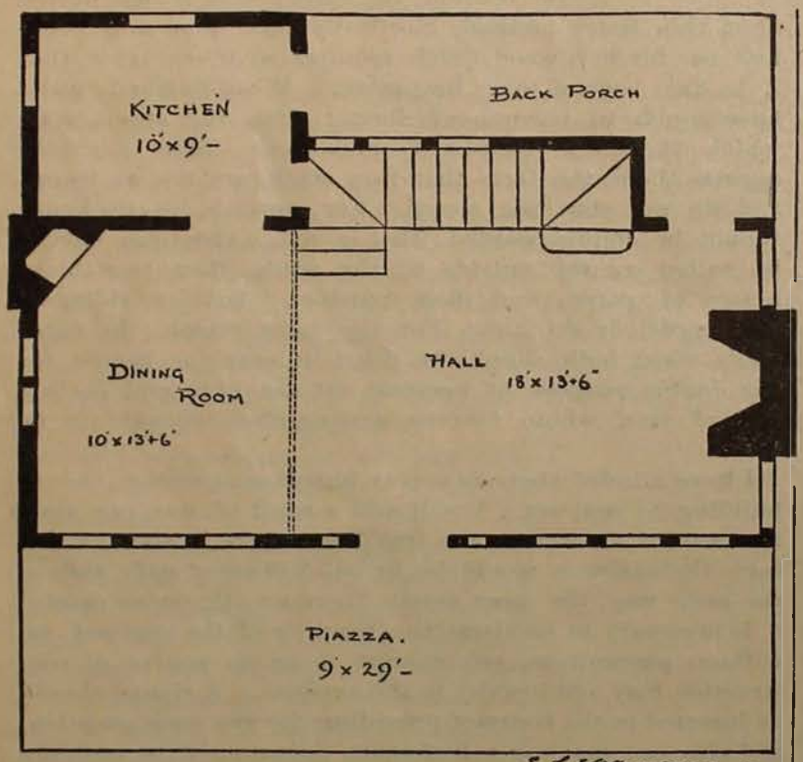
SECOND FLOOR OF NO. 5.

is not finished by the promised date. Contractors' promises are the most brittle of all engagements. Exact a forfeit for each day over the term agreed upon: by this course, a more speedy fulfillment of the contract is certain.

But my article is outrunning space, and the questions of heating, water-supply, and sanitation, must perforce be considered later; meanwhile I conclude for the moment with the cost of material and labor for either of the ideal cottages Nos. 5 and 6.



NO. 6. ANOTHER $1,000 COTTAGE.



PLAN OF FIRST FLOOR OF NO. 6.

APPROXIMATE COST OF COTTAGES.

MATERIALS.

Timber for frames, suitable flooring, and rough siding	$120
Outside covering, clapboards or outside siding	25
Shingles, including sufficient to cover porches	30
Rails and balusters for piazzas (upper and lower)	10
Moldings, facings, corners, weather-boards, etc. (for exterior)	25
Lattice-work under piazza	2
Inside trim and finish	10 to $18
Doors and windows, with frames	90
Blinds	16
Hardware, including nails and iron sash-weights	40
Tin fittings over windows and doors, zinc around chimney, gutters, and sink connections, *with labor*	20
Paper between floorings and walls	10
Paint and staining outside and in, *with labor*	35
Plastering, *including labor*	75
Brick in chimney (a dummy chimney would cost only $5.00)	40 to 50
Drain pipe	7
Cistern of brick with stone cover and iron manhole, *including labor*	35
Pump	3
Sink (kitchen)	3
Trap for sink	1
Total	$597

LABOR NOT INCLUDED IN THE FOREGOING.

Carpenter	$300
Extras	10
Mason building brick or stone piers	10
Digging drain connection with cesspool	6
Grading near house	10
Cartage	15
Total labor	$351
Materials	597
Total cost of building	$948

These figures could easily be reduced by having fewer openings, less paper, a cheaper grade of hardware, smaller cistern, etc., and may indeed be regarded as outside figures. Also in some parts of the country labor is cheaper, while the same is true of lumber and other details.

JANET E. RUUTZ-REES.

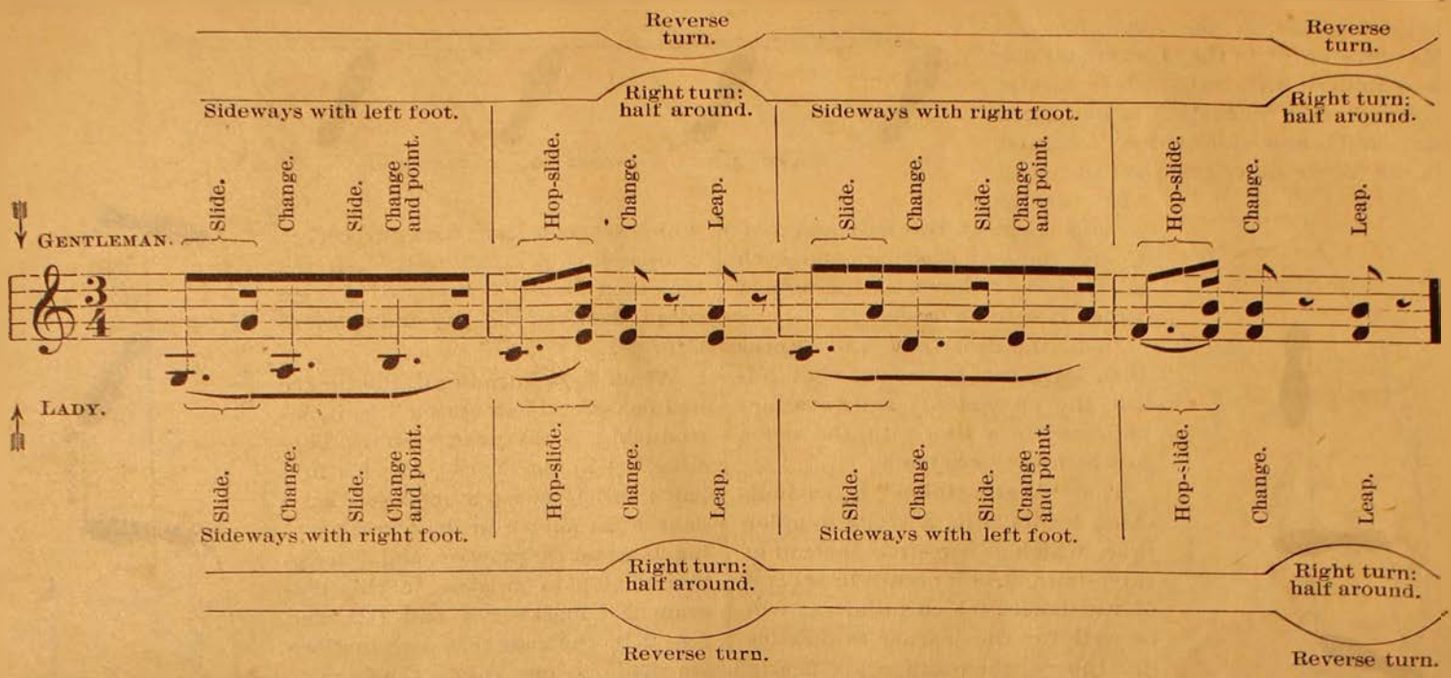
Modern Round Dances.

WITH DIAGRAMS.

PRESUMING that the reader is already familiar with the positions and motions, and the waltz and polka steps, as described and illustrated in the article "Modern Society Dances," and the accompanying diagrams and directions for practice, the following descriptions, etc., need only the preface of a reference to those preliminary instructions.

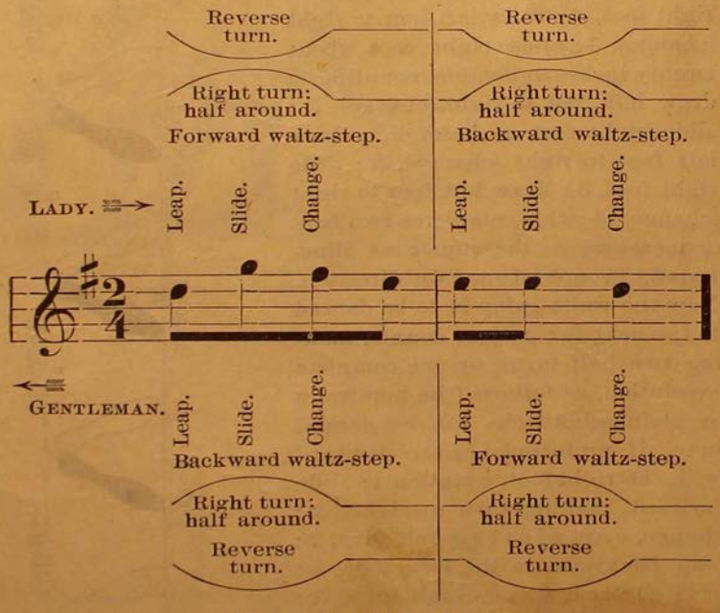
For convenient reference, reproductions in miniature of the illustrations and directions for dancing as given in the February Magazine will be found on pages 327 and 328 of this number.

One of the favorite and most popular of round dances is the "Yorke,"—a derivative of the polka,—which introduces a mazurka movement at pleasure. This is frequently danced to a beautiful polka-mazurka introducing Johann Strauss's exquisite waltz-melody "*Ein Herz; ein Sinn*" (One Heart; One Soul), although there are several popular pieces of dance music adapted and played for the "Yorke." In this dance, which is illustrated both by diagram and description of step set to music, the lady commences with the right foot, the gentleman with the left. Four bars of music are required for each revolution, the half-turns being made at the second bar and each alternate bar thereafter. The diagram for



THE YORKE.

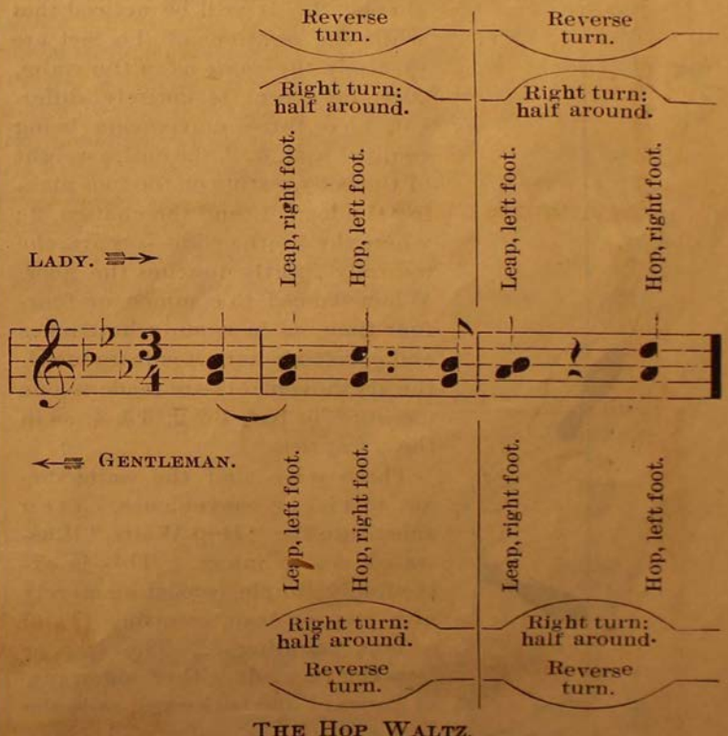
practice of the Yorke shows the left foot in black, the right foot white, and is illustrated beginning with the right foot, as the lady does. The gentleman practicing will begin on the opposite side of the line, with the left foot. The lady begins with the right foot, according to the diagram, as follows: Slide right foot about twenty inches to the side, in second position, counting 1; draw left to right (change) and



THE WALTZ-GALOP.

almost simultaneously slide the right foot to the side, counting, & 2; draw left foot to right in first position (change), placing the weight on the left foot, and raise the right foot from the floor, toe pointed, 3. In the diagram the dotted lines indicate the direction taken by the moving feet, and each line is marked showing at what count such movements are to be executed. The marks A and B, lettered to a single number, indicate that the number marked, for instance, 2-A, as in the change on the diagram, precedes the almost simultaneous movement 2-B. The letters corresponding, marked to different movements, as in hop 1-A, and slide 1-A, indicate that the two movements are to be made simultaneously, as in the hop-slide of the Yorke. The three first movements as above described are all made to the side without turning,—one bar of music.

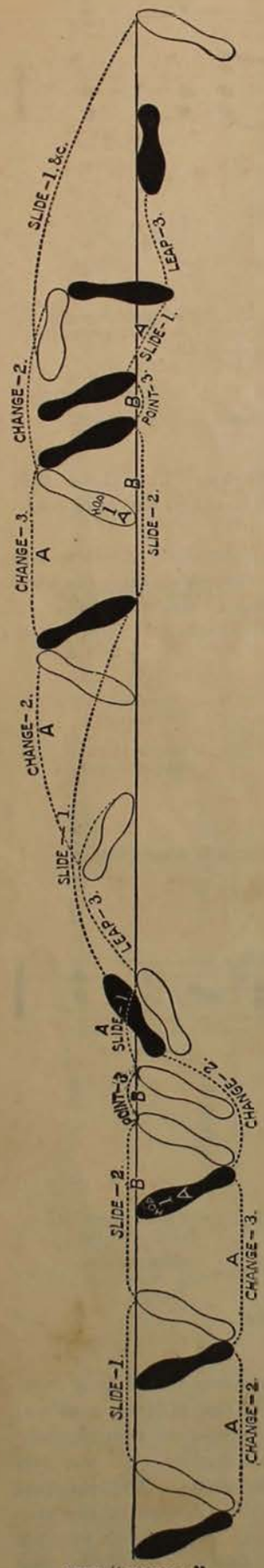
Hop lightly on the left foot and immediately place the weight on the right foot, sliding it sideways and forward about six inches (hop-slide), counting 1; draw left foot to right foot in first position (change), counting 2; leap from



THE HOP WALTZ.

left to right foot, counting 3. Re-commence with left foot, sliding it around to position to begin the sideways movement with that foot, counting 1. Proceed as before, only with opposite feet, the leap in the fourth bar with the left foot being a leap backward as in the waltz. Pay especial attention to the hop-slide (1-A) at the beginning of the second count of 1, 2, 3, as the springing movement at this point is a feature in the grace of the dance. To strike the

heels together at the hop gives the Mazurka effect to the Yorke, and may be practiced with satisfactory results, although this innovation is not necessary, and is now almost always omitted. In the Yorke description set to music, the arrows denote the way the lady and gentleman face at starting, and each movement is shown at the note at which it is to be made.



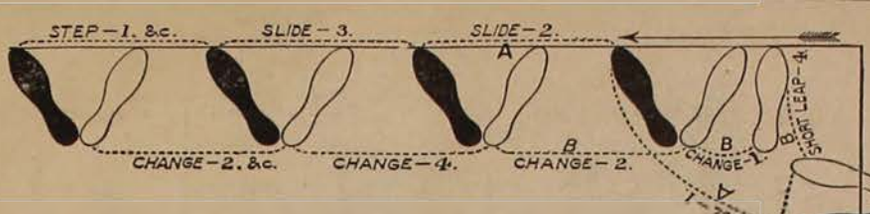
THE "YORKE."

In all the descriptions of dances with steps set to music, that follow, the movements and turns are indicated in a line with the notes to which they are made.

The "Waltz-Galop" is, as indicated by its title, a waltz to galop time, which is two-four instead of three-four. As it occurs in several of the dances which follow, it will be well for the learner to practice it. Indeed, the waltz is now nearly always danced instead of the galop, to galop music. As shown in the description of step of waltz-galop to music, the succession and time of movements is as follows: Leap backward with left foot, counting 1; slide backward with right, turning to right, counting &; change, 2; leap forward with right, 1; slide forward with left, &; change, 2. It will be noticed that while the positions of the feet are precisely the same as in the waltz, that the accent is entirely different, the three movements being counted as 1, &, 2, the entire weight of the body resting on the foot making the leap, 1, and the change, 2: where the &—the slide—occurs, the toe only lightly touches the floor. When danced to common or four-four time, as in some schottisches and *gavottes* where it is introduced, the six movements are made to one measure, or bar, 1 & 2, 3 & 4, as in the "Caprice."

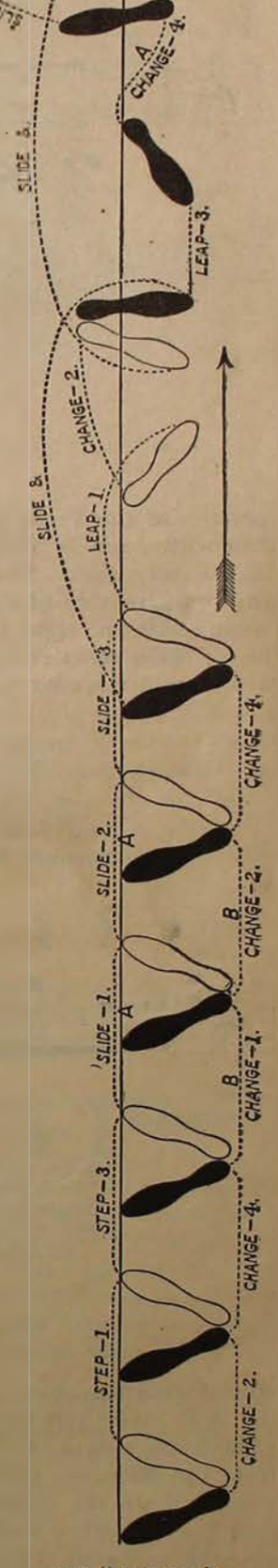
Those who find the waltz-step not to their convenience, often substitute the "Hop-Waltz," illustrated set to music. This is exceedingly simple, consisting merely of a step or leap, counting 1, and a hop, counting 3. The step or leap can be made either sideways, or forward and backward, as in the first step of the waltz. The hop-waltz can also be danced to two-four time by making the leap or step at 1, and the hop at 2.

The "Caprice," a pretty dance, which can be danced to any waltz or schottische music, is a popular favorite. It is often called the "McGinty," from the fact that it is frequently danced to the popular air of "Down Went McGinty, etc.," which seems to have been purposely composed for it, so well does the lamented Daniel's supposed dirge adapt itself to the gay and sportive Caprice.

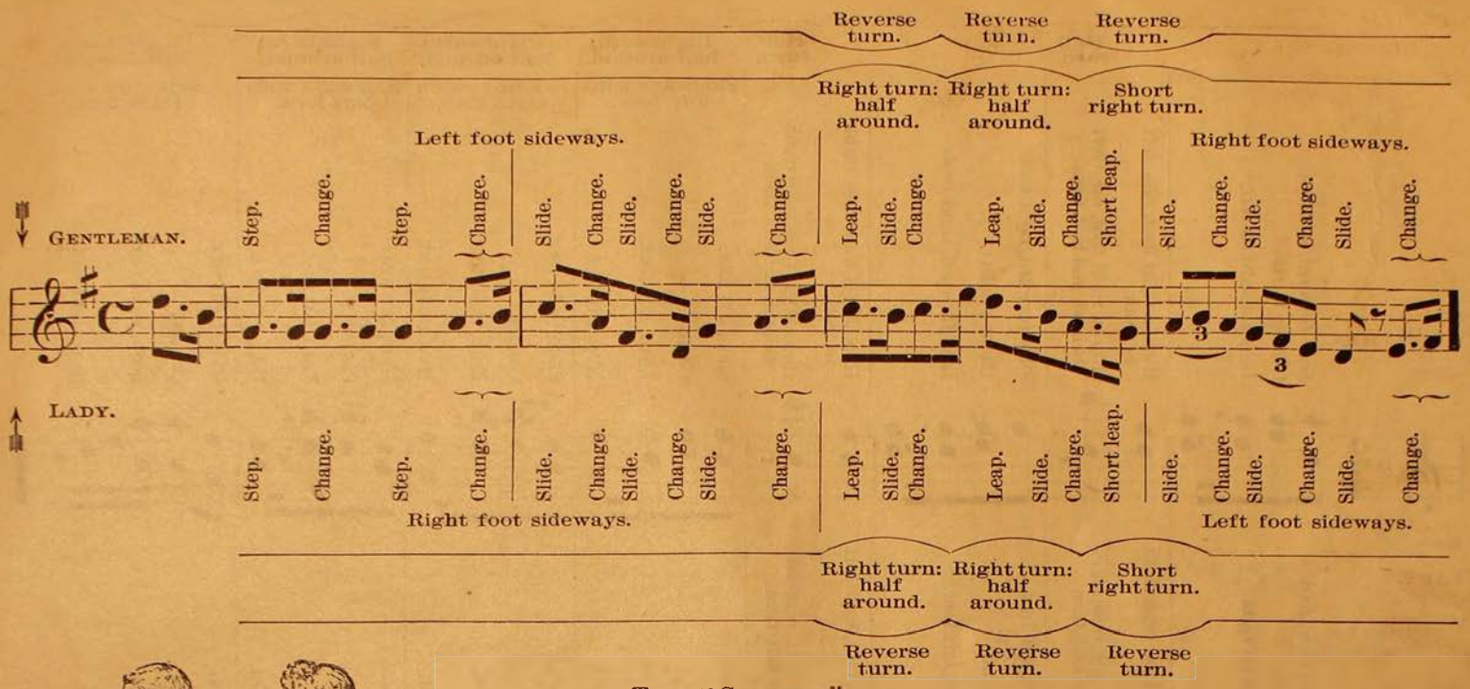


When first introduced, this dance had considerable "spring" to it, introducing a mazurka step or hop-slide, as in the Yorke, in the first part; but it is now modified and danced as shown in the accompanying diagram for practice, and description of step to music. In this diagram the marks 1-A and 1-B, and 2-A, 2-B, indicate that two motions are made to one count, the 1, or 2, as marked, and the one marked A is to precede that marked B, though both movements are made to one count of four-four time.

Beginning, as shown in the diagram, with the right foot for the lady, step to side with right foot, about sixteen inches, taking second position, counting 1; draw left to right (change), 2; step to side with right foot, 3; draw left foot to right (change), 4; slide right foot about twenty inches to the side, counting 1; draw left foot to right (change), &; slide right foot as before, 2; draw left foot to right (change), &; slide right foot, 3; draw left foot to right (change), 4: this completes two bars or measures to the music as illustrated, in a sideways direction. Now the waltz-galop is to be danced to the next bar or four counts, making two half-turns, or one complete revolution, as follows (the hop-waltz or plain schottische can be danced here, if preferred): Leap forward with the right foot, counting 1; slide forward, making turn to right, &; change, completing half-turn, 2; leap backward with left foot, 3; slide backward, half-turn, &; change, completing half-turn, 2; leap backward, half-turn, &; change, 4. This completes the revolution. On the last short note of this bar make a short leap with the right foot, still turning to the right, &; slide left forward, 1; draw right to left (change), immediately sliding left sideways to second position, & 2; draw right to left (change), immediately sliding left foot, & 3; draw right to left, placing weight on left, 4. Repeat all from beginning, commencing with the left foot. The gentleman's step is the counterpart of this, beginning at the opposite side of the line and with the left foot.



THE "CAPRICE."

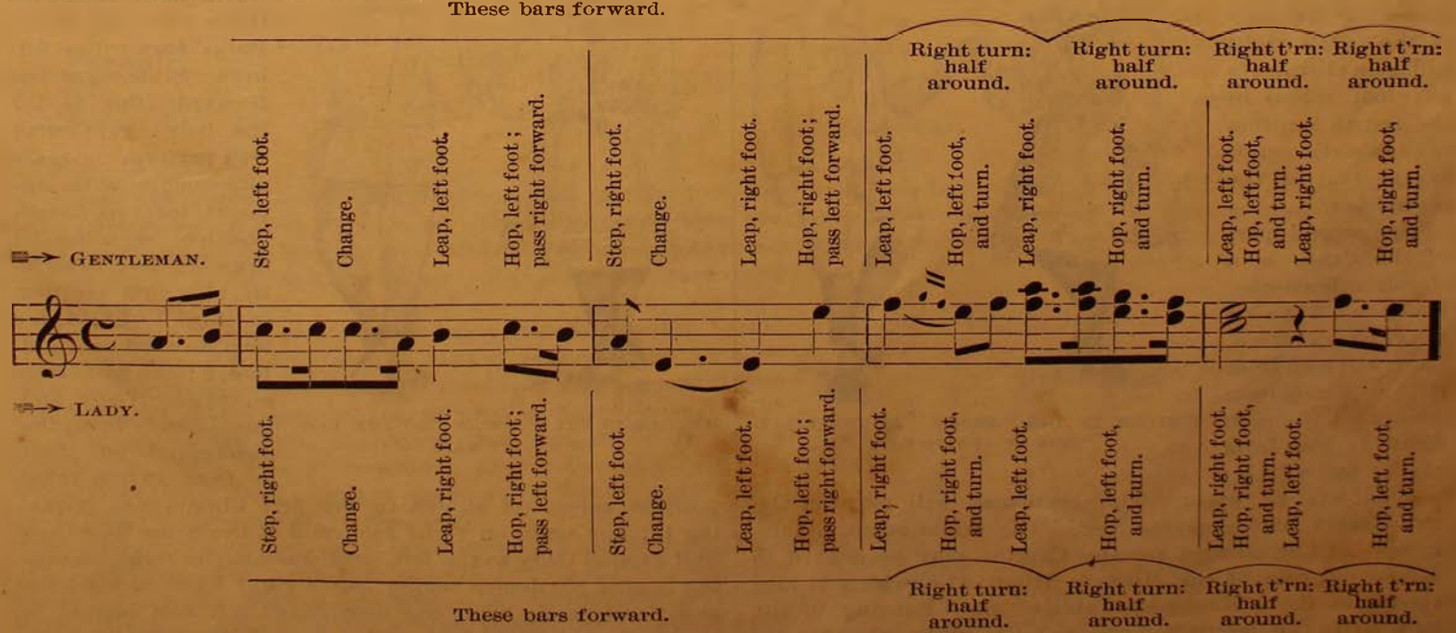


THE "CAPRICE."

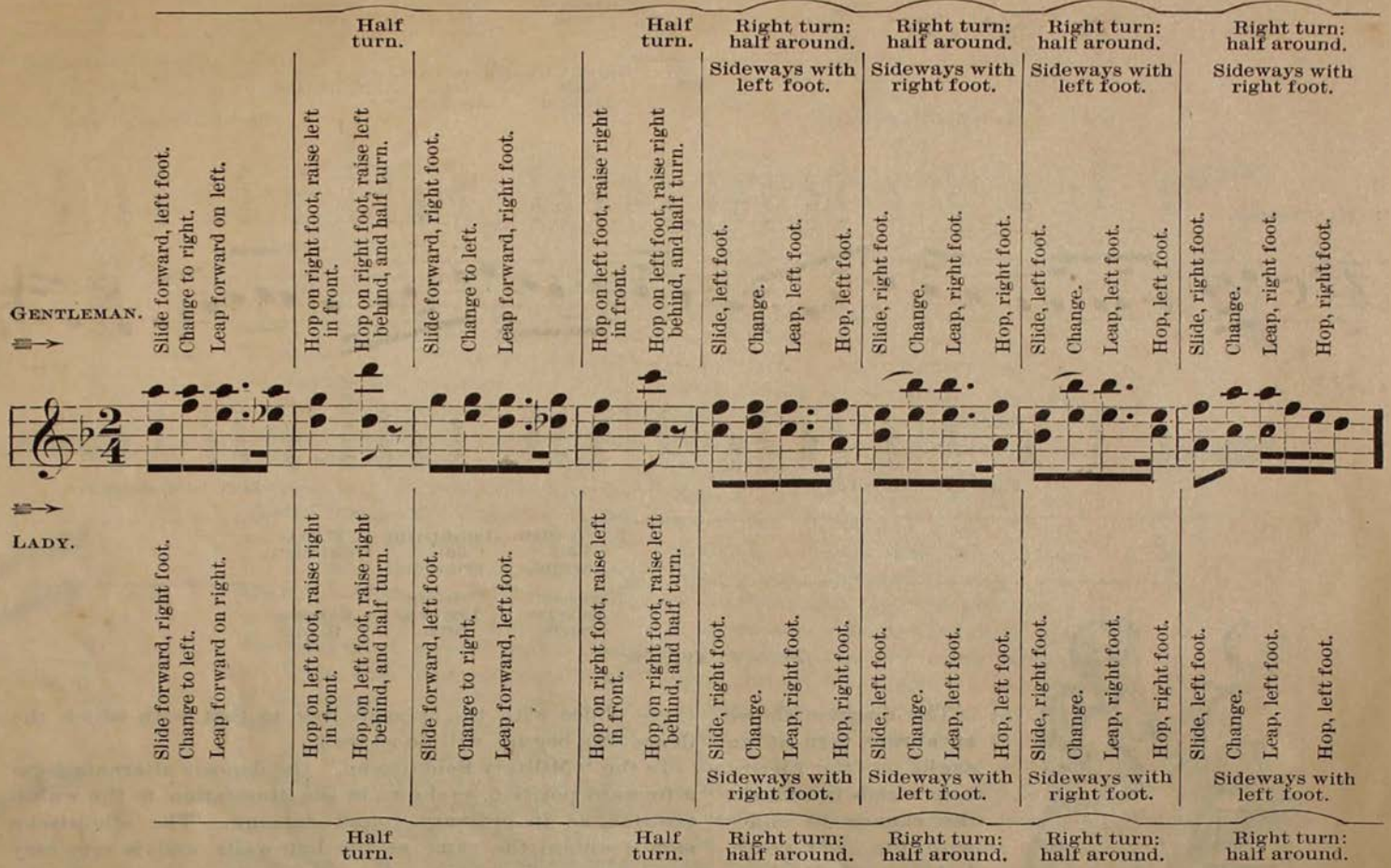
FORWARD POSITION IN THE MILITARY SCHOTTISCHE AS YOU COUNT FOUR.

The diagram shows an abrupt turn at an angle, at the short leap which introduces the change to slides with the left foot. It is not at all necessary, however, to make the turn at this point precisely at an angle: any short turn and leap with the right foot for lady, left for gentleman, which will enable them to make the last three slides with the opposite foot to that with which the dance was begun, will do as well.

In the "Military Schottische," the dancers alternate from a forward position, as shown in the illustration, to the waltz-position, as in ordinary round dancing. The schottische step is almost the same as the hop-waltz, and is very easy to execute. Four bars of music or four counts of four are necessary for the completion of the step of the Military Schottische, which is herewith set to the music of "Dancing in the Barn," to which it is frequently danced. The position is well shown in the illustration, the couple standing side by side, gentleman's right hand at the back of the lady's waist, and the lady's left hand resting lightly on the gentleman's right shoulder. Begin with the right foot for the lady, left foot for the gentleman. For the lady, step right foot forward to the fourth position, counting 1; bring



THE MILITARY SCHOTTISCHE.



THE "BERLIN."

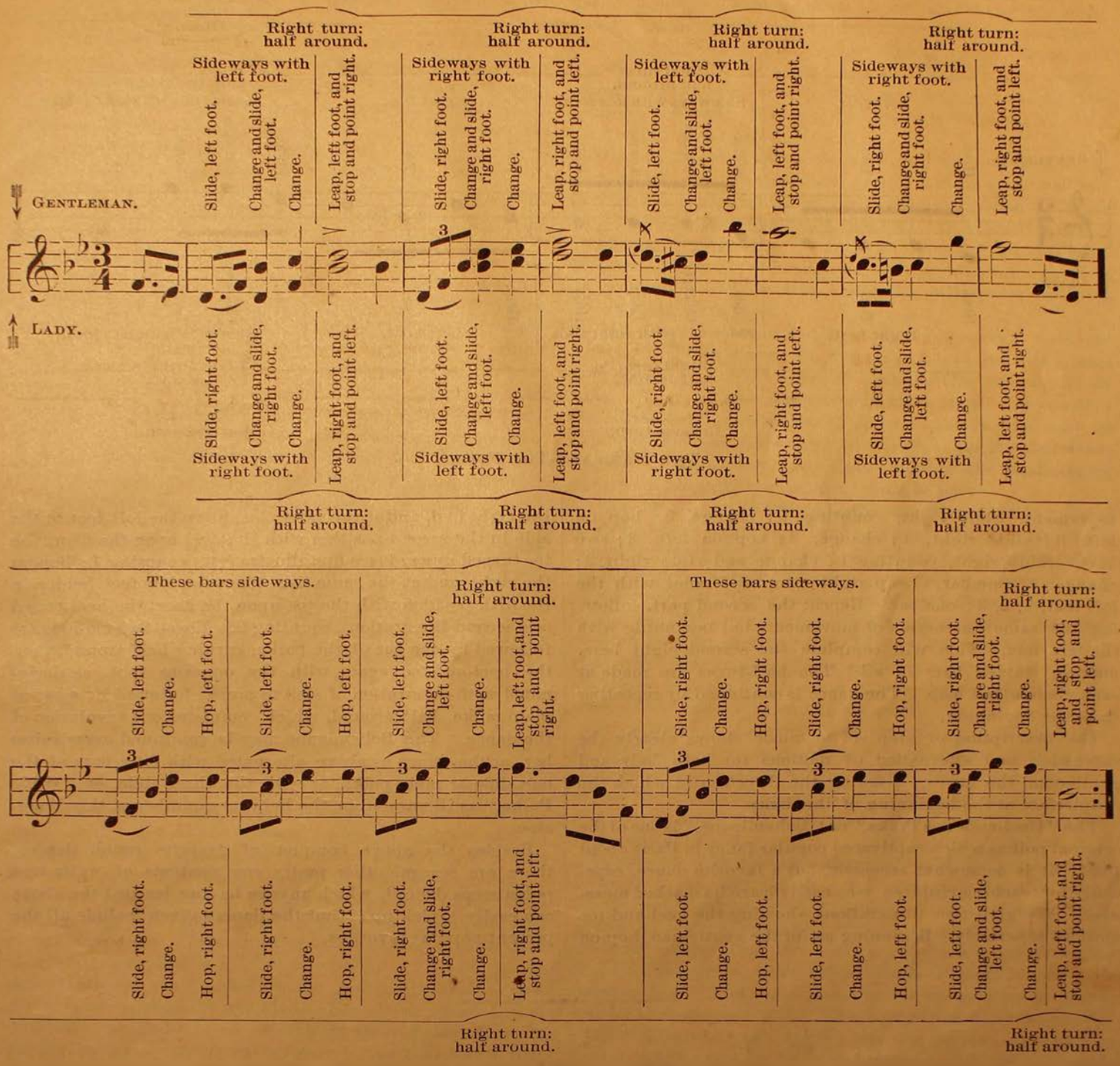
left to right in first position or third position behind (change), placing the weight on the left foot, 2; leap forward from left to right, in fourth position, 3; hop on right, at the same time extending the left foot forward in the fourth position (raised, that is, with the foot lifted from the floor), 4: one bar. Repeat, beginning with the left foot. The illustration shows the positions of the lady's right and gentleman's left foot raised in the fourth position to the fourth count, at the end of the second bar.

POSITION IN THE "BERLIN" AT THE BEGINNING OF SECOND BAR.

The second part of the dance is a simple schottische. Face and take waltz-position. Lady will leap from left to right foot, counting 1; hop on right, 2; leap from right to left, 3; hop on left, 4; repeat. The gentleman will perform the counterpart with opposite feet. The waltz-galop, as described and illustrated for the Caprice, may be danced to the second part of the Military Schottische, which is also known as the "Kentucky Jubilee" or "Dancing in the Barn." In the description of step set to music, the turns at the hops in the second part of the schottische are indicated, as well as the movements to each corresponding note of music.

The "Berlin" is a pleasing novelty, in which the dancers at first proceed directly forward as in the Military Schottische. Take position, the gentleman with the lady's hand in his right, both facing in the same direction. Polka forward as follows: Slide right foot forward (this is for the lady: gentleman will perform the same movements with opposite foot) to fourth position, counting 1; draw left foot to right in the first position or third behind, &; leap forward on right foot, 2: one bar. Hop on right foot and immediately bring the disengaged left foot in front to the third position, raised (as shown in the first illustration), counting 1; hop again on right foot, and at the same time turn half around (lady to the left, gentleman to the right, changing hands, gentleman taking lady's right hand in his left), and immediately bring the disengaged left foot behind in the third position, raised. (See second illustration.) Re-

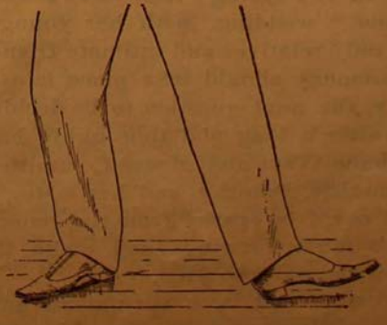
POSITION IN THE "BERLIN" AT THE END OF SECOND BAR.



THE NEW VARSOVIANNA.

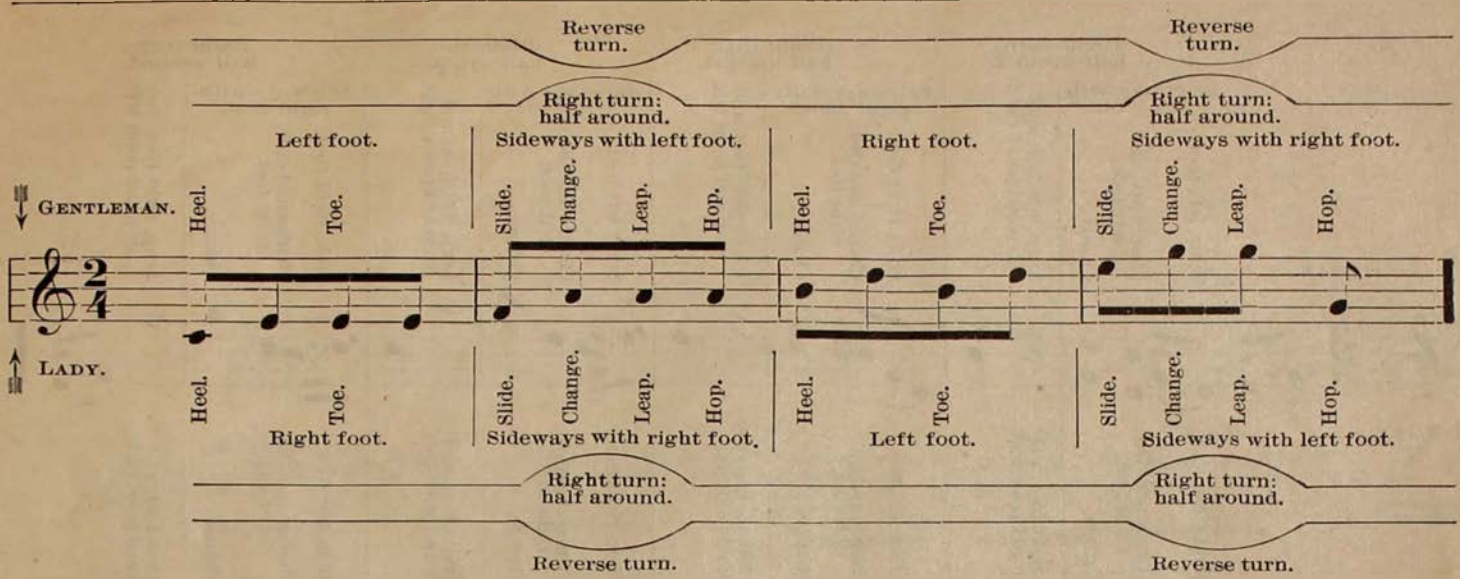
peat the above, the lady commencing with the left foot, the gentleman with the right, in an opposite direction from the start, and at the end of the fourth bar take position as for waltz or polka, and dance the polka for four bars, then repeat as above.

The "Varsovianna" is a dance which, like the Yorke, combines the polka and mazurka. The modern, or new, Varsovianna is rather more elaborate in its movements than the one of that name which our grandmothers danced. The accompanying arrangement of directions set to music describes this dance. Beginning as for the lady, with the right foot, slide sideways about eight inches, counting 1; change and slide right foot again, 2; change, 3: one bar. Leap on right foot; stop, and point with left foot in second position, counting 1, 2, 3: one bar. (To point is to place the foot in the position indicated,—the second position in this instance,—with the toe resting lightly upon the floor, and the heel raised.) Repeat the above, beginning with the left foot, two bars. Then repeat all from the beginning. This completes eight bars of the sixteen composing the succession of the dance. The second part introduces the mazurka



HEEL-AND-TOE POLKA. HEEL.

HEEL-AND-TOE POLKA. TOE.



THE HEEL-AND-TOE POLKA.

movement. Slide right, counting 1 ; change, 2 ; hop on left, 3 ; slide right, 1 ; change, 2 ; hop on left, 3 ; two bars. Slide right, counting 1 ; change and slide right, 2 ; change, 3 : one bar. Leap right ; stop and point with the left foot, 1, 2, 3 : one bar. Repeat the second part, following the same succession of movements but beginning with the left foot. This will complete the second eight bars, making sixteen bars in all. The half-turns are made at each change and leap. The dance is continued by repeating from the beginning.

The description of step set to music shows clearly the succession and alternation of motions for both lady and gentleman, the arrows denoting the direction in which the couple face at the beginning of the dance.

The "Heel-and-Toe Polka," or "Bohemienne," is one of the original polkas which captivated popular fancy in Paris about 1840. It is somewhat eccentric, but a favorite dance, especially for teaching children, who easily learn its marked measures. We give two illustrations showing the heel-and-toe motions separately. Beginning as for the gentleman, hop on the right foot, and at the same time place the left foot to the side in the second position with the heel upon the floor, the toe turned upward (see first illustration), counting 1 ; hop on the right, and at the same time place the left foot behind in the fifth position with the toe upon the floor, the heel raised (see second illustration), counting 2. These two motions are followed by one bar of the polka, turning half around, then the heel-and-toe again with the opposite foot, as designated with description of step to music, followed by a bar of plain polka, half around, which completes one revolution of the dance. The Bohemienne may be continued every other bar, or the dance as above alternated with four bars of the one-slide or plain polka, or with the three-slide, or "Glide Polka," as illustrated in the February number of this Magazine.

Besides the above bouquet of favorite round dances, there are several other pretty combinations of waltz and polka steps danced, which anyone having learned the above can easily "pick up ;" but the dances given include all the present popular favorites.

Our Girls.

Dorothy's Trousseau.

AT Christmastide it was settled that Dorothy's wedding should take place in the spring ; that there should be a simple "home" wedding, with her younger sister as bridesmaid, and only relatives and intimate friends present ; and that the ceremony should take place late in the afternoon. Naturally, the next question to be decided was the trousseau ; and after a long and thoroughly harmonious session of the Home Ways and Means Committee, consisting of the gentle mother, Dorothy, and her sister, it was agreed that sufficient could be spared from the general fund to add to Dorothy's modest savings and make the amount to be expended for the purpose $100.

One hundred dollars seems, and is, a very small sum with which to procure a wedding trousseau possessing any pretensions to completeness or style ; but when good taste and common sense join forces, the purchasing properties of one hundred dollars may be increased many fold.

Dorothy was fond of pretty clothes, as it is natural and right that every young girl should be ; but she had early learned to make the best of what Fortune had bestowed on her, and realized that striving after what is manifestly impossible is only a waste of time, and inevitably results in vexation and utter weariness of spirit. Besides, in matters of dress she understood her own possibilities : she knew what was becoming to her, and could not be tempted into extravagance for the sake of mere prettiness of effect ; and she had a thorough and righteous contempt for "shams." One article, if genuine of its kind, even if inexpensive, possessed a higher value for her than several, perhaps each more costly, of a "make-believe" kind, only for show : so with the sum definitely fixed that she could expend, she set about making her plans in a business-like way, determined

that each one of the precious ten thousand pennies should furnish its full equivalent.

An inventory of "stock on hand" was first in order. This showed a modest array of underwear and hosiery, in good condition; a black silk dress, comparatively new, trimmed with a little good jet; a dress of cream-colored challie with tiny blue figures (purchased last season for thirty cents a yard), trimmed with narrow blue velvet ribbon; an "outing" dress of dark blue twilled flannel with blouse waist and straight skirt, trimmed with cream-colored Hercules braid; a severely plain "tailor-made" suit of inexpensive checked cheviot in shades of brown; a half-worn heliotrope surah, from which sufficient could be utilized to serve as a foundation for a costume of drapery net; a skirt of blue-gray nuns'-veiling, waist and sleeves unavailable; a remnant of old-blue gold-figured foulard, bought at a bargain in the autumn, enough for a simple skirt; a loose wrapper of garnet-and-cream striped flannel, tied at throat and waist with ribbon to match, but otherwise untrimmed; a couple of "wash" dresses with white Hamburg embroidery for trimming, new last year; a jacket of dark blue diagonal cloth, new in the autumn; and various "odds and ends" of ribbon, laces, and hat trimmings, which she knew could be utilized to advantage.

Her winter clothing she did not take into consideration, as she knew there would be time enough for her to think about that, and remodel if necessary, before it would again be needed; for Dorothy was deft-fingered, tasty, ingenious, and, besides, had several pet theories of her own about dressing, which reconciled economy and good effect in a way that was a source of wonder and admiration to her friends. Dot, they said, always looked stylish, yet she did not spend as much on her clothes as they did.

This was due to several reasons: She could not afford a "good" (not expensive) dress more than once in two years, but when that was bought it was of the best material she could procure (excepting in the case of her one black silk, never over a dollar a yard), of solid color of an inconspicuous tint not likely to soon go out of fashion, and its capabilities for "making over" were always taken into account; figured goods, excepting in washable or inexpensive varieties, she never purchased, for one grows tired more quickly of figured than of plain materials, and the plain can always be remodeled to better advantage; she had an eye to "bargains," and many a remnant of "fancy" goods she picked up at the end of the season, that she knew would come in good for remodeling one of her dresses, and somehow she had a knack of making them look as if made for the purpose; and from experience she also knew that the end of the season is the time to secure nice materials and trimmings that merchants do not care to carry over, and which therefore can be bought at greatly reduced prices.

But even all this forethought would not have been half so valuable if it had not been for one sensible plan, which if more girls would follow, especially where there are several in a family, they would find advantageous, not only from an economical point of view, but from an artistic one as well. Both Dorothy and her sister had spent a season with a good dressmaker and milliner, learning certain technicalities in each art which could not otherwise be attained. The millinery and dressmaking for the family therefore cost only the price of the materials, and for both bonnets and dresses many things could be utilized, that, independent of other considerations, a professional could hardly afford time to plan for.

So Dorothy's dresses and bonnets were to be made at home; and, naturally, each of the feminine trio was anxious that, as far as dress was concerned, the bride should make a good appearance in her new position as the young doctor's wife in a flourishing town less than fifty miles away. Each thought, "Oh! if there were only more time!" But Dorothy had only given her consent at Christmas, and Doctor Ben would not listen to such a thing as a long engagement: so, as Dorothy said, there was no use wasting time wishing for more time, and they set to work to do the best they could in the allotted time.

Dorothy wrote at once to several good firms in New York, for catalogues, samples, and prices, and also claimed the offices of a friend in the city who was well posted as to the specialties of the different stores, and who enjoyed nothing better than "shopping," even if she did not spend a cent. When the desired information arrived, it did not take long to decide how the ten crisp ten-dollar bills could be spent to the best advantage.

The first matter settled was the underwear. This was purchased ready-made; for one reason, because it is almost impossible for a person doing plain sewing only occasionally, to give the nice finish that is evidence of the constant practice of the professional; and besides, the economy of strength, and the extra time thus allowed for the dressmaking and other matters, more than balanced the small saving that would result from making them at home.

The list when completed was as follows: Six pair of drawers at an average price of 75 cents, $4.50; six night-dresses, averaging $1 apiece, $6; four corset-covers, from 40 cents to $1.25 each, $3; four underskirts, from 60 cents to $1 each, $3; three outside petticoats, from 75 cents to $1.50 each, $3; one knitted woolen underskirt, $1.50; four medium-weight merino vests, $2. In the selection, preference was given to good material and nice finish rather than elaborate and showy trimming; and the corset-covers and underskirts served instead of chemises.

Other items in the same line were: Six pair of stockings, at from 40 to 75 cents, $3; two pair of corsets, $2.50; three pair of shoes (French kid walking-boots, French kid low shoes, and Suède slippers), $8.50; three pair of gloves, $4; and one dozen handkerchiefs, at from 21 to 50 cents (all pure white), $3.25.

It was at first thought that it would be necessary for Dorothy to be married in a traveling, or "going-away" dress; but a white dress is certainly much prettier for a young bride, and, besides, it can be utilized afterward for a dinner or evening dress: so it was decided to have for the wedding-dress cream-white India silk, trimmed with Oriental lace. The veil, as she was to be married at home, was to be dispensed with. The cost of the dress was: For silk at 75 cents a yard, $8.25; lace for flounce, at 75 cents a yard, $4.50: lace for neck and sleeves, at 30 cents a yard, 90 cents; ribbon for waist and sash, $1.40; silesia lining, $1. The dress was made after the patterns of the "Hernanda" corsage and "Fabiola" skirt (illustrated in the January number of this Magazine), and very stylish and pretty it was. The flounce was carried all around the skirt, without a heading, being sewed on in a reversed manner and then turned downward; and the fullness at the back of the skirt was all massed in plaits laid on the inside. The corsage was modified by having the neck cut a little lower than if a standing collar were to be added, and the lace arranged in a falling frill; and the sleeves were cut to reach just below the elbows, straight around at the bottom, so that the lace frill would just meet the cream-white gloves of undressed kid. Tan-colored slippers of undressed kid were chosen to wear with this, and Doctor Ben was to furnish the bouquet of pale pink roses with a border of lily of the valley and maiden-hair fern.

Her "going-away" dress, which was also to serve for her best dress for some time, was the subject of much thought. For it was selected a light gray camels'-hair serge, combined

with gray velvet, and trimmed with gray velvet ribbon and gray cord passementerie interwoven with silver threads. The skirt was cut the same as for the bridal dress, but shorter at the back, and the fullness massed in gathers in the middle. The "Anatolia" (also illustrated in the January number) furnished the model for the basque. The expense of this dress was: Serge at $1 a yard, $5.50; velvet at $2 a yard, $4.50; velvet ribbon at 20 cents a yard, $1.70; passementerie at 60 cents a yard, $3.30; gray silesia for lining, $1. To wear with this Dorothy evolved a "love of a bonnet" out of a little of the gray velvet, a wreath of pink roses veiled with gray tulle, and a transparent crown made of silver beads bought by the bunch and strung on wire: this cost a little less than $3.

For a wrap, a cape like the "Molda" (illustrated in the February number) was decided upon, made of cadet blue cloth, the lower edge simply hemmed, and the yoke trimmed with white-and-silver braid. The estimate for this was: Cloth at $1.50 a yard, $2.62; braid at 20 cents a yard, 70 cents.

The available portions of the heliotrope surah, after being carefully washed and pressed, were made into a plain waist and gored skirt (the latter finished with a very narrow plaiting at the foot), to serve as a foundation for striped black drapery net at $1 a yard, which cost for the whole $5.75. The lace skirt was in straight breadths with a hem, undraped; and the lace on the waist simply gathered full back and front, and the sleeves arranged in two puffs to the elbow, and plain below. To wear with this, two trimmings were designed: one, a belt with rosette at the back, a Henri Deux ruff, and wrist bows, made of the heliotrope ribbon that had previously trimmed the surah dress; and the other was a removable corselet, cuffs, collar, and epaulets, which Dorothy manufactured of some heavy lace net which she embroidered in an irregular pattern with jet beads that were obtained from jet passementerie no longer usable, and the irregular pattern was chosen that the lack of uniformity in size and shape might not be so noticeable. The pieces of this set could be fastened with pins or hooks and loops to any dress they might be worn with; and the effect with her black silk dress was especially good.

A dressy house-dress, or tea-gown, was, for many reasons, desirable; and after careful calculation this was also included in the list of things attainable. The preferred model was the "Fanchette" (illustrated in the December, 1890, number of this Magazine), and for this was purchased a lovely shade of light green cashmere at 50 cents a yard, which amounted to $2; pink surah for the front, at 50 cents a yard, $1; pink velvet ribbon at 20 cents a yard, $1.30; silver soutache to edge the velvet ribbon, 75 cents; lining, $1.

It was planned that the remnant of figured India silk was to be mounted over an old foundation skirt, the front with a very little fullness near the top, the sides laid in three broad side-plaits, simulating panels, and the back gathered; and the blue-gray nun's-veiling skirt was to be turned and re-draped in more modern style. To wear with these and other skirts, a full waist of surah of a medium shade of blue was thought more desirable (and it certainly is more dressy) than a jersey, so $3 were set aside for this purpose. These things, which could not be worn until summer, Dorothy left to finish after she should be in her new home.

"What is the use," she argued, very sensibly, "for me to tire you and myself to make these now, when I shall not need them immediately? They are all planned, I have my patterns, my form to drape over, and Doctor Ben says I shall have a sewing-machine whenever I want it; and besides, I shall need something to busy myself with and to keep in practice, and I shall have to learn now to rely more on myself,—and oh!" with a little choke, "how I shall miss my darling little mother and my teasing sister!"

When the list was completed it stood: Underwear, etc., $40.25; white silk dress, $16.05; serge dress, $16; tea-gown, $6.05; drapery net, $5.75; surah waist, $3; cape, $3.50; bonnet, $3; gloves, $4: making a total of $97.60, and leaving $2.40 for ruchings and ribbons for the necks and sleeves of her dresses.

"Well!" concluded Dorothy, "I have reason to be thoroughly satisfied with what I have to show for my $100; but it took 'a heap o' thinking'!" M. I. FINDLEY.

Moon Fairy.

(*See Phototint.*)

BORNE on the swaying silver curve
Of the young moon's crescent arm,
I float through the night and the mists that serve
To veil my wondrous charm.

I sift the stars through films of mist,
Till their splendor gleams less bright;
And some I have caught to my breast and kissed,
Grow pale and lose their light.

I sway the sobbing, restless tide,
And I laugh as it makes its moan;
For all the pride of its waters wide
Is curbed by me alone.

And mortals swear by my circling flight,
But I laugh, alone, apart;
For they look at my beauty that gems the night,
Nor dream of my burned-out heart.

Why should I care for the sighing sea,
Or the shining stars above?
Their longing and shining is naught to me,
And I know not mortal love.

Long, long ago, I loved a youth,—
The earth was young, too, then,—
But he scorned my kiss and my love,—in truth,
I hate all mortal men.

And when they vex the silent night
With sighs of their loves and pains,
I arm myself with a lance of light,
And strike through their throbbing brains.

LEILA SOUTHARD FROST.

On the Ramparts.

(*See Page Engraving.*)

THIS beautiful picture, by the famous French artist Charles Edouard Delort, shows us a bit of life in one of the old French cities, at the latter part of the XVIIIth century. Dressed in the coquettish, affected style of the First Revolution, the little *citoyenne* (citizeness) sits perched upon the city walls listening to her gallant's protestations of love and admiration. She wears the helmet-shaped cap, ruffled cloak, and long silk mitts of the period preceding the Directory, and her escort, the costume of all well-to-do young men about town. They, like many other couples, are taking a stroll on the ramparts and enjoying the lovely spring weather, all careless of the terrible events soon to make their loved France a byword among nations. Delort's pictures are remarkable for their richness of detail, and he takes especial delight in reproducing the costumes and manners of the eighteenth century, and to this we owe many other similar works of art from his clever brush.

Home Art and Home Comfort.

Woolen Rug in Star Mosaics.

THIS handsome rug is made of the simplest material that could be suggested; viz., small bits of woolen cloth or felt, cut into five-rayed star-shaped pieces of the size and shape shown in the second illustration, which gives the detail of work. Having cut out a considerable number of these pieces for the mosaic, sew them on a canvas foundation, in close-set rows, following the threads of the canvas as in Smyrna embroidery. The same patterns can be used for this work as for Smyrna work, the one we give being a pattern of the design on the rug illustrated, representing palmetto leaves on a plain ground, with a fancy border all around the rug. In this pattern, each little square representing a stitch in cross-stitch work indicates a star to be sewed on the canvas. The schedule of colors is given separately, showing the combination which produces the pattern, thus: 1 is reddish-brown (filling for center of rug); 2, dark blue (in the border only); 3, light moss-green; 4, medium moss-green (in the palmetto-leaves); 5, dark moss-green; 6, light blue; 7, terra cotta; 8, yellowish gray; 9, light copper-red; 10, dark copper-red (in the border only).

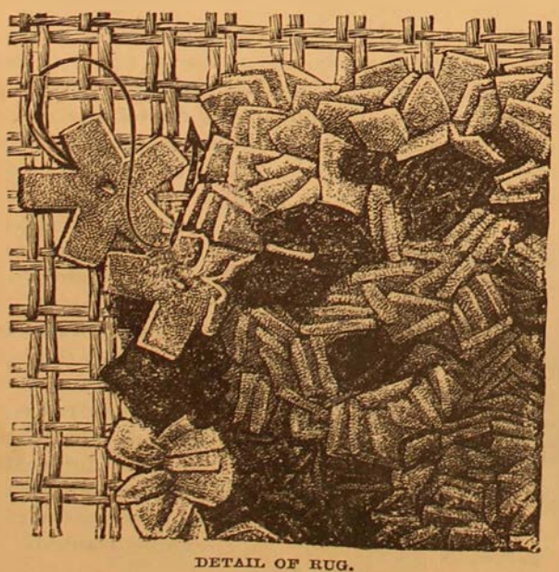
The palmetto-leaf points, as in the pattern, are in the lightest shade of moss-green, but can be varied by working them in terra cotta and the lightest shade of blue, working all the rest of the design according to the pattern, with a dark reddish-brown filling.

The pieces of woolen must be sewed on from the center of each, with strong thread, and arranged in regular rows. They can be crowded quite closely on a foundation of burlaps, if canvas is not used, remembering always to keep them in even rows. The rug as illustrated is one yard and a quarter by one yard and a half in size, but of course this is not arbitrary, as the worker can easily add or leave off several of the palmetto leaves, to give any required length or breadth.

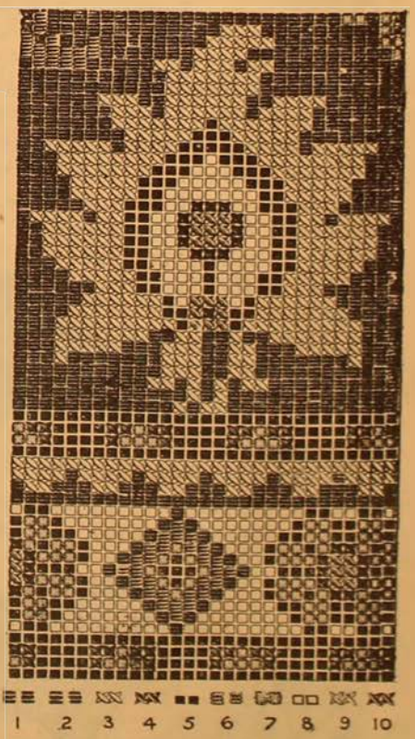
If woolen pieces or bits of cloth of the colors required are not on hand, any light-colored pieces can be dyed to give a sufficient variety.

Any other suitable scheme of color can be adopted in making use of the pattern, which is also suitable for cross-stitch embroidery and Smyrna work.

WOOLEN RUG IN STAR-MOSAICS.



DETAIL OF RUG.



COLORS FOR RUG.

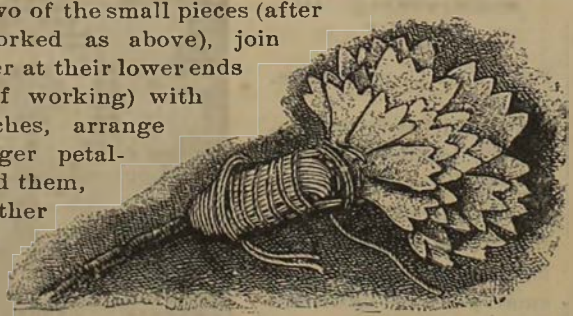
Embroidery in Relief.

Spray of Carnations.

THIS style of embroidery is not at all difficult, and requires no stamping to be done, as the flowers are made of small pieces of cloth and arranged as shown in the illustration, it only being necessary to embroider the stems and leaves. Work the stems in fine silk chenille, in four shades of olive-green and three of grass-green, sewing the chenille down in couching stitch, with very fine sewing-silk of the same color. The long slender leaves are outlined in ordinary outline-stitch, and filled in with herring-bone stitch, as shown in the illustration, using four shades of brownish olive, three shades of olive-green, and two shades of grass-green embroidery-silk.

SPRAY OF CARNATIONS IN RELIEF.

The flowers are made of fine cloth or silk, in three shades of carnation red. For each full-blown carnation, cut out two each of the larger and smaller petals illustrated in actual size. Do not combine the shades in single flowers: the dark red flowers should be placed in the center and at the extreme end of the clusters. Each leaf-portion of the smaller petals is worked with one or two long silk stitches, on the dark red in light red silk, and on the light cloth in dark red. To make the carnations, take two of the small pieces (after they are worked as above), join them together at their lower ends (see detail of working) with several stitches, arrange the two larger petal-pieces around them, and sew together and on the material which is to be embroidered. The flower is finished with a green seed-vessel and calyx, which must be worked in green silk over a filling. For the filling, roll a piece of white worsted several times around the forefinger of the left hand, and fasten the little bunch thus made down at the base of the flower, with a stitch at each end of the loops. Then work over this with light green embroidery-silk, as shown in the detail of filling. Then work the calyx at the base of the seed-vessel with a few stitches in a slightly darker shade of green. The outer petals of the flower can be spread and arranged differently, to give a variety to the grouping. The buds are made in the same manner, using only one small petal-piece. While neatness and regularity of working is necessary in making these flowers in relief, absolute uniformity is by no means an object. This work is beautiful on plush, cloth, felt, satin, velvet, or velveteen, and is very effective for decorating screens, chair-backs, cushions, draperies, and all sorts of hangings and scarfs. The grouping of the flowers is easily accomplished, being a matter of individual taste and fancy.

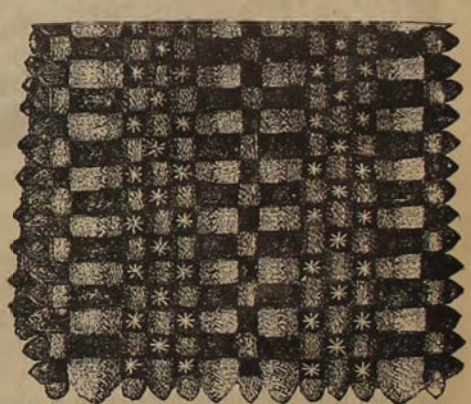


DETAIL OF FILLING.

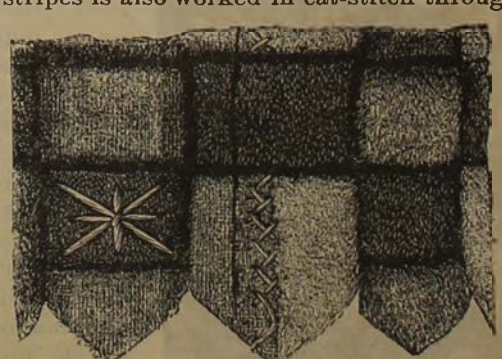
PATTERNS OF PETALS, AND DETAIL OF WORKING.

Cover of Cloth Strips.

THIS cover or scarf is made of half-inch wide strips of cloth or cloth selvages, woven together in the same manner as the Kindergarten children weave their colored slips of paper. To make it easier to manage them, it will be well to cut the ends pointed. To keep the work from slipping out, it is advisable to sew the long ends to the cross-pieces at each corner, thus outlining the cover, which can be made of any convenient size. Five red and six olive-colored stripes run lengthwise, the latter separated in groups of three between the first and second, and fourth and fifth red strips. All the cross-pieces are of black listing or strips of cloth, embroidered, wherever they cross the olive-colored stripes, with stars in gold-colored embroidery-silk, as shown on the detail of work in actual size. Each of the wider red stripes is also worked in cat-stitch through the middle, with gold-colored silk.



COVER OF CLOTH STRIPS.

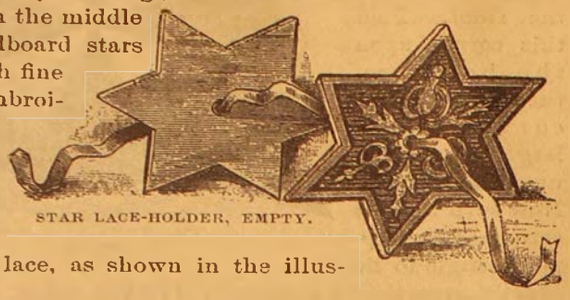


DETAIL OF COVER.

It is a very nice way of using up strips of cloth, to make such covers as this for the bureau or table; and if the required colors are not to be had, any light-colored woolen goods can be dyed to the shades wanted.

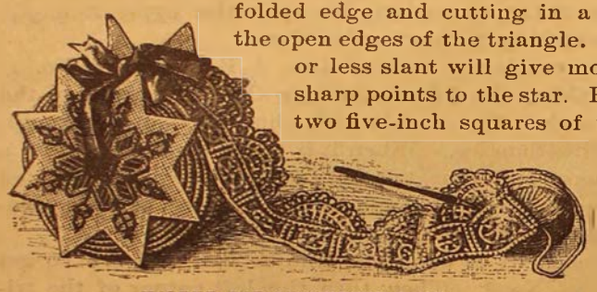
Ornamental Holder for Crocheted Lace.

THIS pretty trifle, to keep crocheted lace or insertion neat while in process of manufacture, will delight the dainty-fingered fancy-worker. The lace is rolled around a piece of ribbon about an inch wide and three-quarters of a yard long; then the ends of the ribbon are run through the middle of two cardboard stars covered with fine linen and embroidered on the outside, and the ribbon tied neatly over the roll of lace, as shown in the illustration.



STAR LACE-HOLDER, EMPTY.

To make the cardboard stars is very easy. Cut an eight-pointed star of cardboard from a five-inch square, which will give a convenient size. To obtain a pattern for the stars, take a five-inch square of paper, fold it diagonally, then again in a triangle, fold once more in a triangle, fold again from the center, and then, with a sharp pair of scissors, cut off the edge, beginning at the end of the shortest folded edge and cutting in a line with the open edges of the triangle. A greater or less slant will give more or less sharp points to the star. Embroider two five-inch squares of fine white linen or silk with red and blue wash-silk, like the embroidery shown in actual size. No stamping is needed for this pattern, as all the stitches are so clearly indicated that they can be easily copied. Cover the outside of the stars with the embroidered pieces, and the inside with plain goods, make a hole in the center of each for the ribbon to run through, and the holder is ready.



HOLDER FOR CROCHETED LACE.

An empty holder is also shown, the stars made of wood, and decorated in poker-work, that is, with designs burned in wood with a red-hot poker-point.

EMBROIDERY FOR HOLDER. ACTUAL SIZE.

Sanitarian.

APPLES AS MEDICINE.—Chemically the apple is composed of vegetable fiber, albumen, sugar, gum, chlorophyl, malic acid, gallic acid, lime, and much water. Furthermore, the German analysts say that the apple contains a larger percentage of phosphorus than any other fruit or vegetable. This phosphorus is admirably adapted for renewing the essential nervous matter of the brain and spinal cord. It is perhaps for the same reason, rudely understood, that old Scandinavian traditions represent the apple as the food of the gods, who, when they felt themselves to be growing feeble and infirm, resorted to this fruit for renewing their powers of mind and body. Also, the acids of the apple are of signal use for those of sedentary habits whose livers are sluggish in action, these acids serving to eliminate from the body noxious matters which, if retained, would make the brain heavy and dull, or bring about jaundice or skin eruptions and other allied troubles. Some such experience must have led to the custom of taking apple-sauce with roast pork, rich goose, and like dishes. It is also a fact that such fresh fruits as the apple, the pear, and the plum, when taken ripe and without sugar, diminish acidity in the stomach rather than provoke it. Their vegetable salts and juices are converted into alkaline carbonate which tends to counteract acidity. A good ripe raw apple is one of the easiest of vegetable substances for the stomach to deal with, the whole process of its digestion being completed in eighty-five minutes.

A SIMPLE REMEDY FOR COLD FEET.—Stand erect and very gradually lift yourself up on the tips of the toes, so as to put all the tendons of the foot at full strain (this is not to hop or jump up and down, but simply to rise—the slower the better—upon tiptoe), and remain standing on the point of the toes as long as possible, then gradually come to the natural position. Repeat this several times, and, by the amount of work the tips of the toes are made to do in sustaining the body's weight, a sufficient and lively circulation is obtained. A heavy pair of woolen stockings drawn over thin cotton ones is also recommended for keeping the feet warm, and at the same time preventing their becoming tender and sore.

BAD AIR PRODUCES BAD HEALTH.—If you find frosted window-panes, damp pillows and walls, and feel languid, with probably a slight headache, when you wake on a cold morning, you can feel pretty sure that the ventilation is imperfect. When the air is shut out to keep out the cold, many suffer from the ill effects of an insufficient supply of oxygen, and the breathing of air charged with carbonic acid and other deleterious substances thrown off by exhalation. The evidences of bad ventilation may not be decidedly marked, but the silent and insidious injury to health goes on. A family can be comfortable with less heat and more fresh air than is generally supposed; and, in rooms heated by furnace or stoves and lighted by gas, too much care regarding ventilation cannot be exercised.

CASTOR OIL FOR WARTS.—Castor oil, it is said, if regularly applied each day to a wart, will remove it without leaving a scar. The time it takes may try the patience of the user, from two to six weeks being required; but if faithfully used it will remove the most obstinate warts.

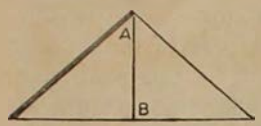
SALT, heated dry and applied in bags to the outer surface, over the seat of inflammation or congestion, will give almost instant relief, while the application of a strong hot solution of salt in water or vinegar acts like magic upon toothache, earache, neuralgic headache, and all that brood of distressing ills.

Kindergarten Work and Play for the Home.

XIII.

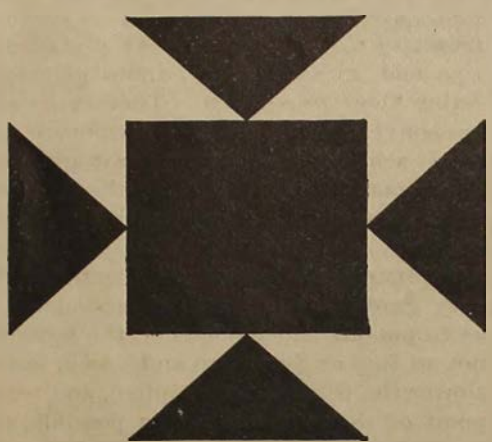
Paper Cutting.

BESIDE the folding of the four-inch square of paper, there is the cutting of it. If this occupation is not as valuable as some others, it still has much to recommend it. It is one of the best for the home, because the material needed—paper and scissors—is everywhere; because the work may be made easy or difficult, according to the skill of the worker; because the variety of design is inexhaustible, and the use of scissors is something the child is eager to learn. In fact, he will very early attempt to use them, often with disastrous results. The only safeguard is to instruct him how to use them upon proper material. The scissors need not be very sharp, and should have rounded ends.

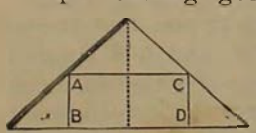


NO. 1.

It is not well to permit your child to uselessly tear or cut even newspapers, if you wish him to respect other material, or books and pictures. Do not encourage him to cut out pictures until he is able to do it pretty well, or at least with as much care as he is capable of exercising. "Why?" do you say? Because in "chopping out" even his own pictures, for his own picture-book, there is too much recklessness and destruction. We wish in every offer of employment to encourage construction. The producing of beautiful figures and designs does this, while a lawless use of the scissors has the opposite effect.

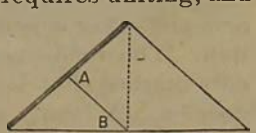

NO. 2.

Paper cutting goes with, or follows, the folding, and requires the same accuracy and delicate handling. In it the simple elements may be logically arranged in a series, and also free play given for original combinations. In the change of material by the division of parts, a new feature comes in. This separation requires uniting, and here the child has the best possible chance to study the relation of parts and whole.

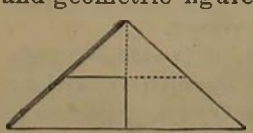


NO. 3.

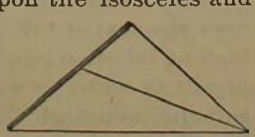
We cut silhouettes, outlines of objects, animals, leaves, forms of beauty, and geometric figures, beginning with the straight lines, and advancing to intricate circular cuts. The paper commonly used is the glazed folding-paper of a light quality, but of course any pretty paper will do, indeed, newspaper may be used in the absence of anything better. The cuts are made upon the isosceles and equilateral triangles, oblongs, and circles, all of which are made from the square.



NO. 4.


NO. 5.

A few directions will illustrate the plan of work. The isosceles triangle is sometimes called the first fundamental. To make this, place one of your squares upon the table, corner to the front. Fold this corner upon the back one, then the right corner of this large triangle upon the left one. Now turn the left corner of the upper triangle to lie exactly upon the back corners. Lift the paper, and turn the other left corner to touch the back ones. You now have eight small triangles one above the other, what we called the "butterfly" in the baby sequence given in the November number.


NO. 6.

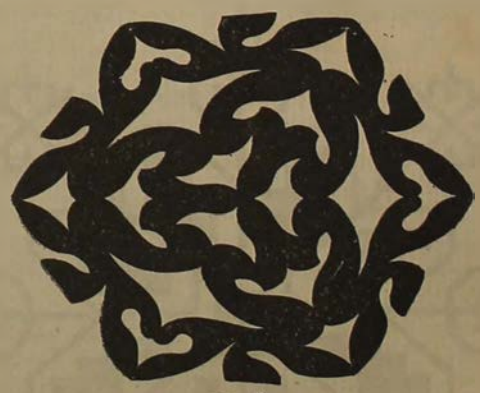

NO. 7.

In taking directions on this fundamental, always hold the triangles with bases towards you, and open edges to the left. (See No. 1.) A new paper is required for each design. Let the marking, or folding, be upon the *upper triangle*, only; the cutting, through *all* of them.

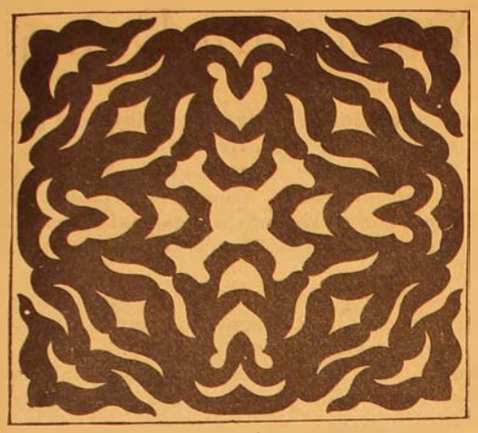
The first cut is the vertical line, A B, shown in No. 1, made by folding the left corner upon the right corner of the upper triangle. Crease this well, then cut upon it through *all* the eight triangles. When it is opened out you have a small square and four triangles, which may be mounted upon the page of a book made for this purpose, or upon separate sheets of stiff paper or Bristol board. (See No. 2.)

The second cut is upon the line A B of No. 3. To get this, fold as No. 1. Then turn the left corner of the triangle to touch the vertical fold, at the base. On another paper, cut upon the line C D of No. 3; and again, cuts both on A B and C D, on the same paper, will produce strikingly different effects. For another cut, fold the apex of your triangle to the middle of its base, giving the line A C of No. 3. Again, cut out the oblong bounded by the lines A B, A C, C D, and B D, of No. 3, a combination of the three preceding cuts.

No. 4 introduces the oblique line. Fold the vertical line of the first cut, then turn the left half of the base of your triangle to coincide with that line, making the crease shown at A B. Again, cut on an oblique line made in the same way on the right side of the triangle.


NO. 8.

So far we have been cutting off. No. 5 begins a series in cutting out. Fold the vertical and horizontal lines upon the upper triangle (see No. 3), then cut upon the lines forming the re-entering angle shown in No. 5. The opposite of this would be a similar cut on the right side. Other cuts



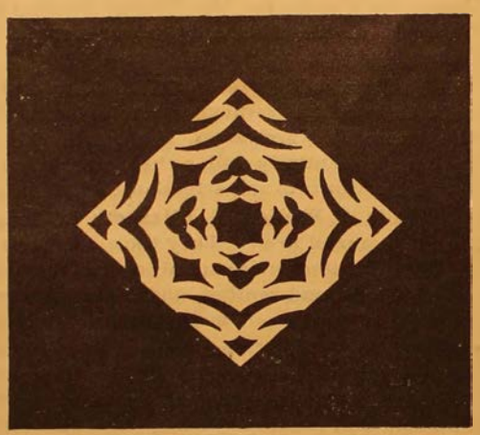
NO. 9.

of this kind are made by taking out a pentagon at the apex of the fundamental, or an oblong at the middle of its base, then both of these on one paper ; and small triangles can be cut out on the right, then on the left, and afterwards on both sides of the form.

No. 6 shows a new slant, found by folding the base of the upper triangle to coincide with its right-hand side. The opposite of this is the same slant on the left side. Another design is made by cutting out the obtuse triangle formed at the base of your triangle when both of these slants are folded upon the same paper. And still another, by taking out the trapezium formed at the apex of the triangle by these same lines.

These are a few of the straight line cuts on the isosceles triangles : others will be suggested as you go on.

Another fundamental is the four-inch circle cut from the square. To obtain this, fold No. 1, omitting the vertical line, then make the fold as shown in No. 6, and from the shorter folded edges cut across, almost but not quite straight. The half-circle can be folded into thirds and fourths, upon which cuts can be made according to dictation or fancy. With this form, hold the curved edges towards you. No. 7 shows a cut upon the circle.



NO. 10.

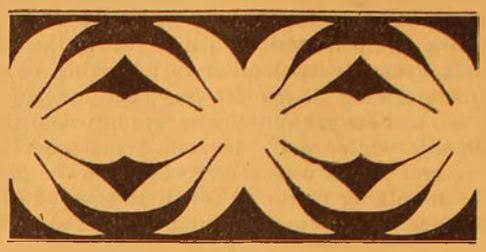
Still another form is the equilateral triangle made by folding the folded half-circle exactly in thirds, and cutting off the curved edges. This fundamental should always be held with open sides towards you. Cuts similar to those illustrated by Nos. 2 to 6 can be made on this, or lace patterns like No. 8. When a child thinks of a pattern, encourage him to cut its opposite also.

Delicate, lace-like patterns (see Nos. 9 and 10) look well mounted upon a dark or light background, and make nice decorations for lamp-screens, needle-books, or box-covers, or the lining of a box or basket, and have a pretty effect when pasted upon the playhouse window-panes, in various colors to look like stained glass. Cut upon large squares they make graceful designs for appliqué work, outline stitch, or braiding.

NO. 11.

Border patterns are easily cut upon a folded oblong. Fold such a piece in half width-ways ; without opening this, fold in half lengthwise, and this in half again. See Nos. 11 and 12.

Books made of unruled paper in which these cuttings have been pasted, or separate sheets tied together when finished, make nice birthday souvenirs for the child to make for some loved one. The same cut may be mounted in several ways, and very different results produced. Mount the clippings made by the simpler cuts, if the beauty or symmetry of the main figure is increased thereby.



NO. 12.

Comparison of size, and new relations of parts separated and grouped in different positions, are brought out in every step of this occupation.

KATE HAWLEY HENNESSEY.

How to Develop the Form.

PROBABLY no subject is more widely discussed at present than physical culture : men, women, and children,—all are interested. And what is there more beautiful and attractive than a graceful, symmetrically developed figure? Is there anyone who would not make considerable effort to attain it ?

But it does not need so much effort, after all. Physical training that necessitates great fatigue or the expenditure of too much nerve force is worse than useless : it is positively injurious ; but systematic exercise adapted to the strength and capacity of the individual need be practiced but a very short time to insure a marked improvement in health, strength, grace, and symmetry of figure.

"But," says someone, "I have not the time ; and, besides, I cannot go to a gymnasium." You surely can afford fifteen or thirty minutes a day, and you need not go to a gymnasium, or provide apparatus, unless you wish to : in fact, you may become your own professor of gymnastics, if you will.

In our April number will appear an exhaustive and thoroughly practical article on "Physical Training," by the well-known author and lecturer E. B. Warman, A.M., who is an acknowledged authority on the subject. This article will describe clearly a system of exercise that can be practiced at home, without any apparatus, and each movement will be illustrated, and the special benefit to be derived from it fully explained, so that one may exercise intelligently to attain a desired result. If any particular part of the body needs strengthening or developing, the illustrations and descriptions will indicate the proper movements to be practiced for the purpose ; and the exercises recommended are suitable alike for men and boys, women and girls,—the tired house-mother, the worried business man, the sedentary student, the chronic invalid, the convalescent, and those who love exercise for its own sake, and wish to retain their health or maintain a uniform physique.

Household.

(*See Page* 321.)

Chat.

THE social observance of Lent becomes more marked every year. Society pays deference to the season by renouncing weddings and dancing from Ash Wednesday to Easter, but finds ample compensation in divers ways, the chief of which have been cynically catalogued as "Flirting, courting, and dining." Dinner-giving is, *par excellence*, the favorite Lenten diversion,—small and early, and more or less informal affairs,—and after the dinner, while their elders enjoy a quiet game of whist, the younger guests undoubtedly improve the propitious opportunity for indulging in the other diversions above cited, and not infrequently an impromptu dance concludes the entertainment.

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BREAKFASTS and luncheons are also favorite entertainments during the Lenten season, and for these, as well as for dinners, the table decorations are characteristic. Violet tints prevail, and violets, pansies, lilacs, heliotrope, and purple and white hyacinths are chosen. At a "pansy" luncheon, the napery was the finest white damask, and the flowers, pansies of every hue,—purple and brown and violet and yellow and white and delicate wood tints,—their beauty enhanced by the setting of maiden-hair fern. The center piece was a large, low, cut-glass bowl filled with pansies and fringed with maidenhair fern, a border of pansies and ferns encircled the plate for each guest, the name cards were in the shape of pansies, and at each place was a bunch of pansies and ferns tied with white satin ribbon. The candle shades were pansies of different colors, and altogether the effect was very lovely.

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BUT the most characteristic features of the Lenten season are the Lenten lectures and readings, given in public halls and private residences (the proceeds, in the latter case, always donated to some charity), and the various classes formed for mutual improvement in some special line, or for definite charitable work,—visiting the hospitals, reading to patients in the convalescent wards, teaching in missions, the sewing classes, at which garments are made for distribution to the poor at Easter, etc. A fashionable dancing-class is transformed for the nonce into a class for German conversation, the members to meet three mornings every week to study under the direction of a professor, and two evenings each week for conversation only. There are also similar clubs organized for the study of French and Spanish, and six weeks of systematic application cannot fail to show good results by Easter. Then there are whist clubs, musical clubs, and clubs for the study of the works of some favorite author; clubs for badminton, tennis, bowling, and riding; and the art clubs, the members of which spend many delightful mornings visiting galleries and exhibitions accompanied by an artist, and then adjourn to the residence of one of the party for luncheon, and to discuss the pictures.

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VENETIAN and Watteau and other picturesque effects at weddings are by no means attainable without much trouble and careful management, as the posing and general *ensemble* are quite as important as the dressing. This necessitates careful rehearsing; and it can readily be believed that the rehearsals of a recent "show" wedding were of daily occurrence for some time previous to the imposing event, and that there is some truth in the rumor that it may be made the subject of a picture. The wedding *cortege* included ten bridesmaids and a maid of honor, the best man and six ushers. The procession of bridesmaids, paired according to their height and a blonde and brunette walking together, entered the church from the vestry-room and walked down the broad aisle, where the ushers were ranged on either side, to meet the bride at the church door, who was preceded by a little maid of honor and escorted by her father. They then attended her to the altar, where the groom and best man awaited them. So carefully was every detail arranged, that bows of ribbon were tied on certain pews to mark the proper halting-places. Everything was *couleur de rose;* the bridesmaids all wore rose-color and carried bouquets of pink tulips, and the chancel was profusely decorated with palms and rose-trees and great bunches of La France roses.

What Women are Doing.

The Visiting Nurse Association of Chicago employs and pays four trained nurses to visit the sick poor, free of charge.

Elizabeth Sargent, M.D., daughter of our former Minister to Berlin, is an oculist of exceptional skill. She lives in California.

The Twenty-third Annual Convention of the National American Woman Suffrage Association will be held in Washington, D. C., from February 26 to March 1.

The daughter of Björnstjerne Björnson, the Norwegian novelist, is an accomplished musician, and intends to become a public singer. She is pretty, and has much dramatic power.

Misses Searle and Gorton, of Chicago, have organized a publishing firm. Both ladies are young, and one has had some experience as a newspaper writer, while the other has done illustrating.

A niece of Count Tolstoi has just finished transcribing his celebrated book "War and Peace" in raised letters for the blind. It took her two years, and makes 5,000 pages of the raised characters.

Queen Victoria has declared her intention of devoting the entire women's jubilee offering to the English Association of Trained Nurses, the chief object of which is the improvement of the nursing of the sick poor.

Mrs. Charity Hathaway, of Beemer Hill, Sullivan County, Pa., is said to be the only woman in the country who is by profession a trapper and dealer in raw furs. Most of the furs are obtained by herself.

Mrs. Bessie Helmer, President of the Association of Collegiate Alumnæ, has edited twelve volumes of the decisions of the Appellate Courts for Mr. Justice Bradley of the United States Supreme Court, who says the work could not have been better done.

Miss Harriet E. Lothrop, M.D., of Taunton, Mass., lately a graduate at Zurich, is resident pathologist at the State Hospital for the insane at Norristown, Penn. In this hospital the women patients are entirely under the charge of women, from the head physician down to the attendants.

Isabella A. Wylie and Elizabeth A. Gougar, of Chicago, have formed a novel firm. They took the money earned by school-teaching, united their capital, opened an office, and deal in real estate, loans, and renting, and already have more business than they can attend to. Their customers are largely school-teachers.

The Woman's National Council of the United States will be in session at Washington, D. C., from February 22 to February 25, inclusive. The Council will open with a religious meeting on Sunday, and continue through the three following days—in all, seven public sessions.

Miss Xavier, who formerly held the position of instructor in Spanish at Wellesley College, has received the appointment of Secretary to the French and Spanish Consulate, being the first woman ever put in an official place of this kind. Miss Xavier is conversant with Spanish, French, Italian, German, and English.

Mrs. Drake, the wife of a Congregational minister in Iroquois, S. D., has been ordained to preach the gospel by the largest council of Congregational ministers ever assembled in the State. There was only one negative vote. Mrs. Drake has for six years assisted her husband, who has the oversight of five churches, preaching with as much ability and acceptance as he.

Mrs. Carrie Steele, of Georgia, a colored woman, has founded a colored orphan asylum, where destitute children may be cared for and taught trades. She has built a cottage and stable, a larger building is going up, and four acres of land around it have already been put under cultivation. Mrs. Steele has collected the money entirely by her personal efforts.

Fraulein von Chauvin, a German lady, has made for herself a more than national reputation as a naturalist. Her collection of butterflies is the most perfect in Germany; she has an aviary in which birds and animals of the most opposite natures live together in peace; and by observation and experiments, she has made valuable discoveries in animal and plant life. She has also written several valuable treatises.

Artistic Notes.

In framing a water-color, an etching, or an engraving, in fact, any work of art under glass, the important matter is to make the whole dust-proof. Pasteboard should be used instead of a wood backboard. The water-color or other picture should be fastened to the back of a mat with paste or mucilage, in one place only, viz., the bottom. Next paste mounting-board or pasteboard to the mat, back of the picture, and of the same size as the mat. Thus you do not risk wrinkling the paper of the water-color, etching, or engraving. This should be allowed to dry under a smooth, solid weight. Clean the glass with newspaper, lay it in the frame (which ought to be protected against the hardness of the table by a wadded cloth), then place the picture, mat, and backboard on the glass. Cut paper into slips and paste them on the wooden frame and the pasteboard back, so these slips will connect all firmly to the frame. When this is finished, paste smooth paper over the whole back, quite to the edge of the frame.

Foreign framers of engravings mount them on a stretcher of wood which fits exactly in the frame, under the glass. Over the wooden stretcher is white muslin on which the engraving is completely and carefully pasted. Very few firms in New York do this successfully. It adds to the durability of the engraving.

Water-colors are as durable as oil-paintings. They need less light. Hung in the dark or packed in storerooms, paintings in oil deteriorate. Nothing but fire, water, or an accident, will destroy water-colors.

Glass without a greenish tinge, and without a blister or wave in it, is necessary to give the best effect to water-colors. Unfortunately American glass does not as yet fulfil these conditions; but the United States is rich in the materials which may be extracted from the soil for the making of the purest glass.

Japanese water-colors on thin silk are sold in many of our largest cities, and the question often arises, "How shall they be mounted for room decoration?" An examination of the Japanese method will help to solve the problem. Underneath the painting on silk is fastened smooth white paper. This and the painting on silk are firmly pasted on heavier paper, all around, just at the four edges. A material woven of raw silk, with a geometrical pattern of gold outlines on the black ground, is used for a border to isolate the water-color painting from the rest of the room. This black-and-gold fabric makes a margin of two inches on each side, eight inches above the painting, and twelve inches below. The top edge is pasted around a small, slender rod of wood with a cord attached at each end and meeting above the center, which is fastened so as to form one loop by which the *kakemono*, as this decoration is called, can be hung on a nail. These are planned to be easily put up and quickly taken down, as the Japanese change the decorations in their homes often. They have a storeroom, secure and strong, for their artistic treasures, which are taken out a few at a time, the selection often being made according to the taste of an expected guest and displayed during the banquet, after which they are rolled up and put away. The lower end of this Japanese wall-decoration is firmly secured with flour paste to a polished ivory rod about an inch in diameter. The weight of this rod keeps the *kakemono* from flapping backward and forward with the least current of air, as many of the Japanese wall-decorations do in American homes. It is physically bad for the eyes, and therefore artistically hurtful to the brain, to have a moving object on the wall. Decorative art, to be worthy of the name, must be restful, refined, and suggestive of pleasant associations.

There are some popular oil-colors which are fugitive, *i. e.*, they act on the canvas as some calicoes do in the washtub—fade away to dingy mystery. Chrome green is one. Paint a house near the ocean with chrome green, and the year after the color will be a conundrum. The most credulous lady who is in the habit of believing unsigned articles on art will not believe that "the cottage was painted all over last year." Use Cinnabar green, of which there are many shades manufactured, and the ocean air will leave the color unchanged.

Tubes with a screw top and collapsible sides of metal were invented by an American artist named Rand, who was a fine-looking, gray-haired gentleman during the early days of the "School of Design for Women," before Peter Cooper gave the struggling school a roof. Hand-books on painting in oil, written before this invention, give directions for the mixing of paint, which this American invention has made obsolete. These tubes are used all over the world, not only for oil, but for water-colors. Vitrifiable paints, *i. e.*, pigments of an earthen or metallic nature mixed with the glassy material which forms the glaze on the "china"—correctly speaking, "pottery"—used in the household and on the dining-table, are also put up in these collapsible tubes in France, and can be bought here at reputable artist-material stores.

Beware of bargains in art materials. Age adds to the value of paper for water-colors, but age detracts from the value of water-color paints sold in porcelain pans or tubes. Oil paints in tubes may be so old as to have grown solid, and therefore impossible to press through the screw top.

The powder colors such as some ladies buy for making wax flowers may be used for either oil or water-color painting, by grinding with a glass "muller" on a ground-glass slab. The back of an old earthenware plate will answer: the important thing is not to touch the colors with a metal knife, as the metal produces a chemical change in the colors. The old masters had to grind their own colors, and this was the work they let their pupils do under their direction, and for which labor the masters gave instruction in liberal return.

In attempting to make oil paints, take only a small quantity and grind perfectly smooth. This takes time, and with some colors you feel patience has ceased to be a virtue. The powder colors are of different degrees of fineness. The oil helps to smooth out the separate grains into a glowing mass. Remember your paint will be worthless in a few days, and only grind that which is to be used for the day.

The custom of saving oil paints on the palette from one day to the next, by placing the pigments, orderly or disorderly, on glass, and keeping it in water, is false and mischievous economy, because the water effects a chemical change in the paints, prejudicial to harmonious coloring.

Petroleum, such as is used for light, is the best liquid with which to clean brushes that have been used in oil painting. Then wash with luke-warm water and white Castile soap.

Turpentine and salt will clean the paint from the most heavily loaded palette.

Feminine figures in Japanese costume are painted in water-colors on silk, in Japan, by really good decorative artists, and sold in New York. A pair bought for a hall decoration were framed under glass in the following manner: Over a wooden stretcher eleven by thirty-two inches, sight measure, white muslin was pasted, over which the thin Japanese paper under the silk on which the Japanese lady reading a book was painted, was also skillfully pasted. A wooden mat, gilt beveled, held the glass in place. The mat was two inches wide at the sides, six inches high at the top, and eight inches deep at the base. The frame was light wood beautifully polished, hand made, and but one inch wide. Yellow silk was twisted around the wire by which the whole was hung to the wall. The peculiarity of the mat was that it was covered with embossed Japanese wall-paper of which the prevailing color was a warm red-brown on which gold outlines showed nine different designs in a space of thirteen inches. The largest spots of color were yellow, green, and purple. As for the forms, every square inch furnished both straight and curved lines, if you chose to look for them. The whole effect was harmoniously quiet in form, and deeply, darkly, beautifully warm, in color.

An artist's studio is not a public place, any more than a poet's study is a shop. Strangers have no more right to walk into a room for which a painter pays rent, than they have to run into a private parlor, or rest in a lawyer's office. Expensively dressed women in New York City sometimes extend their "shopping" tactics to the studios, moving examples of their ignorance of art and human rights.

Ruskin, the great English writer on art and nature, lays great stress on the origin of the word "lady"—loaf-giver. Ruskin's first edition of "Modern Painters," his first book, was signed "A Graduate of Oxford."

ALICE DONLEVY,
Of the "Ladies' Art Association."

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.

George Bancroft.

The venerable historian George Bancroft, who died in Washington on January 17, presented one of the most remarkable instances in our times of intellectual and physical vigor in old age. Born in Worcester, Massachusetts, on October 3, 1800, he had consequently reached the advanced age of ninety years and three months when death removed him. He was the son of the Rev. Aaron and Lucretia Chandler Bancroft, and his father was a noted man in his time. In the fields of thought and action George Bancroft has made his career a pride to the country he has seen develop in the seventy-three years which have elapsed since his graduation at Harvard, in 1817. At that time he intended to enter the ministry, and went to Germany to study. It was at Jena that he met Goethe, and at Heidelberg he studied with Schlosser the historian. In Paris he met Alexander von Humboldt and Benjamin Constant, and at Leghorn, Lord Byron. He finally returned home and accepted the position of Greek tutor in Harvard. At about twenty-five years of age he decided to undertake a history of the United States, the first volume of which was published in 1834. Soon after this his active political career began. He was Secretary of the Navy under James K. Polk's administration, and during his term of office accomplished a work which will forever associate his name with the navy: that was the foundation of the Naval Academy at Annapolis. Mr. Bancroft left the Cabinet in 1846 to become Minister to England, holding that position three years. In 1867 he was appointed Minister to Prussia, in 1868, Minister to the North German Confederation, and in 1871, to the new German Empire. In 1874 he asked to be recalled, and returned to America to prepare the tenth and last volume of his history for the press. Since that time he has made Washington his winter residence, passing his summers at Newport. It is in his history that Mr. Bancroft's name will live: "The history of America is the history of liberty" and all are interested in it. Mr. Bancroft's first wife was a member of the famous Dwight family. She died in her youth. His second wife, who was a Mrs. Bliss of Boston, and possessed of a remarkable education, died on March 15, 1886, at the age of eighty-two. Mr. Bancroft's only child, a daughter, died in childhood.

Commerce of the Great Lakes.

The figures relative to the trade of the Great Lakes are striking. During two hundred and thirty-four days of navigation last year, tonnage passed through the Detroit River to the amount of 10,000,000 tons more than the entries and clearances of all the seaports in the United States, and 3,000,000 more than the combined foreign and coastwise shipping of Liverpool and London. This does not include traffic between Lakes Superior and Michigan, or Lakes Erie and Ontario, or local traffic between ports on these lakes. Nearly three times as many boats yearly pass through the St. Mary's Falls Canal at Sault Ste. Marie as through the Suez, though with only two hundred and thirty-four days of navigation, whereas the Suez Canal is open all the year around. The growth of ship-building on the lakes has been very marked in the last few years. In 1886–'87 there were thirty-one boats built, valued at $4,074,000; in 1889–'90 there were fifty-six built, valued at $7,866,000. The tendency, as elsewhere, has been towards iron and steel for large ships. Ten were built of steel in Cleveland, in 1888–'89, aggregating 22,989 gross tons. One of steel and one of iron were built in Detroit, and two of iron in Buffalo. This year has seen Chicago enter the steel ship-building field, the keels of two steel ships having been laid last July.

The Indian Dances.

The strange craze among the Indians of the Northwest, concerning the so-called "Indian Messiah," is indicative of greater danger of an Indian war than at any time since 1876. Never before have so many diverse tribes been so generally united by a single idea. Runners go from one tribe to the other and incite them to the so-called "ghost-dances" with which the Indians work themselves up into a state of wild excitement and then into a death-like swoon, in which, it is asserted by the deluded ones, the Indian sees and communes with the Indian Messiah, and learns his wishes and what is to come to pass. At such a dance a great fire is built in the encampment, and at sunrise all the braves assemble around a big bass drum. Then the dancing begins. The chiefs, imitating various animals, such as the buffalo, deer, elk, and others which they know of, enter the dance, one by one, and begin to circle round the fire and the beating drum, at first slowly, then more rapidly, the drum-beats being accelerated as the dance progresses. Occasionally one, simulating a bear, will go all around and snarl at his companions; the young men and boys act the part of wild ponies and kick and prance around like unbroken wild colts. For about five hours the wild festivities continue, until, one by one, the exhausted participants drop out, unable longer to stagger around the blazing fire and beating drum. Then they are led away to their wigwams by the squaws, who sit out of sight within them, watching the proceedings. After such a dance a council of war is next in order, if any of the chiefs claim to have received a message to fight from the Messiah.

A Unique Case of Skin-Grafting.

No more unique surgical operation is on record than one lately performed in Chicago, when one hundred and thirty-two Knights Templar displayed a most notable example of fraternal love and self-sacrifice in order that a sick brother might be restored to health. Sir Knight John Dickerson had had a cancer removed from his thigh, and so deep and wide an incision had been made that nature could not supply the skin to heal it over. One hundred and forty-four square inches of surface were to be covered. The surgeon informed the Sir Knights of the commandery that if such a measure of human skin could be obtained, it would probably save the patient's life. Every knight, to a man, offered to suffer the loss of a piece of cuticle to be supplied to the healing of their sick brother. The surgeons selected such individuals as were physically qualified, and they were dieted, etc., for several days before the necessary operation. The under surface of the arm of each was scrubbed, cleansed with alcohol to wash away any microbes, and then a strip of the flesh sliced off. Nearly all the self-sacrificing templars gave away the strips of skin with commendable unconcern, but two fainted during the ordeal. The strips were immediately applied to the patient, and the skin-grafting was done.

Curing Cancer by Electricity.

A very simple, and, if correctly reported, useful operation, has recently been performed in England. It consists in the application of electricity to cancer by the following method: The patient is put under the influence of anæsthetics, and the electric current is then passed through the tumor and all tissues for some distance around it, by means of fine insulated needles, so as not to injure the skin. The effect produced consists in a cessation of growth, gradual disappearance of pain, some shrinking and hardening of the tumor and enlarged glands, and a better state of health: the growth, as a whole, does not disappear, but remains as an inert mass, composed, as is supposed, of fibrous tissue only. This treatment has been used in cases where the knife had failed, or the disease had progressed too far for such surgical treatment.

The Constitution of the Earth.

The great English physician Sir William Thomson made a curious experiment relating to the constitution of our planet, and believes he can deduce certain consequences therefrom. The experimenter suspended, from a steel wire, two eggs, one raw, the other boiled, and gave each a slight rotary movement around their longer axes. The boiled egg acted like any solid body: its rotation continued for some time. On the other hand, the motion of the raw egg soon ceased: this difference was caused by the fact that in the case of the raw egg the shell only was set in motion, as in its rotation it is subjected to the friction of the substance contained in the shell, a friction which tends toward repose. He concluded from this that the earth cannot be composed of a thin solid crust inclosing a liquid or paste-like nucleus: this constitution would be incompatible with the movement of the terrestrial axes, which corresponds to the phenomena of the precession of the equinoxes.

How the World appears to the Inferior Animals.

Besides the organs of hearing, touch, and smell, Sir John Lubbock has remarked upon the *antennæ* of insects organs which seemed affected by senses unknown to us. Experiments made upon certain fresh-water crustaceans showed that they are sensible to sounds corresponding to more than 40,000 vibrations per second, sounds which we cannot hear; and to ultra-violet rays which we cannot perceive. All the rays which we are able to perceive appear to us with determinate colors. It may be the same with animals; yet it is probable that they see colors unknown to us, and as different from those to which we are accustomed as red is different from yellow, or green from violet. It results that natural light, which seems to us white, appears colored to them, and that the aspect of nature would be quite different to them than to us. It is then possible that for certain animals nature is full of sounds, colors, and sensations of which we have no notion.

Telephone Between London and Paris.

Arrangements are now completed for the opening of telephonic communication between London and Paris. Aerial lines of copper wire are in course of construction between the two capitals and their respective coasts, and a double cable made at the common cost of both governments is about to be laid between the coast of Kent and Sangate to connect the aerial lines, which will establish a complete metallic circuit between the two capitals. It is easy to predict that the telephonic communication will be excellent, for the product of the total resistance of the line (in ohms) by the total capacity (in microfarads) will not exceed 5,900, while for the telephone line lately established between Buenos-Ayres and Montevideo, this product is equal to 10,400. The cable across the English Channel will have four wires, and the specifications relative to its construction have been established with technical considerations of the highest interest, but are much too scientific to be treated of here. It is

hoped that, before this month is over, telephonic communication between London and Paris will be an accomplished fact. It is proposed that Queen Victoria and President Carnot shall be the first persons to use the line. They will, perhaps, exchange verbal greeting, which will be carefully collected in phonographs. Only one feature of the line seems to be objectionable; that is, the high rates—two dollars for a three-minute conversation.

The New State of Washington.

The latest information in regard to the new State of Washington shows that its general progress is greatly in advance of any previous year. As reported by the June census, the population is 349,516, an increase of 274,400 since 1880. The compilations show that during the year there have been produced wheat, oats, and barley, to the amount of 29,000,000 bushels, worth $11,000,000; 1,722,643 tons of coal, worth, at the market price, $6,890,612; and there has been packed at the mouth of the Columbia River, along the Washington coast, Puget Sound, and Alaska, 1,761,000 cases of salmon, estimated at $6,000,000, besides $300,000 in halibut, sea-bass, and herring. The catch of skins and furs in Washington amounts to about $400,000. The total exports of various products, via Port Townsend, amount to $4,077,767; and the imports $927,726. In the past year 472 miles of railway were built in this State, and 1,144 miles are now under construction. Towns innumerable have sprung up in all directions, and several places scarcely known in the State a year ago have developed into cities of from three thousand to six thousand inhabitants each. A rich onyx mine has been discovered and will soon be worked; steps have been taken toward developing the large iron mines; and there are several newly discovered mines of coal. The records of the State Auditor show that there are large live-stock interests also in Washington; and, altogether, throughout the State a wonderful advance is observable in all material development.

The New Polar Expedition.

Dr. Frithjof Nansen, the intrepid Norwegian explorer who successfully crossed Greenland last year, is contemplating an expedition to the North Pole in 1892, and is at present engaged upon the equipment of the expedition, especially in building and fitting out the vessel. At a recent meeting of the Danish Geographical Society, at Copenhagen, at which the King of Denmark was present, Dr. Nansen gave an outline of his contemplated journey. He will follow the same route as that attempted by the unfortunate Jeannette expedition, and purposes to start from Christiania in the summer of 1892, hoping to penetrate Behring Straits in the same season, just as the Jeannette did. His plan is based upon the intention of proving the existence of a "northern current," which, starting from the Siberian rivers, extends northward from Spitzbergen and Franz Joseph Land, along the east coast of Greenland, round Cape Farewell, and high up along the west coast. The vessel Dr. Nansen is preparing is to be as small as possible, with very oblique sides, so that the pressure of the ice will lift her up instead of crushing her. Among her equipments will be a captive balloon, to be used for taking observations as to the position of the vessel. The expedition is to be provisioned for five years, and fittings provided for the vessel, so that, should she be crushed, any ice-floe could be converted into a habitable site. Dr. Nansen advanced very plausible arguments to show the existence of the current which he expects to find and follow to his frozen goal.

Subterranean Wealth of the World.

When we reflect on the increasing production of the mines where we seek combustible minerals and metals, the subject will be found to be one of proportionate importance, since all the conditions of financial and commercial power are so intimately connected with the existence of subterranean wealth. The value of the entire products of all the mines of the earth, which they yield during a year, is now estimated at more than two thousand millions of dollars. The precious metals, gold and silver, represent but a seventh part of this treasure taken from earth's subterranean stores. The greater part of the gold comes from the mines of California and Mexico, and from those of Brazil, Venezuela, and the Argentine Republic. Next to these are rated Canada, Australia, and India. The Transvaal in southern Africa acquires constantly increasing importance: in 1886, the export of gold was 69,543 pounds sterling; in 1887, 133,534 pounds; in 1888, 235,970 pounds; and in 1889, it was 750,000. However, carbon gives humanity a revenue three times as great as that which is derived from all the silver and gold mines combined. In this colossal revenue given by coal, Great Britain has the lion's share: at present it draws upon its coal mines for two hundred millions of dollars and it sells fifty million dollars' worth to the whole world. Great efforts are constantly being made to attain safety in working the mines, and these efforts have not been wholly fruitless; for at present, although the sacrifice of human life is not agreeable to contemplate, the number of mining accidents decrease in proportion to the increase in the amount of material mined.

The Three Hundredth Minor Planet.

The Minor Planet No. 300 was discovered by Mr. Palisa, of the Vienna Observatory, on October 11, 1890, but under the number 299, in consequence of a singular misapprehension showing how numerous these celestial bodies are. On October 3, Mr. Charlois, the rival of astronomer Palisa, discovered, at the observatory of Nice the Minor Planet 298. Eight hours after, Mr. Palisa saw a celestial body in the neighborhood of the position indicated by his young emulator. Modestly, he imagined that he had only confirmed the French discovery; but when he came to calculate the orbit of 298, he learned that he had really discovered another planet, and he was then obliged to number the last discovery (of October 11) 300.

Henry Schliemann.

The news of the sudden death of Dr. Henry Schliemann, which took place at Naples on December 27, 1890, was received with deep regret by all who knew the re-discoverer of ancient Troy and Ilium, or who had heard of his works. His career as noted by himself in an autobiographical sketch prefixed to his work "Ilios," reads like a romance. Henry Schliemann was born on January 6, 1822, at Neu Buckow, in Mecklenburg-Schwerin, and his father was a Lutheran clergyman in the parish of Ankershagen, near by. The elder Schliemann was fond of conversing about the discoveries of Pompeii and Herculaneum, and of reciting verses from Voss's German translation of Homer, firing the child's imagination to such an extent that he declared he would go find the site of ancient Ilium and dig out its huge walls. He went to school at Neustrelitz, but at fourteen his family fell into poverty, and in 1836 he was apprenticed to a grocer in the little town of Furstenberg, where for five years and a half he retailed herrings, butter, and the like. At last he broke a blood-vessel lifting a heavy barrel, and was discharged as useless. He begged his way barefoot to Hamburg, and went as cabin boy on a vessel bound for Venezuela. The vessel was wrecked but the crew escaped, and Schliemann ultimately found his way, in a destitute condition, to Amsterdam. After many hardships he obtained employment with an Amsterdam merchant, and then, having acquired the English, Dutch, French, Spanish, Italian, and Portuguese languages, by ardent study in the intervals of business, he was sent by his employers to St. Petersburg, where he started in business for himself. In 1849 he found his way to California, and from that time his fortunes turned, and in 1863 he retired from business with wealth sufficient to indulge his long-cherished dream of excavating Troy, Ithaca, and Mycenæ. In 1868 he went to Greece to search for the site of ancient Troy. He commenced operations on a place called Hissarlik, which he had recognized as the site of Ilium; and defraying the whole of the heavy expenditure out of his own pocket, continued, with but few interruptions, his excavations at Ilium until the year 1882. His collections made at Ilium were exhibited at the South Kensington Museum, and afterwards preserved in the National Museum at Berlin, while many of the objects found at Mycenæ have been deposited in the Polytechnicon at Athens.

The Kioto-Fu Canal in Japan.

Japan is already traversed with railroads, and its population is following more and more in the track of Western civilization. This tendency, a consequence of the revolution of 1868, extends to public works of all kinds, and among others a canal for navigation is now in course of construction, which is to connect Biwa Lake and the Bay of Osaka, upon which Kioto, the ancient capital of Japan, is situated. The work, begun in 1885, will be completed during the current year, and will cost one million dollars. The canal of Kioto-Fu has not been constructed merely to afford a means of navigation which will put the interior of the country into communication with the sea-coast: it also supplies water-power to the manufactories of Kioto, water necessary for the irrigation of the rice-fields, and also for distribution in the city. It starts from the south-western extremity of Lake Biwa, the largest lake in Japan, which terminates in a marshy plain in which a ditch has been dug, protected by longitudinal dikes, to carry off the water in case of freshets. At the end of this ditch, which is about three hundred feet long, the canal really begins. It goes through three tunnels and then divides into two branches, one of which crosses a valley by a bridge-canal, the boats being drawn by submerged cables.

King Kalakaua.

The seventh King of the Hawaiian Islands, David Kalakaua, died at the Palace Hotel in San Francisco, on January 20. He was in poor health when he arrived in San Francisco some time ago, and it is supposed that a trip to Southern California overtaxed his strength. David Kalakaua—the last name signifying "The Day of Battle"—was descended from the ancient royalties of the Hawaiian Islands. He was born at Honolulu, on December 16, 1836. His father was the Hon. C. Kapaakea, of the royal house of Maul, and his mother was the High Chief Keohokalole, of the royal house of Hawaii. When Kalakaua was elected King in 1874, he named as his successor his sister, the Princess Liliuokalani, who was Regent of the Islands during her brother's absence. Her husband, John O. Dominis, is an American, and all her closest friends are Americans. Kalakaua has had quite a stormy reign in his island kingdom, but his country is rich, and he has been able to make extended tours outside of his dominions and get well acquainted with the world, and altogether have a pleasant time. The Hawaiian Government is a limited constitutional monarchy. There is a standing army of 250 men, and a volunteer force of 250 more. The foreign relations of the country are controlled by the United States Government. The Hawaiian Islands, discovered by Captain Cook, more than a century ago, compose an area of 6,677 square miles. The capital, Honolulu, on Oahu Island, has 20,487 inhabitants. There are one hundred and eighty-nine public schools, maintained at a cost of more than $200,000 a year. The soil is of volcanic origin, but very fertile. Sugar and rice are the chief products, the sugar exports in 1888 amounting to $10,818,000. Railroads, steamboats, and "all the modern improvements" have been introduced upon the islands. The U. S. steamer Charleston will convey the remains of the late king back to Honolulu, where he will be buried with imposing ceremonies.

REVIEW OF FASHIONS.—MARCH.

PATTERN ORDER, **Entitling holder to a Pattern, will be found at bottom of page 337.**

COTTONS retain their well-deserved popularity, and in texture, color, and design even surpass those of last season. While winter clothing is still necessary for comfort, and especially during Lent, these beautiful fabrics are fashioned into costumes for the coming season. Zephyrs and ginghams are the first choice for general wear, and are shown in stripes and banded effects, also in large plaids, following in general style the new woolens. *Chiné* effects are noticeable in some of the new ginghams, and the brocaded ginghams with tiny blossoms in white or self-color on homespun blue, violet, sky-blue, pink, or pale olive ground, are very beautiful, and when artistically made and trimmed with embroidery and velvet will be formidable rivals to the favorite India silks.

Madras cloths are a trifle lighter than ginghams ; and the percales are especially soft in finish, the prettiest having lines of delicate color on a white ground. Polka and coin spots of different sizes, white on colored grounds, and *vice versâ*, are also popular ; and there are lovely floral designs that are by some preferred to all others.

Rose-pink, light and dark blue, gray, and lavender are leading colors in all cotton goods. White embroidery is the preferred garniture, in close-worked, fine patterns rather than showy open-work designs ; and velvet ribbon in all widths, or satin ribbon, will be used in profusion in combination with the embroidery, also revers and other accessories of piece velvet. Undraped skirts, full waists, and full sleeves are chosen for making up cottons, and quite as much attention is paid to the style, fit, and finish, as for costumes of more expensive fabrics, while full latitude is allowed to individual taste.

Warm-tinted grays and browns are leading colors this season, and each color is subdivided into ten or more shades of itself, so there is little difficulty in selecting a becoming tint. Some of the grays are softly antique in shade, as suggested by the name, "Rouen" gray, which is the uncertain deep color of a crumbling walled ruin of some stately stone memorial. Others are natural tints, distinguished as elephant, camel, rat, and mouse grays ; then come an indefinite number of drab-grays, usually called *noisette*, and from drab to tan and tan to brown is a natural sequence. Some of the shades of tan tinting into olive are exquisite, and in cloth make charming costumes to be relieved by the favorite cluster of violets in corsage or toque, giving the wearer an aura of spring and woodland freshness.

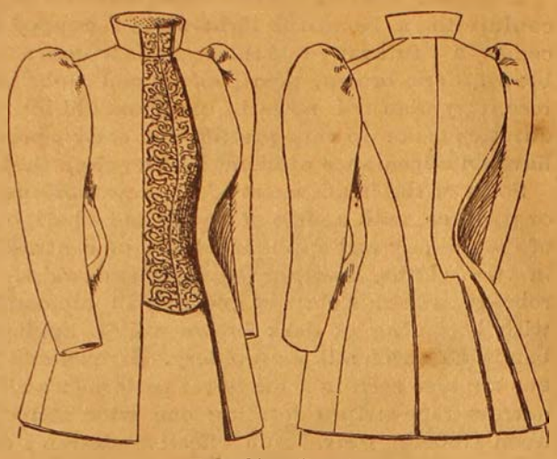
Among the favorite heliotrope shades, a new tint, verging toward the gray, and called petunia, is sure to be a favorite. Burnt rose and old rose are next in favor in evening and light colors, and among the new shades in rich colors are Egyptian red, a deep cardinal ; *garance*, a rich madder hue ; Prussian green ; *mazarin*, a bright blue ; and the *voyant* color, usually combined with brown, called Seville, a brilliant Spanish orange. Soft yellowish browns and brownish yellows, called almond-colors, are seen in a variety of shades, and show at their best in the handsome silk Bengalines for street wear.

Early importations of millinery display many charming effects. Flowers are used in the greatest profusion, and are as beautiful in appearance as their natural prototypes.

Lady's Costume.

ATTILIA BASQUE. FULL SKIRT.

There are generous clusters of modest violets for the early season, which one might imagine were just plucked did not closer inspection betray their lack of perfume; drooping plumes of lilacs that sway with every movement as naturally as the genuine blooms when blown by the breeze; chrysanthemums made of silk muslin and gauze that even a connoisseur might be excused for mistaking for fine specimens at a flower-show; and roses—roses everywhere, of every known color and variety, each with its distinctive foliage, and the long stems often bearing the characteristic thorns. Flowers of the same kind are used by themselves, always with their appropriate foliage, and, in mounting, the unstudied grace of nature is copied as closely as possible. Different varieties of wild-flowers are shown in the same cluster, also "old-fashioned" flowers,—larkspur and "ragged sailor" and coreopsis and tiny garden pansies,—and are specially liked for trimming children's straw hats.



Léodie Coat.

Lady's House-Dress.

AZELINE WAIST. FABIOLA SKIRT.

Hats have broad brims extending in front, narrow in the back, and drooping gracefully at the sides. Crowns are a trifle higher, usually flat on top, and there are also crownless hats and bonnets. Semi-transparent brims are a feature, the effect produced by insertions of lace-straw or beading, and by having the entire brim made of broad trimming-lace of fine texture, or thin net shirred scantily.

FOR information received concerning woolens and other dress materials, thanks are due to Stern Brothers; for millinery, to Thomas H. Wood & Co.; and for children's fashions, to Best & Co.

Lady's Costume.

ALMOND-BROWN cashmere is the material used for this dressy costume, with a vest of chamois-colored silk embroidered with gilt, and a sash-belt of striped brown velvet and chamois gros-grain ribbon. The skirt—of which we do not furnish a pattern—is made of straight breadths, the front one, only, gored, as the figure may require, and finished with a scantily gathered flounce surmounted by a pinked ruching of silk of the same shade as the cashmere. This is mounted over a gored foundation skirt, and, if desired, may be made demi-train length, and mounted over a gored demi-train like the pattern given this month.

The basque, the "Attilia," is very becoming. The ruching is of black net embroidered with gold, and is made very full, and wide at the neck, where it shows through the opening on each side. The model is desirable for all light-weight woolens, and for silk. The pattern is fully described on page 314.

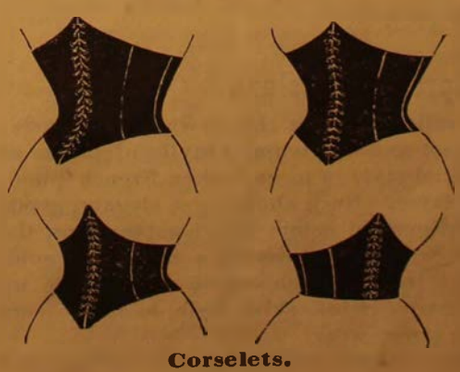
Etelka Morning-Dress.

Léodie Coat.

SUITABLE either for house or street wear, according to the material in which it is made, this is an especially *distingué* garment. Cloths of various colors, with a velvet vest, plain or embroidered, are very fashionable for street wear; and plain or brocaded silks, with the vest in strong contrast or showily trimmed, are selected for the house and worn with demi-train skirts of lace or silk. The model is also suitable for dark cloths, for ordinary wear. The pattern is fully described on page 314.

Lady's House-Dress.

A CHARMING house-dress made of India silk having blue spots on a fawn-colored ground, and trimmed with white embroidery which forms the yoke-revers, half-belt, lower parts of the sleeves, and the revers on the skirt, which is included in the pattern of the waist, the "Azeline." The skirt used is the "Fabi-



Corselets.

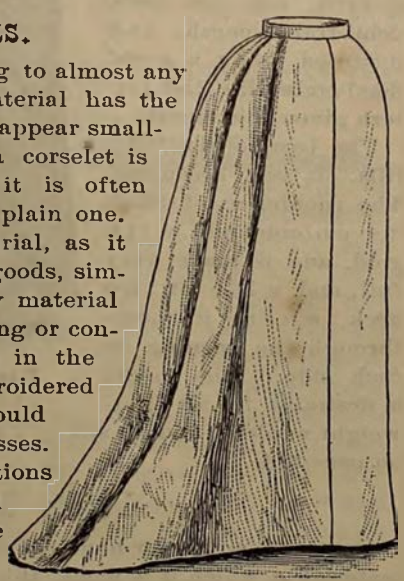
ola," given in the January number. The waist reaches about an inch below the waist-line, and is straight across the back, which is finished with a belt of narrow ribbon having a rosette in the middle. The revers can be added to any skirt that is plain in front. The design is equally suitable for light woolens and washable goods. The skirt pattern was described in the January number. The waist pattern is described on page 314.

Etelka Morning-Dress.

A THOROUGHLY practical model, which can be appropriately used for any of the materials usually chosen for the purpose. It is in sacque shape, with fullness in the middle of the front and back, which is secured to a fitted waist-lining which may be made as tight or loose as desirable. The deep collar is very stylish, but this may be omitted if preferred, also the full effect of the sleeves, as the sleeve-lining is a plain coat-sleeve. The illustration represents dark blue cashmere trimmed with narrow gold braid. For washable goods, the collar can be trimmed with embroidered frills, and a flounce added at the foot. The pattern is fully described on page 315.

Corselets.

A CORSELET is becoming to almost any figure, and if of dark material has the effect of making the waist appear smaller. With a full waist a corselet is especially desirable, and it is often an effective addition to a plain one. Velvet is a favorite material, as it combines well with most goods, simple or expensive; but any material can be used, either matching or contrasting with the goods in the waist. One of silk embroidered with jet or other beads could be worn with various dresses. See page 315 for directions about the pattern. All three of these shapes are given on one Pattern Order.



Demi-train Skirt.

Demi-train Skirt.

THIS model is equally desirable for a foundation skirt over which any kind of drapery can be arranged, or for a plain demi-train skirt of any material with the lining of the same shape. It is especially graceful, and has the fullness massed closely in the back. Straight breadths could be arranged over it, after the manner of the "Fabiola" skirt illustrated in the January number. See page 315 for full particulars about the pattern.

Spring Woolens.

PLAIDS are most salient among the new spring goods; there are, however, not so many popular styles of plaids as last season: one special style, a large broken French plaid, leads in fashionable favor. Such showy, yet elegant, goods are seen in all the seasonable colors and combinations, the tide of favor setting strongly towards a blue and gold-colored plaid in light weight serge, which when made up on the bias, or in the "Circle" skirt style, is really very handsome for spring street-wear.

Other favorite combinations are shades of heliotrope and petunia, brown and beige, olive and reseda greens, all in large, broken plaids crossing to form three-inch or four-inch squares, with very light-tinted grounds, and strong contrasts of tone in the colors thus combined.

A special novelty in one-color material is the Bedford cordurette, a beautiful light-weight repped cloth, which comes in a full range of the season's colors: fawn, almond brown, dark brown, pearl, silver and Gobelin gray, burnt rose, Egyptian red, mazarin blue, and old blue. These cordurettes make up very prettily for early spring wear, and have an appearance of being heavier than they are.

Some of the handsomest of the new woolens are in robes, or patterns, with a strip of a yard and a half, or thereabouts, of embroidery and appliquéd band of contrasting material, in two widths, to trim the skirt and waist. A beautiful robe-dress in this class of goods is in almond-brown cloth, with bordering of dark brown velvet appliquéd in cross-bands with rich silk embroidery. Striped and figured woolens are also seen in some novel patterns: a clustered set of narrow tape-stripes forming one wide stripe, in old-blue upon Gobelin gray, is an effective design; another has a pure white stripe figured with balls of blue.

Cloths in solid color figured with herring-bone or chevron stripes are likely to be most popular during the coming season. The stripes vary in size from a line as fine as the wale of a diagonal cloth, to two inches wide. Scottish homespun twills in stripes, irregular or undefined checks, and mixtures, are shown in the colors which peasant women in the north of Scotland and Ireland dye their own homespun goods, with dyes made from native forest barks. Natural gray, natural brown, and homespun blue are favorite shades in these peasant woolens, which, although known as Scottish homespuns, are really made in France, and are far better and stronger cloths than their prototypes. Of course, the plausible story that these goods are actually woven and dyed with forest barks by peasants in the wilds of the Scottish islands and Ireland loses credence when one comes to examine their soft, firm textures and even colorings.

Figured cloths,—camels'-hairs and homespuns,—have soft raised woolen spots or blocks of matted tufts.

Imported Silks.

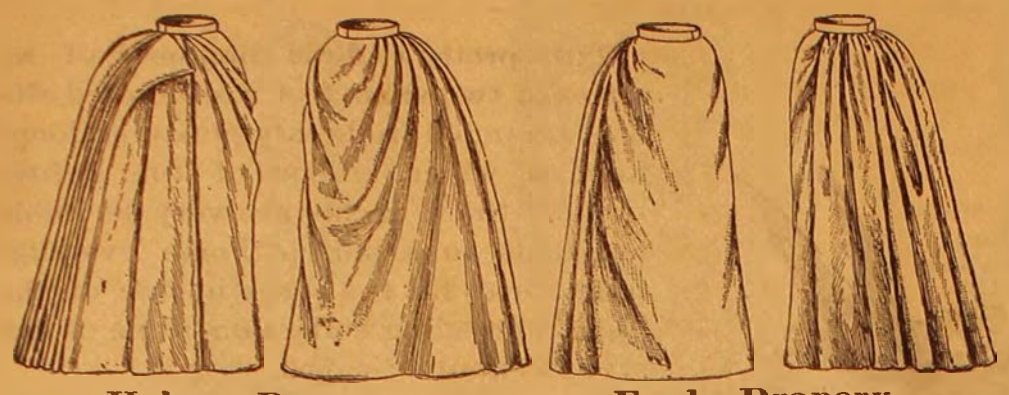
FOULARDS, India silks, and fancy weaves are among the first importations. These are chiefly printed in small figures in contrasting colors, and are used for gowns of secondary importance, such as the home evening-dress, or, if in high or light colors, for dressy evening-wear.

There are some lovely quaint patterns in these soft figured silks, principally floral designs, and many with *chiné* effects. In black and white, however, small or unobtrusive geometric patterns are liked, especially for half-mourning evening-dresses.

Satin has made a great advance in favor of late, and among the silks for reception and visiting dresses rich satins in all the new artistic colors, and satin-striped and figured brocades on satin grounds, are foremost.

Exquisite indeed are many of the colorings in these satin brocades, the new line for the spring trade tending more towards the artistic and picturesque than did the magnificent fabrics worn during the winter. Gilt and silver brocades are likely to retain a considerable popularity, especially for dressy toilets to be worn immediately after Lent; and as the early Easter season promises a revival of winter festivities before the real spring season fairly sets in, there is no doubt that quantities of figured silks, printed *crêpes*, and silk gauzes, in floral cluster designs in all the lovely French colorings, will be made up in evening gowns to be worn early in April.

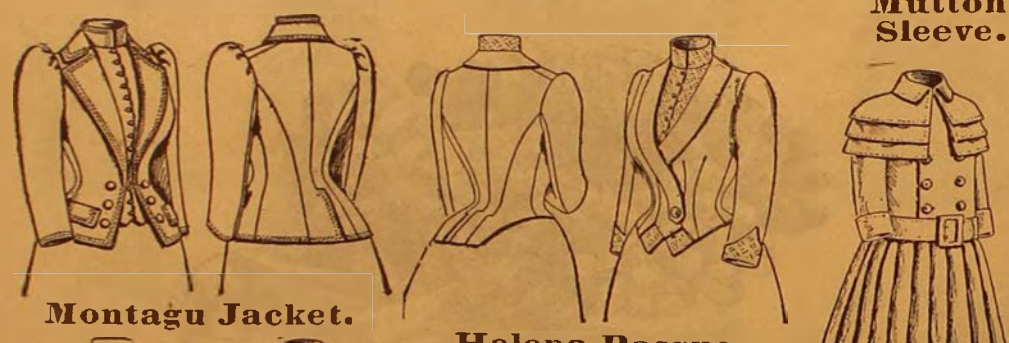
Standard Patterns.



Helena Drapery. Freda Drapery.

Nita Cape. Vena Cape. Sybil Waist.

Violetta Basque. Gwendoline Waist. Leg o' Mutton Sleeve.

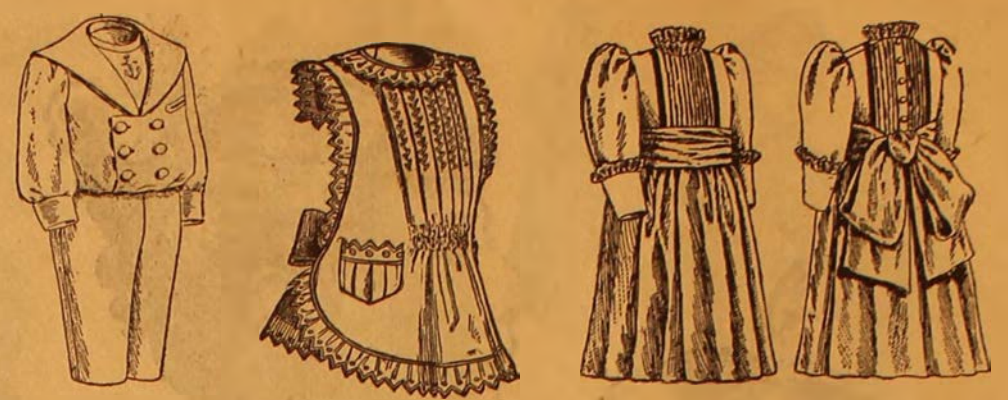


Montagu Jacket. Helena Basque. Brunswick Suit.

Hermione Blouse. Freda Basque. Belle Apron.

Pansy Dress. Una Dress. Norfolk Jacket.

Lesley Waist. Miss's Drawers. Lisa Dress. Dorothy Dress.



Harold Suit. Ethel Apron. Iris Dress.

Descriptions of these Patterns will be found on page 315.

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 seasonable fabrics, simple as well as expensive; while for professional dressmakers they are invaluable.

1.—Reception costume of mastic-gray cloth embroidered with brown silk.
2.—House dress of *prune* camels'-hair braided with black.
3.—Black satin and jetted velvet reception-jacket.
4.—Diamond cluster finger-ring.
5.—Directoire hat of pearl-gray felt, with green velvet and gray feather garniture.
6.—Girl's dress of Scotch plaid camels'-hair and green velvet.
7.—Reception toilet of moss-green velvet and peach-colored satin.
8.—House dress of rose-pink cashmere with bordering worked in red silk stars.
9.—Promenade costume of chamois-colored cloth, with olive plush sleeves and borders.
10.—Combination sleeve of India silk, satin, and lace, for house dress.
11.—Costume of plaid cloth and black velvet.
12.—Traveling-cloak of fine striped cheviot, with *plateau* bonnet to match trimmed with yellow wings and brown velvet bows.
13.—Toilet of black-and-white printed silk, for elderly lady.
14.—Sleeve garniture of netted silk passementerie for cloth costume.
15.—Promenade pelisse of argent-gray rough cloth, with braided sleeves and Medici collar.
16.—Waist of brown cloth and plaid velvet.
17.—Catogan braid coiffure.
18.—Pearl and ruby half-hoop finger-ring.
19.—Finger-ring with diamond-set shanks and solitaire pearl.
20.—Mistletoe scarf-pin of green gold set with a single pearl.
21.—Evening waist of white *crêpe* with black velvet ribbon rosettes, simulating marguerites.
22.—Costume of printed challie, trimmed with Alençon lace.
23.—Reception toilet of embroidered black Régence silk, with violet satin front.
24.—Traveling costume of dark-blue French broadcloth.
25.—Evening toilet of embroidered rose-colored *crêpe de Chine*, trimmed with white lace and black velvet ribbon.
26.—Home costume of blue cashmere and gold-braided white silk.
27.—Louis Seize coat of velvet, with vest of velvet-figured grenadine net.
28.—Morning coiffure of rolled puffs.
29.—Classic coiffure, with curled front hair, and Greek coil at the crown held by gold fillets.
30.—Coiffure for a young girl. Looped braid with tortoise-shell hair-pin.
31.—Silver gilt *châtelaine* with five chain-pendants.
32.—Jacket of embroidered black velvet, with Venetian collar of lace wired into shape, and puffed sleeves and drapery of gray tulle.
33.—Reception toilet of prune-colored faille Française, with black silk passementerie.
34.—Diamond finger-ring.
35.—Gold bangle with three clover-leaves.
36.—Girdle of black silk passementerie, with fringe of jet beads.
37.—Tortoise-shell side-combs with silver filigree tops.
38.—House dress of *mazarin* blue cashmere, with moire waist-garniture to match.
39.—Silver lace-pin in design of golf-clubs and balls.
40.—Traveling pelisse of plaid cheviot.
41.—Collarette of black silk passementerie with bugle fringe.
42.—Tea-gown of gray Henrietta cloth, with pale yellow India-silk front, and white lace garniture.
43 and 44.—Corsage of almond-colored cloth, with Medici collar, sleeves, and corselet of brown silk Escurial cord lace.
45.—Home toilet of reseda serge, embroidered with tulips on the corsage. Reseda moire ribbon sash.
46.—Theatre hat of braided black velvet ribbon and green-and-gold plaid ribbon.
47.—Tailor-made costume of gray mixed cheviot with gray Milan ball garniture.
48.—Watch fob of chased gold.
49.—Costume of dark-blue cashmere, with silver gray puffed silk sleeves.
50.—Toilet for carriage or house, of black Régence silk.
51.—House-dress of black camels'-hair, with garniture of white silk and crimson braids with silk balls.
52.—Silver bracelet set with Rhine-stones.
53.—Watch fob of Roman gold, with black enameled ball pendant.
54.—Costume of petunia cloth and Scotch plaid serge.
55.—Gold brooch representing a guitar set with pearls.
56.—Silver racquet brooch.
57.—Toilet of pink Henrietta cloth, with full skirt. Garniture of white silk embroidered with gold and brown velvet.

Fashion Gleanings from Abroad.

(For Descriptions, see Page 313.)

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

Stylish Coiffures.

Stylish Coiffures.

1.—A DRESSY evening-coiffure. The hair is brushed over rolls in Pompadour style, to the crown, which is covered with short, fluffy curls. A diamond star is the only ornament. This style of hair-dressing calls for good natural hair, and is most appropriate for a young matron.

2.—EMPIRE coiffure. The hair is all fastened loosely at the back of the head with a few ringlets. The short hair on the forehead is curled across the front. A string of beads and a tuft of ostrich feathers and an aigrette are fastened in the knot of curls at the back.

3.—CLASSIC coiffure. The hair is combed up loosely and fastened in a small knot at the crown. Three long shell pins ornament this coiffure, and the front hair is curled in a full bang on the forehead.

4.—THIS is a pretty coiffure for scant hair. The hair is first waved or *crêped*, then arranged in a French twist, bringing the ends to the top of the head, where a frisette of short curls covers all the top of the head and forehead. A blackbird with jeweled eyes is the only ornament.

BROWN and yellow is a favorite color combination.

Medici Collar-Fichu.

Ribbon Neck-Ruche.

THIS pretty trifle is composed of rosettes of two shades of rose-colored ribbon, arranged in thickly clustered loops upon a wider ribbon of the lighter shade. Such ruches are very desirable additions to a simple home evening-toilet, or to fill the space in one of the high, spreading collars on some of the stylish shoulder-capes.

Medici Collar-Fichu.

A HANDSOME finish for any nice dress to be worn in the house. It is made of cream-white silk ruched in a plaiting to stand up around the neck at the back, and folded to form a V-shaped revers inside a pointed shawl-collar of black silk upon which black thread lace about four inches wide is gathered in a ruffle. Butterfly bows of black ribbon at each side of the neck-plaiting and at the end of the fichu-collar, which reaches the waist, complete this accessory to the toilet, which can be made in other colors and in white lace, as well as in those described.

Ribbon Neck-Ruche.

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.

ATTILIA BASQUE.—Half of the pattern is given in 9 pieces: Vest, outer front, side gore, side form, back, collar for back, and three pieces of the sleeve. The collar is to be joined to the back piece only, which will leave an opening at each side of the neck. The large piece of the sleeve is to be gathered at the top, between the holes. The holes at the back edge of this piece denote two plaits to be turned upward on the outside. A medium-size will require three and a half yards of goods twenty-four inches wide, and five-eighths of a yard additional for the vest. Eight yards of goods of the same width will be required for a skirt (exclusive of the ruching) as illustrated with the basque. Basque patterns in sizes for 34, 36, 38, and 40 inches bust measure.

AZELINE WAIST.—The pattern consists of 10 pieces: Front, belt, yoke-revers, side gore, side form, back, three pieces of the sleeve, of the waist; and revers for skirt. The opposite notches at the top and bottom of the front designate the middle. The yoke-revers is to be joined in the shoulder and armhole seams. The holes across the back show how far down it may be faced to match the yoke-revers. The larger 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 revers is to be placed on the skirt in a line with the edge of the front of the waist (see illustration). A medium size of the waist will require two and a half yards of goods twenty-four inches wide, and one yard and a quarter of piece embroidery, including the skirt revers. Waist patterns in sizes for 34, 36, 38, and 40 inches bust measure.

LÉODIE COAT.—Half of the pattern is given in 9 pieces: Vest, outer front,

side gore, side form, back, two collars, and two pieces of the sleeve. The outer side of 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, and five-eighths of a yard additional for the vest. Patterns in sizes for 34, 36, 38, and 40 inches bust measure.

ETELKA MORNING-DRESS.—Half of the pattern is given in 10 pieces: Front, side form, and back of lining; and front, back, two collars, and three pieces of the sleeve. The front and back pieces are to be gathered at the neck, respectively forward and back of the hole in each, and shirred below in a line with the row of holes in each, and drawn in to fit the lining. 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 ten yards of goods twenty-four inches wide. Patterns in sizes for 34, 36, 38, and 40 inches bust measure.

CORSELETS.—One pattern only is given, but the pattern is marked so that the three styles illustrated can be cut from it. The pattern is in five pieces, which are to be joined according to the notches. The rows of holes in the pattern designate the outlines for the two smaller corselets. The lacing may front or back or at both places; or hooks and eyes may be used, at either place, as preferred. Three-fourths of a yard of velvet will be required for the largest corselet, and about an eighth of a yard less for the smaller one. The pattern is a medium size.

DEMI-TRAIN SKIRT.—Half of the pattern is given in 3 pieces: Front, side gore, and half of back breadth. In sewing to the belt, the front and the side gores are to be held full to suit the figure, or shallow plaits may be laid in them. The back breadth may be gathered at the top, or the fullness massed in the middle in plaits laid on the inside, as indicated by the holes at the top. A medium size will require seven and a half yards of goods twenty-four inches wide. Patterns in two sizes: 23 waist, 40 front; 27 waist, 42 front.

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.

ADELINA DRESS.—Half of the pattern of the waist is given in 10 pieces: Lining for front, outer front, side gore, side form, back, collar, bretelle, and three pieces of the sleeve. The outer front is to be gathered at the bottom, forward of the hole, and drawn in to fit the lining. The bretelle is to be gathered, and placed to the row of holes in the front and back pieces. It is to be fullest on top of the shoulder. The large piece of the sleeve is to be gathered top and bottom, between the holes, and the lower gathering is to be placed to the row of holes across the sleeve. The skirt is made of four straight breadths, and the flounce of six breadths: both are gathered. The size for fourteen years will require eight yards of goods twenty-four inches wide, and six and a half yards of braid. Patterns in sizes for 12 and 14 years.

BEULAH DRESS.—Half of the pattern is given in 10 pieces: Vest, outer front, back, skirt for back, strap for back, collar, revers, and three pieces of the sleeve. The vest is to be lapped under the front so that the holes will match. The skirt for the back is to be gathered at 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 ten years will require three yards of goods twenty-four inches wide, one yard and five-eighths additional for the vest and the skirt for back; and one-half yard of velvet. Patterns in sizes for 10 and 12 years.

EVALINA DRESS.—Half of the pattern is given in 5 pieces: Front, back, bretelle, and sleeve of waist, and one-half of the skirt. The bretelle is to be gathered, and is to be placed to the row of holes in the front and back of the waist, and with most fullness on top of the shoulder. The sleeve is to be gathered top and bottom, between the holes, and at the bottom is to be finished with a narrow band of the necessary size. The skirt is to be gathered at the top. The size for four years will require four and a half yards of goods twenty-four inches wide, three yards of wide embroidery for the flounce, two and three-quarter yards for the bretelles, and one-half yard for the neck. Patterns in sizes for 2, 4, and 6 years.

BERYL APRON.—Half of the pattern is given in 4 pieces: Front, yoke for front, back, and cap. The front is to be laid in a double box-plait according to the holes. The cap is to be gathered, and sewed into the armhole according to the notches. The size for eight years will require three yards and a quarter of goods twenty-four inches wide, three yards of embroidery, and three-quarters of a yard of narrow embroidery for the neck. Patterns in sizes for 8 and 10 years.

HELENA BASQUE.—Half of the pattern is given in 9 pieces: Vest, front, side gore, side form, back, collar, cuff, and two sides of the sleeve. The left front is to be cut off in a line with the notch in the front edge and the middle of the point at the bottom. The extension at the side-form seam is to be lapped on the outside toward the middle of the back. The extension at the back seam is to be lapped toward the left on the outside. The long collar is made of a bias fold two and one-half inches wide, stretched on the lower edge, and held easy on the upper edge, to make it fit. A medium size will require two and one-half yards of goods twenty-four inches wide, and three-quarters of a yard additional for the vest, collar, and cuffs. Patterns in sizes for 34, 36, 38, and 40 inches bust measure.

VIOLETTA BASQUE.—Half of the pattern is given in 8 pieces: Front, side gore, side form, back, collar, cuff, and two pieces of the sleeve. The extension at the back seam is to be lapped from left to right. A medium size will require two and three-quarter yards of goods twenty-four inches wide. Patterns in sizes for 34, 36, 38, and 40 inches bust measure.

FREDA BASQUE.—Half of the pattern is given in 11 pieces: Front, full vest, jacket front, side gore, side form, back, collar, two sides of the sleeve, and two pieces of the cap. The full vest is to be gathered at the top, and laid at the bottom in three plaits turned forward, and then placed on the front according to the notches. The row of holes down the back shows the outline for the trimming. The upper part of the outer piece of the cap is to be gathered between the holes. A medium size will require one yard and three-quarters of goods twenty-four inches wide, and one yard and a half of velvet. Patterns in sizes for 34, 36, 38, and 40 inches bust measure.

GWENDOLINE WAIST.—Half of the pattern is given in 10 pieces: Front, side gore, side form, back, full front, full back, collar, and three pieces of the sleeve. The full front and back pieces are to be gathered at the top in a line with the rows of holes, and at the bottom, forward and back of the hole in each piece, respectively. The full piece for 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 in the sleeve. A medium size will require two yards of goods twenty-four inches wide, and three-quarters of a yard of velvet. Patterns in sizes for 34, 36, 38, and 40 inches bust measure.

SYBIL WAIST.—Half of the pattern is given in 8 pieces: Front, side gore, back, inside yoke for front and back, collar, and two pieces of the sleeve. The front and back are to have fine tucks run in lengthwise between the notches at the top, and as far down as the rows of holes, so that they will fit the yoke. The sleeve is to be gathered top and bottom between the holes. A medium size will require three and three-quarter yards of goods twenty-four inches wide. Patterns in sizes for 34, 36, 38, and 40 inches bust measure.

HERMIONE BLOUSE.—Half of the pattern is given in 6 pieces: Front, side gore, back, collar, and two pieces of the sleeve. Before cutting the goods, turn broad hems on the fronts and run narrow tucks—from one-half to three-quarters of an inch wide, and just meeting—in it, and deep enough to form a yoke reaching as far as the row of holes in the back and front. Then cut out by the pattern. Gather the sleeve top and bottom, and place the notch in the top to the shoulder seam. A medium size will require four and one-half yards of goods twenty-four inches wide. Patterns in sizes for 34, 36, 38, and 40 inches bust measure.

MONTAGU JACKET.—Half of the pattern is given in 10 pieces: Vest, outer front, side gore, side form, back, two collars, two sides of the sleeve, and pocket. The holes in the pocket match with those in the outer front. The front edge of the outer front is to be turned back in a line with the row of holes, to form the revers. The sleeve is to be gathered at the top between the holes. A medium size will require two yards of goods forty-eight inches wide. Patterns in sizes for 34, 36, 38, and 40 inches bust measure.

VENA CAPE.—Half of the pattern is given in 6 pieces: Front and back of yoke, two collars, and two cape pieces. The yoke pieces extend to the waist line, and are sewed to a belt of the proper size, to keep the garment down in place. Both cape-pieces are to be gathered at the top, the larger one sewed to the yoke in a line with the lower row of holes, and the smaller one in a line with the upper row. This upper one may have the upper edge covered with the trimming on the yoke, or it may be sewed on in a reversed manner, and then turned downward. A medium size will require two yards of goods forty-eight inches wide. Patterns in two sizes for ladies, medium and large.

NITA CAPE.—The pattern consists of three pieces: Half of cape, half of collar, and the entire hood. Join the notched edges of the hood, and then turn the outer edge over in a line with the row of holes. One yard and a quarter of goods forty-eight inches wide will be required for a medium size, including the hood. Without the hood, five-eighths of a yard will be sufficient. Pattern a medium size for ladies.

LEG O' MUTTON SLEEVE.—The pattern is in two pieces: Sleeve and cuff. Gather or plait the sleeve at the top, between the holes. Trim the lower part of the sleeve forward of the cuff. Pattern a medium size for ladies.

HELENA DRAPERY.—Half of the pattern is given in 3 pieces: Apron, back, and plait for the side. The holes at the top of the apron denote a plait to be turned toward the front; the side is to be laid in three plaits turned upward on the outside. At the top of the back drapery, the two holes nearest the front edge denote a side-plait to be turned toward the back; the clusters of holes are to be matched to form a burnous plait that is to hang loosely on the outside; back of this, the holes denote four side-plaits to be turned toward the middle of the back. The piece for the plait is to be laid, according to the holes, in a box-plait, and then secured over the seam that joins the front and back. Seven and one-half yards of goods twenty-four inches wide will be required. Pattern a medium size for ladies.

FREDA DRAPERY.—Half of the pattern is given in 2 pieces: Half of the front and half of the back. The holes near the back edge of the front indicate three plaits to be turned upward on the outside. The back is to be gathered at the top. The front can be made with either a straight or bias seam down the middle, or without a seam. Seven yards of goods twenty-four inches wide will be required. Patterns in a medium size.

LESLEY WAIST.—Half of the pattern is given in 10 pieces: Plain front, full front, side gore, side form, plain back, full back, collar, and three pieces of the sleeve. The full front and back pieces are to be gathered at the top, forward and back of the hole in each, respectively; and at the waist line in a line with the row of holes in each, and drawn in to fit. The full piece for the sleeve is to be gathered at 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 three yards of goods twenty-four inches wide. Patterns in sizes for 14 and 16 years.

NORFOLK JACKET.—Half of the pattern is given in 9 pieces: Front, side gore, side form, back, two collars, cuff, and two sides of the sleeve. Lay box-plaits in the front and back according to the holes. The size for twelve years will require two and three-quarter yards of goods twenty-four inches wide. Patterns in sizes for 10, 12, and 14 years.

UNA DRESS.—The pattern consists of 11 pieces: Front, side gore, and back of lining; full back, full front, surplice front, collar, two pieces of the sleeve, cuff, and one-half of the skirt. The plaited front is to be laid in four plaits turned forward, as far down as the row of holes, and is to be gathered at the bottom. The surplice front is to be laid in three plaits turned forward. The plaited back is to be laid in three plaits turned toward the middle of the back, and otherwise arranged to match the full front. The sleeve is to be gathered top and 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 six years will require four yards and three-quarters of goods twenty-four inches wide. Patterns in sizes for 6, 8, and 10 years.

IRIS DRESS.—Half of the pattern is given in 6 pieces: Front, side form, back, sleeve, cuff, and one-half of the skirt. The rows of holes in the front and back pieces indicate the outlines for plaited pieces that are to be laid in fine plaits turned toward the middle of the front and back, respectively, and placed on the lining. These pieces may be omitted, if preferred. The sleeve is to be gathered at the top between the holes; the skirt is to be gathered at the top. The size for six years will require four yards of goods twenty-four inches wide, and two yards and a half of silk for the sash. Patterns in sizes for 4, 6, and 8 years.

LISA DRESS.—Half of the pattern is given in 10 pieces: Two pieces for the front, side gore, back, two collars, cuff, and two pieces of the sleeve, for the waist; and one-half of the skirt. Lay the front edge of the front in one plait turned forward, and lap it over the vest so that the holes will match. Gather the top of the skirt and sew it to the waist with more fullness at the back than in front. The size for six years will require four and one-quarter yards of goods twenty-four inches wide, to make all of one material, or one yard and one-quarter of plain and two and three-quarter yards of contrasting goods to make as illustrated. Patterns in sizes for 4, 6, and 8 years.

PANSY DRESS.—Half of the pattern is given in 8 pieces: Front and back of lining, full front, full back, collar, sleeve, cuff, and one-half of the skirt. The full pieces of the waist are to be gathered top and bottom, forward and back of the holes in each, respectively; their upper edges are to be placed to the rows of holes in the lining, and the lower edges joined to the bottom of the waist lining. The sleeve is to be gathered top and bottom between the holes. The skirt is to be laid in double box-plaits, according to the holes. The size for six years will require three and a half yards of plain goods, and one yard and a quarter of contrasting material. Patterns in sizes for 4 and 6 years.

DOROTHY DRESS.—Half of the pattern is given in 5 pieces: Front and back of waist, sleeve, puff, and one-half of the skirt. The skirt is to be gathered at the top, and sewed to the waist with a little more fullness in the back than in front. The row of holes in the waist designates the place for the trimming. Both the sleeve and puff are to be gathered at the top, between the holes, and the lower part of each is to have a casing about three-quarters of an inch from the edge, through which draw-strings are to be passed to draw them in to the desired size. The size for four years will require three and one-quarter yards of goods twenty-four inches wide. Patterns in sizes for 6 months, and 1, 2, and 4 years.

ETHEL APRON.—Half of the pattern is given in a single piece. Lay the front in five box-plaits, as indicated, one in the middle and two on each side, and as far down as the row of holes. Shirr it below, or not, as preferred. Lay the pocket in plaits and place it on the apron so that the clusters of holes will match. The size for six years will require one yard and three-eighths of goods twenty-four inches wide, and four yards of trimming without fullness. Patterns in sizes for 6, 8, and 10 years.

BELLE APRON.—Half of the pattern is given in 5 pieces: Front, yoke, back, sleeve, and sleeve-band. Lay the front in three box-plaits, as illustrated. The size for six years will require two and one-half yards of goods one yard wide, and four yards of embroidery. Patterns in sizes for 4, 6, and 8 years.

MISS'S DRAWERS.—Half of the pattern is given in 2 pieces: One leg, and half of the band. Gather the top at the sides and back. Leave open at the sides or back, as preferred. The size for ten years will require three-quarters of a yard of muslin, one yard of insertion, and one yard and a half of embroidery. Pattern in sizes for 8, 10, and 12 years.

HAROLD SUIT.—Half of the pattern is given in 8 pieces: Front and back of blouse, chemisette, collar, two pieces of the sleeve, and two pieces of the trousers. The lower edge of the blouse is to have a hem about an inch wide through which an elastic ribbon is to be run to bring it in to the required size. The sleeve is to be gathered top and bottom between the holes. 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.

BRUNSWICK SUIT.—Half of the pattern is given in 11 pieces: Front, side-gore, and back of waist; collar, and three pieces of the cape; cuff and two pieces of the sleeve; and one-half of the skirt. The skirt is to be laid in kilt-plaits and sewed to the bottom of the waist. The opposite notches at the top and bottom of the front of the waist, designate the middle. The size for four years will require three and one-quarter yards of goods twenty-four inches wide. Patterns in sizes for 4 and 6 years.

Beryl Apron.

Beryl Apron.

THIS pretty model is best made in white goods, as illustrated: embroidered flouncing is especially good for the purpose, or embroidery can be added. The front has a yoke, and the back is in sacque shape. See page 315 for a full description of the pattern.

Adelina Dress.

Adelina Dress.

THIS is just the model to be used for light-weight woolens and washable goods for spring and summer wear. The fullness in the waist and the full bretelles make it very becoming for slender, undeveloped figures. The illustration represents gray-blue cashmere with openwork passementerie interwoven with silver. For washable goods, embroidery would be most effective for the flounce and bretelles. The pattern of the waist only is given. The skirt is made of four straight breadths of goods twenty-four inches wide, with the flounce seven inches deep and about half as wide again as the skirt. The pattern is fully described on page 315.

Evalina Dress.

A QUAINT little model that is suitable alike for washable goods and light silks and woolens. It is particularly pretty made in solid-colored gingham or Chambéry trimmed with embroidery. The bretelles can be omitted, if preferred, and

Evalina Dress.

the dress will then be quite simple enough for the most practical uses. See page 315 for particulars about the pattern.

Children's Dresses.

FIG. 1 represents the "Sarita" dress (illustrated and described in the Magazine for July, 1890) made in beige-colored cashmere with ruby velvet yoke, cuffs, and belt. The model is quite as desirable for washable goods, gingham with embroidery being particularly pretty.

FIG. 2 shows a pretty coat-dress that is especially stylish made in light woolens or silks, although the model is appropriate for washable goods as well. The back pieces are rather wide, and to these the middle of the skirt is attached in gathers, a narrow belt, buckle, and bow concealing the joining, and matching the front. The illustration shows blue-and-white shepherd's check silk, with vest, cuffs, and back breadth of white surah, and revers of blue velvet. Full particulars about the pattern will be found on page 315.

Children's Dresses.

SARITA DRESS. BEULAH DRESS.

The Economies of Prohibition.

BY W. JENNINGS DEMOREST.

A WONDERFUL impetus in all kinds of trade and in every branch of mechanical industry would certainly follow the Prohibition of the Liquor Traffic.

Besides this immense increase in the business of the country, a great reduction in taxes would inevitably follow this moral and social revolution. Probably not less than one-half of the present taxes, both in city and country, are required to protect society from the depredations caused by this destructive business of liquor selling. The large expense of our courts, our police, and their accompaniments,—prisons, lunatic asylums, poor-houses, reformatories, and many other departments of charities and correction,—is due, in very large proportion, to the ravages on society caused by the legal toleration and sanction of this poison of alcohol.

Most of this expense could and would be saved if this vile traffic in alcoholic poisons were prohibited by law. The terrible amount of misery and crime, the fearfully devastated homes that, directly or indirectly, are the result of the use of the poison of alcohol, besides the tremendous losses by fires, accidents, etc., are only too well known.

But the business and material aspects of this question of Prohibition are astounding, in fact, overwhelming; and at no period of history have the people had so favorable an opportunity to practice the virtues and secure the benefits of economy in the interest of the people, as the present.

The question of the benefits and economy as applied to prohibition of the liquor traffic has a very broad and significant compass, covering a wide field which includes every department of business, our whole civilization, indeed, whether applied to the beautiful in art, the utilities of industry, the benefits of education, or the necessaries of life. Each and all of these interests are involved in the many and great advantages that would result from the entire prohibition of the liquor traffic, as well as security from the terrible result that the traffic produces,—an insatiable appetite which has become a national Juggernaut of crime and passion.

The large amount of the people's earnings lured from them by the temptation of alcohol, and swallowed up in this vortex of destruction, is an awful, colossal, wanton waste. In an intelligent and careful consideration of this stupendous waste, the mind is staggered with the magnitude of the cost of the liquor traffic to the whole country. Every man, woman, and child has to share and endure this awful burden and incubus on society! In all its business relations, our whole country is more or less paralyzed by this terrible blight on the resources of the people.

Careful estimates of the real cost of alcoholic beverages have put the amount at eleven hundred million dollars, annually, in the United States; and then certainly eleven hundred million more are squandered to repair the inevitable consequences of this costly war on the lives and health of the people and industry of the country. How appalling is the stupendous waste of their earnings! Twenty-two hundred millions of the people's hard-earned money, all destroyed, worse than wasted! All gone to satisfy the terrible cravings of a vicious appetite, to burn, corrode, and consume the bodies and to destroy the minds and morals of the people!

If the people could only realize what the world would secure through Prohibition, if through Prohibition these thousands of millions were put in the regular channels of trade, if we could have this vast amount of money spent for the ordinary necessaries and luxuries of life, what a tremendous boom we would have in every department of our industries! Commercial enterprise and mechanical employments would be stimulated to a degree that the world has never yet seen. Confidence and security would promote activity in new enterprises, wages everywhere would be largely increased, everybody would have employment, all kinds of trade would be nearly doubled, and every branch of productive industry enlarged and strained to its utmost capacity to supply the wants of a prosperous and happy people.

A greatly increased consumption and an increased production would be the result all over the country; stores would be crowded with customers; mills, mines, foundries, and workshops, overrun with work; there would be less crime, less poverty, more building, and better homes with less nuisances; plenty of work at high wages, plenty of money, plenty of schools, and plenty of recreations,—plenty of everything that makes life enjoyable. Who would not welcome Prohibition?

> "Prohibition! Give echo to that dear name,
> While listening millions laud its honest fame.
> Its reign's supreme, its fields forever vernal;
> 'Tis based on truth, and truth has life eternal."

The Necessity for Conscientious Rulers.

THE magnitude of the interests that grow out of the demands of a large community for supervision from appointed guardians, makes the obligations and selections of these guardians a matter of the greatest possible importance.

As the highest good of the people can only be secured when the wisest, best, and most conscientious men are selected to direct the affairs of a large community, to put the property and lives of the people in the hands of unscrupulous men, especially men whose education, instincts, and interests are associated with the vilest dens in the community, is to invite crime, and to jeopardize every home and degrade every department of the government.

This would seem too evident to need any argument; and yet we find our country, in all its political aspects, now under the sway and absolute control of the liquor dealers, a class of men whose very business has become a synonym of the most abject selfishness,—a business that not only demoralizes the people, but has not one redeeming feature of a moral character,—a business that blights and blots the whole community with the mildew of passion, crime, and lawlessness.

With such rulers put in authority by the votes of the people, what wonder that we have vice and corruption pervading the whole fields of politics, that chicanery and plunder in public office are the rule and not the exception?

What wonder that 8,000 legalized dens of vice and crime are found in the city of New York, and in other cities in like proportion, all over the land? What wonder that our lives, homes, and property are in constant jeopardy, that every person who walks our streets at night is in dread of violence?

What wonder that the labor elements are everywhere disturbed, that anarchy, distrust, train-wrecking, murder, and other high crimes are so prevalent everywhere?

But why these terrible scenes in a civilized community? Who or what is responsible? The answer comes back with the fearful truth and distinctness: Alcohol poisoning, sanctioned and justified by law.

Licensing liquor-selling is in truth the lowest form of

vicious treachery, involving the whole country in a state of unrest. property is jeopardized, lives are endangered, and the country is flooded with crime, misery, and pauperism, and all to gratify a vicious, perverted appetite, and in subservience to the most dastardly indifference and wicked complicity of so-called respectable citizens.

There is but one remedy, ABSOLUTE PROHIBITION OF THE LIQUOR TRAFFIC; and this can only come through the determined political action of conscientious voters, who must combine for this purpose, and by heroic, zealous exercise of their political rights at the ballot-box, dislodge the terrible incubus on our civilization, with the power of Prohibitory Laws, faithfully enforced. W. J. D.

Responsibility for the Liquor Traffic.

THE national dishonor that the people suffer on account of governmental sanction of the terrible curse of liquor selling, is not so apparent as it is real. The real injury it is to our civilization is beyond expression.

The mountains of crime and the terrible destruction of lives, health, and property, are among the awful consequences that this vile and insidious poison of alcohol produces everywhere; and what makes this poison so dangerous, and so great a curse to the people, is the fact that it has the countenance and approbation of a large number of the best and most respectable portion of the community, many of whom not only use it themselves, but are ever ready to advocate its use to others.

Quite equal to this in pernicious effect are the wicked sanction the liquor traffic gets from apathetic respectable citizens, and the connivance and complicity of many Christian people, who are supposed to have higher standards of morality, but whose influence, on this account, is indirectly the more effective in misleading the minds of the people, by allowing the conviction to become prevalent that the use of alcoholic poisons as beverages is only questionable, and therefore may be tolerated with impunity.

As the liquor traffic thrives on ignorance and selfishness, aggressive opposition is essential to its prohibition, and ENTIRE PROHIBITION is the only remedy. If the selling of a fascinating poison to the people inflames the worst passions, producing misery and debauchery in our homes, and makes in our cities slums that are real hells on earth, how can the toleration and legal sanction of these horrors by the people be considered other than the worst form of treason?—more especially when the Supreme Court of the United States says that no legislation can bargain away the public health or the public morals: the people themselves cannot do it, much less their servants.

How terrible becomes the responsibility of every voter for the crime and wretchedness that the liquor traffic produces in the community, when votes secure a license for the perpetuation of this villainous business of debauching the people with an alluring, fascinating poison.

Voter, does your vote count in this complicity with the curse of all curses, the liquor traffic? Does your party "justify the wicked-for-reward,"—a license?

WHAT ANSWER? W. J. D.

DEMOREST MEDAL CONTESTS.

16,000 MEDALS AWARDED.

40,000 RECITATION BOOKS SOLD DURING 1890.

The work at foreign mission points is increasing in interest. Letters are received from West and South Africa; Bombay and Rangoon, India; Samokov, Bulgaria; Launceston, Tasmania; Kingston, Jamaica; and many other distant places. The selections are translated into the native languages, and given to the young people. Several programmes have been sent, but the contestants' names are unpronounceable.

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" E. J. SMITH	Providence, R. I.
REV. L. S. FOSTER	Carrollton, Miss.
" E. O. TAYLOR	Lake Geneva, Wis.
MISS M. H. SOWLES	Leonard, N. Dak.
H. FRANCES JONES	Philadelphia, Pa.
N. J. BRAY	Minneapolis, Minn.
MISS INEZ A. GODMAN	Winsted, La.
M. J. HALL	Bozeman, Montana.
GEO. A. FRACKER	Iowa City, Iowa.
TALLULAH ATKINS	Orange Home, Fla.
MR. F. W. CLARK	Northampton, Mass.

THE following announcement appears in the January number of "The Junior," an able and popular youths' paper, published at 32 E. 14th St., New York City, subscription price, 40 cents:

FROM CONTEST TO CONQUEST.

IMPORTANT ANNOUNCEMENT TO DEMOREST SUPERINTENDENTS, AND CONTESTANTS EVERYWHERE.

The success of Demorest Medal Contests in educating the youth in the principles of Temperance and Prohibition, and through them reaching the masses, shaking prejudice, convincing the reason, convicting the conscience, and winning the support of the people, has made this branch of work one of the most popular as well as one of the most beneficial in the range of temperance effort.

During the last four years, 16,021 medals have been awarded by W. Jennings Demorest. This indicates that 16,021 meetings have been held, and over 128,000 addresses delivered by youthful orators. The good accomplished by this means can never be known.

The Junior movement has always been a prominent agent in this work. "The Junior" has, from the first, realized its importance, given its heartiest support, urged it incessantly, and has, more than any other paper, been the recorder of its success.

We have great pleasure in signalizing our removal to New York City and inaugurating our New Year's work by announcing that each issue of "The Junior" will contain one or more selections which may be used in competition in Demorest Contests, on the same basis as the pieces published in the Demorest Recitation Books.

These pieces will be selected with special reference to dramatic expression, clearness of argument, and force of appeal; will be new and fresh, many of them original, and all of them approved by Mr. Demorest, before publication. We sincerely trust that these "Junior" orations will echo around the globe and win to the Prohibition reform millions of earnest advocates. Let Juniors everywhere co-operate with W. C. T. U., I. O. G. T., and other workers, in making Demorest Medal Contests a power for good.

The following letter from Mr. Demorest will be of interest to all friends of this work:

"To 'The Junior':—With great pleasure I give my hearty approval to the plan of 'The Junior' for publishing orations for Demorest Medal Contests. Let us all, young and old, with the opening of this New Year, resolve to thunder our protest against the legalized iniquity of alcoholic poison, every day, until our glorious country is liberated from its thraldom, and our coming citizens shall govern the nation with heroic patriotism.

"Yours, 'from contest to conquest,'

"W. JENNINGS DEMOREST."

NEW YORK CITY, *Jan'y* 1, 1891.

Some Notes on the Adulteration of Food.

IN an interesting paper on the adulteration of food, read before the AMERICAN SOCIAL SCIENCE ASSOCIATION a few years ago, it was stated that the only way in which this great and growing evil could be effectually checked was by communicating to the people in every possible way "the most ample and exact information as to the manner in which foods are adulterated, the kinds of food usually tampered with, and the evil effects arising therefrom." The aim of those who use adulterations is to artfully conceal their dishonest work, and it requires in most instances the best expert skill to detect the foreign or deleterious substances. It is useless to pass laws on the subject unless the people are fully roused to the importance of having the laws executed.

Adulterations may be roughly divided into two classes:

1. Those which are simply fraudulent, but not necessarily injurious to health—the use of some cheap but wholesome ingredient with the pure article for the purpose of underselling and increasing profits, as for instance the admixture of water with milk, of peas and carrots with coffee, meal with mustard, and wheat flour with pepper.

2. Those which are injurious to health—the use of drugs or chemicals for the purpose of changing the appearance or character of the pure article, as for instance, the admixture of potash, ammonia, and acids with cocoa to give apparent smoothness and strength to imperfect and inferior preparations; the use of alum and other deleterious substances to raise and whiten bread.

In his "Familiar Letters on Chemistry," Baron Liebig states that the bakers of Belgium discovered some years ago how to produce from damaged flour a bread which appeared to be made from the finest and best wheat flour; and they did it by adding to the dough sulphate of copper, a poison.

It is a curious fact that in the country from which chemically treated cocoa is now being exported, namely Holland, the adulteration of coffee with chicory was first practised. The adulteration took so well in England that subsequently a patent was taken out for a machine which moulded chicory in the shape of the coffee-berry. But that was a comparatively harmless adulteration.

The late Dr. Edmund Parkes, professor of military hygiene, and one of the highest English authorities on the subject of the adulteration of food, stated that he found the cocoa sold in England very commonly mixed with cereal grain, starches, arrowroot, sago, or potato starch, and that even brick-dust and peroxide of iron were sometimes used.

In Dr. Hassall's well-known work on "Food and its Adulteration," it is stated that out of sixty-eight samples of cocoa examined thirty-nine contained earthy coloring matter, such as reddle, Venetian red, and umber.

A writer in the "Hospital Gazette" of London (Aug. 23, 1890) says: "We do not regard all adulterations as equally heinous. When, however, potent chemicals are systematically added, what words can sufficiently convey our indignation! . . . Cocoa of the most excellent quality and of absolute purity is now to be obtained at very reasonable prices; and no purchaser need be at any loss to get an article to which the severest tests can be applied, and which will come out triumphantly from the ordeal. We were, nevertheless, positively startled, not long since, to receive a pamphlet, bearing on its front page the names of some distinguished chemists, and addressed to the medical profession, vaunting some foreign manufactured cocoas which were distinctly stated to contain a considerable addition of alkaline salts. Surely even lay readers do not need to be reminded that soda and potash cannot be taken with impunity day after day." And an English physician, in a communication to the October (1890) number of "Hygiene," states that of late years the country (England) has been "flooded with foreign cocoas contaminated with an admixture of alkali." The object of the contamination, he says, is this: "Cocoa does not give an infusion or decoction, but mixed with water is practically a soup; it is suspended, not dissolved. Now, the addition of an alkali gives rise to a soap, in plain English, much as when common soap, a compound of oil and alkalies, is mixed with water; but this alkalized cocoa has an appearance of strength which it does not possess, and the consumer hastily assumes that he is getting far more for his money and being supplied with a much better article. . . . The recent great improvements in the preparation of cocoa, by removing the superabundant oil, have so much increased the digestibility of this nutritious beverage that the last excuse for the addition of alkalies and starch is gone, and the presence of the former, besides being deleterious, cannot answer any purpose except giving an appearance of fictitious strength to the resulting infusion, or soup."

In an article on "Cocoa and Chocolate," in the October number of the same magazine, Dr. Crespi says: "The attempt to prepare cocoa in a soluble form has tempted some foreign firms to add alkaline salts freely. These salts cannot be recommended to healthy subjects as regular articles of food."

The Birmingham (England) "Medical Review" for October, 1890, contains an article on "Food and its Adulterations," in which it is stated that "quite apart from any question as to the injury resulting to the human system from taking these salts it would be only right that the medical profession should resolutely discountenance the use of any and all secret preparations confessedly adulterations, and adulterations, too, of a sort not justified by any of the exigencies of the circumstances. . . . Cocoa is only to be recommended as a beverage when it is as pure as possible."

Quite recently a valuable little work on chocolate and cocoa was published in Germany. It describes, with characteristic German thoroughness, the cacao-tree, the properties

of its fruit, and the various modern methods of preparing the food product for the m rket. In treating of "the manufacture of cocoas deprived of a portion of their oil and rendered more soluble," the writer says: "This branch of the manufacture has recently undergone a great development. Hygiene appears to demand a product which, with a diminution in the amount of oil, should be further distinguished from ordinary chocolate by its readily dissolving in water, milk, etc., thereby being much more easily appropriated by the human system. The removal of a portion of the oil ought to make it more readily assimilated by the digestive system. Starch, cellulose, and the albuminoids are of difficult solubility, and must be converted into such a form as to be readily soluble in water. This would render them easy of absorption, and increase their efficiency. In practice this end has been sought in several ways." . . . The Alkaline or Chemical process "depends on the fact that the roasted cocoa is treated with carbonate of soda, magnesia, potash, or bicarbonate of soda. * * * The cocoa of those manufacturers who employ the alkaline method is sometimes subjected to a perfectly barbarous treatment in order to secure solution by means of the alkali. For instance, the roasted cocoa-beans are boiled with an aqueous alkaline solution; the product is then dried, deprived of its oil, and afterward ground. Or the crushed cocoa is roasted, deprived of its oil, powdered, and boiled with water containing an alkali. Both methods of treatment are in the highest degree destructive to those bodies which are essential constituents of cocoa. It is especially the cacao-red which is attacked, and with it disappears also the aroma."

It should be added that in the manufacture of large quantities by the Alkaline or Chemical method it is difficult, if not impossible, to so regulate the heat in drying the cocoa after the chemicals are added (the material being then in a very sensitive state) as to prevent the oil from being scorched; and it is well known that burnt oil or fat is wholly indigestible.

The deleterious effects of the chemicals used in such processes have been referred to in general terms; something more definite and precise on that point will be of interest.

In reply to the inquiry, What is the effect on the system, especially on the gastric mucous membrane, of small quantities of dilute alkaline liquids taken frequently and regularly (for example, for breakfast), one of the leading physicians in Boston says: "I would say that while some persons and certain conditions of the system might bear without injury dilute alkaline liquids taken at not frequent intervals, yet the great majority of persons and those with a sensitive stomach could not bear the daily use of such liquids without serious injury. It would produce gastritis, or inflammation of the mucous membrane of the stomach, of varying degree, according to the frequency and amount taken and the susceptibility of the person. This would be accompanied with many of the symptoms of dyspepsia, and if carried to any considerable extent, with troublesome eruption of the skin, and not infrequently with serious disturbance of the functions of the kidneys. I certainly think its long continuance would be dangerous."

Dr. Sidney Ringer, Professor of Medicine at University College, London, and Physician to the College Hospital, perhaps the greatest English authority on the action of drugs, states in his "Handbook of Therapeutics" that "the sustained administration of alkalies and their carbonates renders the blood, it is said, poorer in solids and in red corpuscles, and impairs the nutrition of the body." Of ammonia, carbonate of ammonia, and spirits of ammonia, he says: "These preparations have many properties in common with the alkaline, potash, and soda group. They possess a strong alkaline reaction, are freely soluble in water, have a high diffusion-power, and dissolve the animal textures. . . . If administered too long, they excite catarrh of the stomach and intestines."

Household.

"Our Cooking Class."

LESSON XIII.

CLAMS AND OYSTERS.

DURING the Lenten season and an R in the month, we may with perfect propriety discuss the cooking and preparation of oysters and clams. We will take them each in turn and try a few of the simpler ways of cooking them.

In buying clams, as, in fact, with almost anything, you must stop and consider to what use you intend putting them. If to be served raw on the half-shell, then the very smallest size are only fit for the purpose: of those, five or six for each person, served on a bed of pounded ice, each clam with its natural amount of liquor, is a most delightful and potent appetizer. These, like oysters, are always served as a course by themselves, just before the soup.

The smallest size is also best for roasting. The shells must be scrubbed until perfectly clean, then place the clams flat in a clean dripping-pan in the oven: when the shells open, the clams are done. Dish them carefully, that you may lose none of the juice, and serve hot. I prefer this to the old-fashioned way of placing them directly upon the hot coals, as it puts your fire out, most of the liquor goes into the fire, and the shells are not clean.

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If you wish to stew or serve clams cooked whole, purchase those of medium size; for soup or fritters, when the clams are chopped, the largest size will do; but for anything else they will be found too tough.

When using the liquor of either clams or oysters, boil it until the scum rises, skim carefully, and you can pour off the liquor perfectly clean and fit for use, as the sediment will remain at the bottom. Always prepare the liquor in this way before putting in the clams for stewing; and remember that too much cooking toughens both clams and oysters. In stewing, leave the clams in the liquor only long enough to become perfectly hot, then serve: remove oysters as soon as they plump, that is, when they swell.

For clam stew, to about a quart of shelled clams allow half a pint of milk, a tablespoonful of flour, two tablespoonfuls of butter, and pepper and salt to taste. Take the clams from their liquor, put them in a colander, and pour about a pint of cold water over them. Add this water to their liquor, boil and skim as above directed, then add it to the milk and put on to boil. Beat the flour and butter to a cream and add to the milk as soon as it comes to a boil. Put in the seasoning and clams, and let them simmer about two minutes. This is sometimes served with toasted bread or crackers at the bottom of the dish.

When making clam soup, have your thickened milk in one saucepan and the clam-juice with the chopped clams in another, and do not put the two together until you are ready to serve, or the milk will curdle. For clam soup, to about a quart of shelled clams allow a quart of milk, three tablespoonfuls of butter, the same of flour, four of cracker-crumbs, and pepper and salt to taste. Rinse the clams and boil and skim the liquor as directed for clam stew; chop the clams, add them to the liquor, and let it come to a boil. In the meantime, put the milk on to boil, rub the flour and butter to a cream, and add it to the milk as soon as it comes to a boil. When ready to serve, add the cracker-crumbs to the milk, mix with the clams and liquor (which also should be boiling hot), and serve immediately. A little finely chopped parsley is a great addition to clam soup.

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For fritters, chop the clams fine, and for the batter use the juice of the clams, previously boiled and skimmed, instead of the milk usually required in batter. Clams may be used whole in fritters, but they are never so delicate as when chopped. Oysters should always be used whole in fritters, one to each fritter; and their liquor, properly prepared, used in making the batter.

Oysters of the smallest size are only fit for stews, soups, or to be used in stuffing. Raw oysters should be served ice-cold on the half-shell, with a quarter of a lemon in the center of the plate, the oysters arranged symmetrically around, the larger ends pointing outward. I should never select the largest oysters for serving raw: the medium size is by far pleasanter to look upon, and not such a gastronomic feat to swallow. I agree most heartily with Thackeray, who, after partaking of one of our very large oysters, remarked that he felt as though he "had swallowed a baby." For frying or broiling, the larger the oyster the better.

If for soup or fritters, place oysters in the colander and rinse with cold water, the same as clams, stirring and lifting gently, then run the fingers carefully around the frilled edges to see that no bits of shell adhere. Use this water with the oyster liquor.

For frying, the oysters need not be rinsed. Dry each oyster thoroughly, sprinkle with a little salt and allow them to stand a few minutes, then roll in well-sifted flour, dip in beaten egg, roll again in bread or cracker-crumbs, and fry. Prepare all your oysters

(*Continued on page* 324.)

The "Michigan Stove Co." have made a new departure in the manufacture of their unrivalled stoves and ranges, which will be appreciated by all who use stoves, and especially by those who handle them and have to keep them clean. This is the use of aluminum with iron, which mixture makes smoother castings, prevents cracking, and benefits the iron in every way. No other manufacturers of stoves and ranges use this combination of metals. As everybody is not familiar with aluminum, although it is much talked about at present, they are sending to each of their customers a handy little match-safe made of that metal, which is as "bright as silver" and as "light as a feather."

SIR PHILIP MILLER, the great English horticulturist, writing in 1740, says: "The best method to have Cabbages good is to procure fresh seed from abroad every year, for it is apt to degenerate in England in a few years."

The above is a simple illustration of the fact that the best seeds will rapidly degenerate under unfavorable conditions. The wise will take heed, therefore, and buy their seeds of D. M. Ferry & Co., Detroit, Michigan, whose world wide reputation as the *best* and *most reliable*, as well as the *most extensive* seed growers and dealers, is due to the fact that they take advantage of every circumstance of climate, soil, methods of culture, selection of seed-plants, etc., to procure the best possible seeds and keep them up to that high standard.

Send your name to the firm's address, and you will receive a copy of their Seed Annual for 1891 free.

(*Continued from page* 323.)

first, that you may give your entire attention to the frying. Have lard enough in your pan to cover the oyster completely, and be sure that it is hot enough. If it will brown a piece of bread by the time you have counted forty, it will do. Count as the clock ticks. Place the oysters in the frying-basket (do not pile them one on top of another) and immerse in the hot lard. They should be a light brown in about four minutes. Remove them at once, drain, then place them in your dish on soft wrapping-paper, which will absorb all superfluous grease. This paper must of course be removed before serving. If you are not the happy possessor of a frying-basket, then only use lard enough to prevent the oysters from sticking to the pan, and turn them as one side browns.

In broiling oysters, dry and salt, as you do for frying, dip in bread-crumbs, then flatten well with the hand, broil on a well-greased broiler for two minutes on each side, and serve at once with a little piece of butter on each oyster.

Both clams and oysters should be kept very cold, although oysters if frozen are apt to turn sour.

MRS. C. A. SHERWOOD,
Teacher of Cooking at the "Manhattan Working-Girls' Club."

Fish Food for Lenten Dishes.

BESIDES the ordinary methods of preparing fish for the table, there are many ways in which fish remnants may be warmed over, or *réchauffés*, and become even more appetizing, if anything, than at their first appearance. Also there are various ways of preparing salt fish, which those who do not live where fresh fish is readily obtainable will find desirable to know, in order that their table may not be lacking in suitable dishes for the Lenten season. The following receipts will doubtless prove acceptable to the housekeeper wishing to prepare simple, inexpensive, and palatable food for the season

FISH CHOWDER.—Halibut, haddock, bass, or any of the firm-fleshed fishes make excellent chowders. Pork is usually used in making chowder, but butter may be used instead, if preferred. Slice half a pound of pork and fry it in the chowder-kettle. Remove the pork, put a plate upside down in the kettle, and put in layers of sliced raw potatoes, onions, and broken pieces of fish, season with salt and pepper, cover with water, and boil till the onions and potatoes are cooked. Put in some pilot crackers when the chowder is nearly done. The onions can be left out if not liked. Chopped parsley is an addition.

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FISH SOUP.—Wash a large cod-head and put it on to boil in one gallon of cold water. Boil one hour, then strain through a sieve or coarse cloth. Wash half a pound of rice and put over to boil with the strained soup, cut up one onion and grate a carrot fine, and add. Boil slowly for another hour, then add chopped parsley, and all the fish picked from the head. Boil four pounds of potatoes, and as soon as these are done the soup is ready to serve. A little milk will make it very like oyster soup, and improves it.

GERMAN PIE.—Peel, wash, and slice two pounds of potatoes; soak four or five red herring in warm water and break up into flakes; arrange the sliced potatoes and herring in a pie-dish, sprinkle with pepper, and add a little dripping. Cover with a paste made of one pound of flour and three ounces of lard or dripping, and a teaspoonful of baking-powder, mixed quite stiff with cold water. Bake the pie for two hours, and serve hot.

KEDGEREE.—This is a dainty breakfast-dish, and can be made of the left-over portions of any delicate white fish. If fish needs to be prepared especially for it, boil it till done, and then remove all the bones and skin, and separate into flakes. Boil a teacupful of rice, and when soft mix two ounces of butter with it and add the flaked fish, seasoning with salt, white pepper, and a little cayenne. Have three hard-boiled eggs in readiness, chop them fine, reserving one of the yolks, stir in the kedgeree, then dish, and grate the yolk of an egg over it.

FISH AND MACARONI.—Any kind of boiled white fish can be worked over by this receipt. Break pipe macaroni into short lengths, drop into salted boiling water and boil for twenty-five minutes. Drain, and mix with an equal quantity of flaked fish. Put into a saucepan two ounces of butter, and a little lemon-juice, pepper and salt, and add the yelks of two eggs. When quite smooth, stir in thoroughly one half-pint of drawn butter, then put in the fish and macaroni, and heat it thoroughly in the sauce. Put it in a baking-dish, keeping it heaped high in the center, cover it lightly with fine bread-crumbs, and brown in the oven.

CURRIED FISH.—Free one pound of fish from skin and bones. Chop an onion and fry it in butter, adding a tablespoonful of curry powder. When the onion is cooked thoroughly, add the fish, broken into flakes; cook for five minutes, stirring constantly. Serve in a border of boiled rice. To boil the rice for the curry, wash it, soak for half an hour in warm water, then drain and boil for fifteen minutes in water boiling when the rice is put in. Drain, and keep hot till wanted.

MOCK SMELTS.—This is a fish dish which is not fish at all. Make noodle dough,—as for soup,—beating together with a rolling-pin three eggs, a teaspoonful of salt, and flour to make a stiff dough. Cut into four pieces, roll out as thin as paper, spread on a paper to dry, and, when dry enough, roll up. With a sharp knife shave the roll into thin rings, and boil them five minutes in water boiling when they are put in. Brown a pint of bread-crumbs in butter in a frying-pan. Skim out the mock smelts into the crumbs, pour a cupful of rich milk over all, let it heat up well, and serve. This is an excellent family luncheon-dish for Lent.

CODFISH CROQUETTES.—Pick a pound and a half of salt codfish to pieces, and soak overnight in sufficient cold water to cover it. In the morning, drain and press it dry. Put half a pint of milk into a double boiler; rub together two ounces of butter and three even tablespoonfuls of flour, stir into the hot milk, and cook to a thick paste. Stir in the picked-up codfish and two beaten yolks of eggs; let it cook for two minutes, season with salt and pepper, and turn out to cool. Then form into croquettes, dip into egg and then into bread-crumbs, and fry a light-brown.

Reproduced in Miniature from the February Number of this Magazine.

For the Completion of "Modern Round Dances," see Page 292 of this Number.

1

MODERN SOCIETY DANCES

BY T GEORGE DODWORTH

DANCING has been a source of amusement as far back as history has been able to take us it has been used in war in religious ceremonies, and for social amusements. Although the style and manner have changed from time to time, yet the dance continues to be universally enjoyed, and I believe will continue to be At present I have only to deal with dancing as a social pastime, and the dances our fashionable society are using There can be no doubt that the pleasure of dancing is due to a number of things that please the senses, aside from the rhythmical motions, and among these are the pleasure of being in company with the opposite sex, the inspiring strains of an orchestra, and the large and handsomely furnished rooms that are used for the purpose.

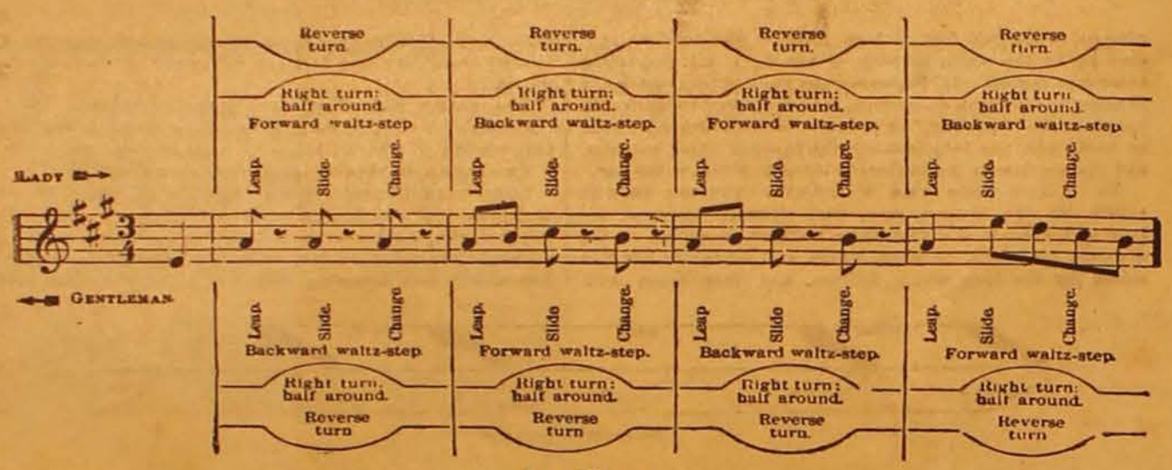
Society, though is easily satisfied with a limited number of dances, which vary slightly from year to year, more in speed than in combinations of movements, one year a little slower, or another year a little faster, and it is not for the want of variety to choose from for I doubt if any other country can produce as many round and square dances as we have here. The truth of the matter is, society hasn't the time to devote to learning new dances or combinations, and, partly also out of respect to the large number of foreigners who attend these notable dances, and who do not know the variety we have, it is only when a new set make their début that new ideas are taken in society previously procured in a dancing-class, but it is not long before even these imitate their elders and fall into the same routine, consequently the dances are few, and vary very little from their original form

The fashionable round dances are the "Waltz," "Polka," "Three-slide, or Glide Polka," and "Polka Redowa," the square dances, "Lanciers," "Saratoga Lanciers" and, occasionally, a "Quadrille." These are few, and would prove rather monotonous were it not for the "Cotillion," or "German;" for at most fashionable assemblies the Cotillion takes up a greater part of the evening, and in some cases all the evening. During the Cotillion the Waltz and Polka are generally danced alternately but with constant changing of partners, passing through various figures and the exchanging of souvenirs, it certainly becomes a very interesting dance, so one does not mind the limited number of round dances used

Ever since round dances came into vogue, the Waltz has been *the* dance the *tempo* has changed and so has the name; but still the three movements of the waltz were made. When the "Redowa Waltz" was the fashion, the waltz time—three-four time—was played faster than now consequently the three movements were made quickly and with more spring on the first movement It was necessary to spring more quickly, the same as in running one is obliged to spring from one foot to another in order to move with any amount of speed. Then the fashion changed to slow waltzing, which was called the "Boston," the three movements were made slowly, and the leap, or spring, on the first movement was necessarily changed to a long step, or glide, still making three movements to a bar, one to each beat. The Waltz of the present time is a modification of both, and when the steps are made in a trained and cultivated manner, it is certainly nearer perfect dancing than either of the two mentioned above, and deserves to be called "the poetry of motion."

In describing the steps used in the "society" dances, I will use the "Dodworth method," in which we deal with "movements" more than "positions," in explaining. The "Waltz" steps are "leap," "slide," "change" The gentleman leaps backward from right to left, counting one slides the right foot sideways on a line with the left foot, counting two, then brings the left foot up to the right foot quickly, and displacing the right foot, counting three. Now he is in position to begin the forward waltz to leap forward from left to right foot, on one, slide left foot sideways on a line with the right, at two, bringing the right foot up to the left quickly, to displace the left, at three.

Practice backward and forward till the steps are well known and follow each other smoothly, then practice reversing, which is to leap backward from left to right, slide the left foot sideways on line with the right, and bring the right foot up to the left quickly, displacing the left, then leap forward from right to left, slide the right foot sideways

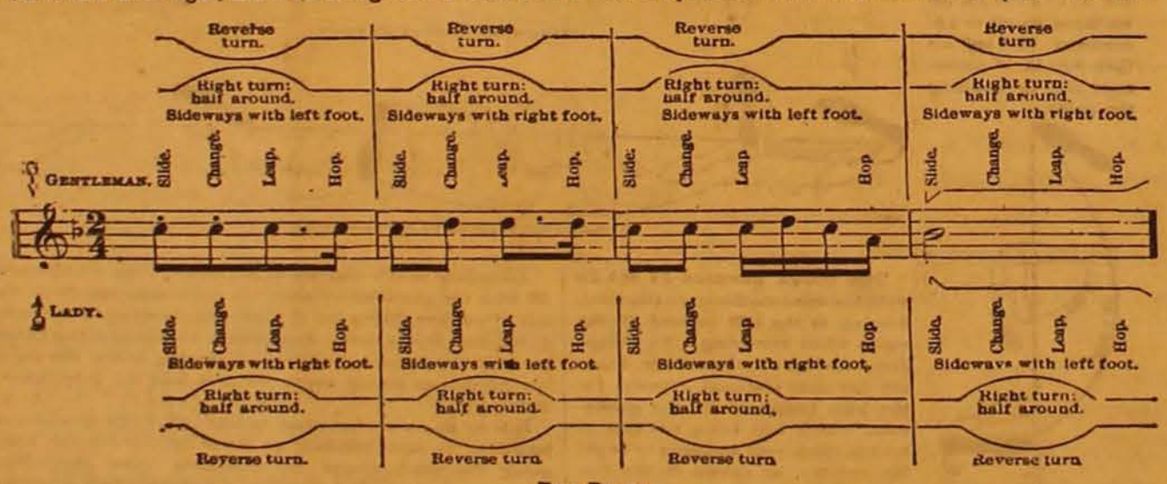


THE WALTZ

2

on line with the left, and bring the left up to the right quickly, displacing the right. Give the reverse the same amount of practice as the other. After knowing these two steps, the "right" and "reverse," practice turning on the second movement in a bar,—every slide,—being very careful to turn to the right, and in reversing to turn to the left. enjoy the dance, the steps are made longer and change less frequently. However, experience teaches all this.

On the opposite page will be found a description of the waltz-step, with turns, etc., set to music. Begin facing in the direction indicated by the arrows, and move in the direction that you read the music, from left to right. The same



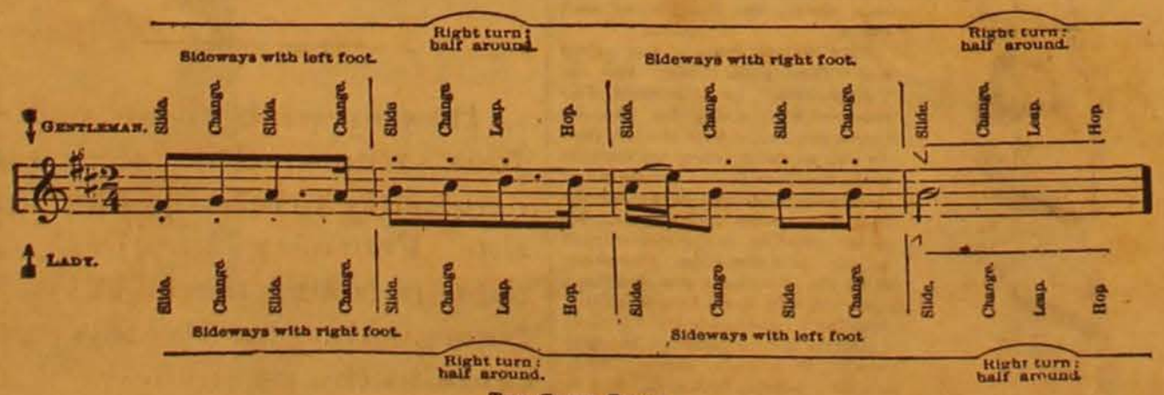
THE POLKA.

In order to change from turning in one direction to another without stopping, the gentleman must go backward twice, so as to change from right to left and left to right.

The above description answers for the lady's part, with the exception that in beginning she commences on the forward step of the waltz with the right foot, when the gentleman steps backward with his left; and in reversing, the lady will step forward with her left foot when the gentleman steps backward with his right. The change from the right turn to reversing is made by making two waltz-steps forward when the gentleman makes two waltz-steps backward, always bearing in mind that in speaking of a "waltz-step" three movements are represented,—leap, slide, change.

The changing from one turn to the other is gauged according to the amount of space the dancers have to move in: if crowded, the steps are made very short and change more frequently; and if fortunate enough to have room to rule applies to the other dances illustrated with music, but always carefully notice the arrows at the beginning of the music, which indicate the way the lady and gentleman are to face in starting.

The "Polka" has the same movements as the Waltz, with one extra, the "hop," which must be made in a very gentle manner, so as not to be conspicuous, and is made, comparatively speaking, like a grace note in music, and at the last of a bar "Slide," "change," "leap," "hop," are the movements. The gentleman begins sideways, with his



THE GLIDE POLKA

forward when the gentleman makes two waltz-steps backward, always bearing in mind that in speaking of a "waltz-step" three movements are represented,—leap, slide, change.

The changing from one turn to the other is gauged according to the amount of space the dancers have to move in: if crowded, the steps are made very short and change more frequently; and if fortunate enough to have room to left foot, the lady with her right, both turning half around on the change and leap. No reverse steps are required as in the Waltz as all the movements are made sideways, and in order to reverse, the body is merely turned the other direction on the change and leap. One bar must be danced backward by the gentleman and forward by the lady to stop turning in the direction they are going, so as to turn the body in the other direction, whichever it may be.

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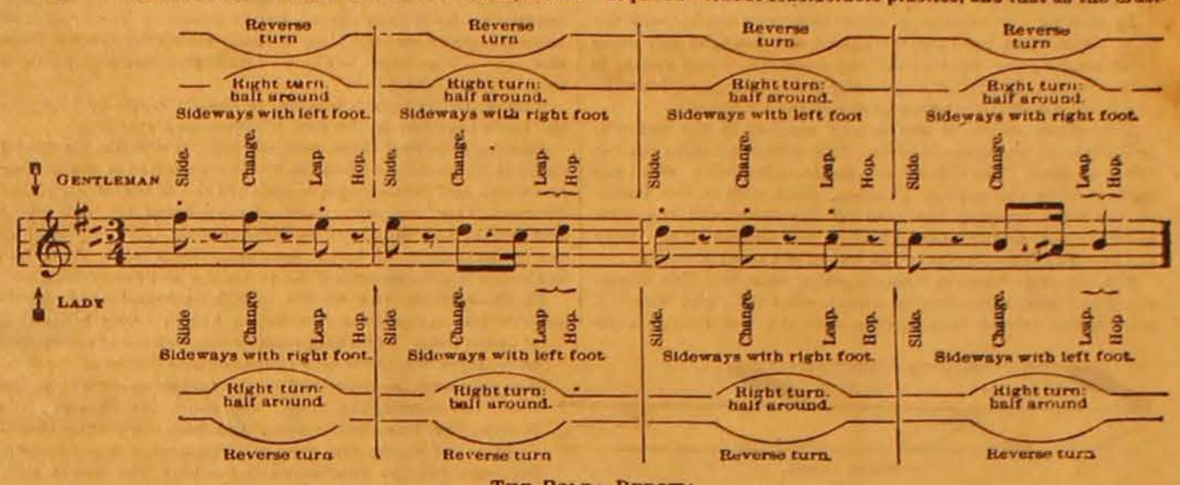
The "Glide Polka" is composed of "slide," "change," "slide," "change," slide," "change," "leap," hop," requiring two bars of music to make the combination. The first bar is danced sideways without turning, the turn being made on the second bar, as in the Polka No reversing is used in this dance, as the turns are not made on every bar, and there is no danger of becoming dizzy

The "Polka Redowa" is the same as the Polka, but is danced to three-four time instead of two-four as in the Polka



THE POLKA REDOWA

In the "Dancing Classes" composed of young persons not yet "out" but who meet for practice and the pleasant associations, will be found a greater variety of dances, for, in addition to those danced by their elders and described above, will be found the "Caprice," "Military Schottische," or "Dancing in the Barn," "Cadet Polka," "Heel and-Toe" Polka, "Dash Polka," "Yorke," "New York," "Columbia York," Knickerbocker," "Berlin," and others, probably not so well known, and too numerous to mention in the present article

In conclusion I would say our best examples in society are those who have been painstaking in acquiring a thorough knowledge of the art of moving properly when dancing. To learn to dance is an easy matter, but to learn to move well when you dance, requires long and careful practice There is no dance in which the bad habits of motion will show so plainly as in the "Barn Dance," in which you often see dancers rushing forward in a crouching position swinging their arms and drawing their knees up with a kick and a hop, imitating the poor, uncivilized Indian who knows no better This contrast, however, forms a strong background for bringing out those who show the essence of refinement and cultivation in every movement which is so much more in keeping with the elegant costumes worn, the beautiful music played, and the magnificent surroundings where "Modern Society Dances" are enjoyed.

Diagrams and Directions for Practicing Dancing.

WITH the view of giving those who have no knowledge at all of the positions and movements, or motions, composing the so-called "steps" of dancing, the means of practicing and acquiring the ability to make them, the accompanying drawings and diagrams have been prepared A careful reading of the descriptions and practice in accordance with the following instructions, will enable anyone to dance the favorite round dances of the day as described in the foregoing article.

It must be borne in mind that no accomplishment can be acquired without considerable practice, and that as the musician must learn to be proficient in short exercises before he can execute a whole piece of music, so the practice-steps in dancing must be thoroughly acquired until they are reduced to an involuntary memory of the muscles, and do not require a mental effort to make them, before the "round" dance, or the same steps in revolution, can be made with ease In practicing, the beginner must do as in learning anything: go slowly at first, until a mastery of the subject is acquired, and then by practice work up to the speed necessary Begin by counting and making the movements deliberately being sure that each movement is correct before making the next one Learn each portion of the "step" you are practicing, as you would learn each note of a bar of music, and count to very slow time, as in counting for slow music, while making the motions required in succession, for the waltz, polka, or other dance you are learning In short, one must learn the alphabet of the positions and motions in dancing, before a dance can be "spelled" in its entirety.

To the uninitiated, the round dance often "looks easy" the different motions, well and evenly executed, bear so close a resemblance to each other that they are not distinguishable to the unpracticed. Bearing this in mind, the beginner will not attempt to give too much "character" or emphasis to a motion so as to make it in marked contrast to the others. This will be explained as we go on.

Beginning with the five positions, which all would-be dancers must know, we find that they are simply attitudes of one foot in relation to the other. The positions are herewith illustrated in diagram and (in part) by perspective drawings. In all the diagrams that follow, the white foot represents the right foot; the black, the left foot: the black and white feet with dotted outlines are used to represent the positions which these respective feet have just left. The dotted lines on the diagrams represent the direction on the floor in which the foot must move in order to take the step required.

THE FIRST POSITION illustrated by diagram only is taken by placing both heels together, with the feet flat on the floor

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FIRST POSITION.

and turned outward at almost a right angle. In all subsequent positions and motions, this angle must be maintained as nearly as possible.

THE SECOND POSITION (illustrated by diagram and by a perspective drawing of the feet in position) is taken by standing on one foot,—moving the other to one side as far as the toe will reach, pointing downward, without bending the knees In the diagram of this position the feet are shown with the heels about the length of a medium-sized foot apart. The illustration in perspective shows the proper position of both feet, the left foot flat on the floor, the right extended in the second position, the heel being lifted from the floor. The second position of the left foot is simply the reverse of this, standing on the right foot and extending the left in the same manner and to the same distance.

SECOND POSITION.

SECOND POSITION

THE THIRD POSITION (illustrated simply by diagram) is taken by placing the heel of one foot in the hollow of the other foot, both feet flat on the floor, and at the same relative angle as the preceding. The white foot, representing the right foot, is shown in the third position on the diagram. For the third position of the left foot, place the left foot in front. The third position of the right foot is sometimes called, for the sake of convenience, the third position of the left foot behind, and *vice versâ*

THIRD POSITION

THE FOURTH POSITION is perhaps the most important of all, as in beginning most dances the feet are first placed in this position. (This position is illustrated both by diagram and in perspective.) To take the fourth position, stand on one foot (the left foot is shown in the illustration), and advance the other foot about the length of one foot forward of the standing foot, maintaining the angle as shown in diagram, the extended foot having the heel off the floor. It will be seen by the perspective sketch of the right foot in the fourth position, that this is much the same as the ordinary walking position, except that the toe touches the floor and the heel is raised slightly,—say an inch.

FOURTH POSITION.

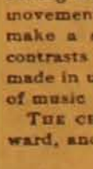
FOURTH POSITION

The fourth position behind (illustrated both by diagram and in perspective) is much the same as in beginning to take a step backward. As illustrated with the left foot in fourth position behind in the perspective drawing, the right foot remains standing, and the left is extended behind, with the heel raised The fourth position of the right foot behind is when the right foot is extended behind, with the heel from the ground In the diagram, the fourth position of the right foot behind is shown

FOURTH POSITION BEHIND OF RIGHT FOOT

FOURTH POSITION BEHIND OF LEFT FOOT

THE FIFTH POSITION (illustrated by diagram) is taken by standing on both feet with the heel of the forward foot touching the toe of the one back of it, the feet at nearly a right angle, as shown in the diagram of the right foot in the fifth position. The left foot in the fifth position is when the left is placed in front of the right in the same manner. The fifth position of the right foot is sometimes called the fifth position of the left foot behind, and *vice versâ*.



FIFTH POSITION

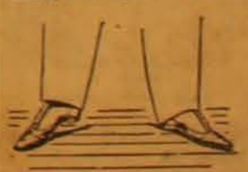
These positions must be remembered by their numbers, and it will be found much easier to do so by remembering that the odd numbers, 1, 3, and 5, represent the positions when the feet are in contact and flat on the floor, and the even numbers, 2 and 4, represent the positions when the feet are apart, the standing foot flat on the floor, the toes of the extended foot pointing downward, and the heel raised.

The practice of these positions, even by those who do not care for dancing, will add much to the power of posing and poising the body gracefully, remembering always to keep the legs straight, the head erect, and the body very slightly inclined forward.

BESIDES THE POSITIONS, the various "motions" which occur in dancing must be learned thoroughly. These are sometimes spoken of as "steps," but are, in reality, different motions of the feet and legs, carrying the body in different directions, or transferring its balance, with a certain pleasing marked expression not made in ordinary walking motion. These motions are six; viz., the change, the slide, the step, the leap, the hop, and the halt.

The learner will bear in mind that these names are given for purposes of designation, and are not to be taken in the most literally exaggerated sense. Notwithstanding they are different, yet all are so subdued in their expression that their equality gives them a certain resemblance. For instance, the slide is no long, sweeping glide, carrying one bodily from one point to another, nor the leap a sudden spring calling all the strength of the body into play; but these movements reduced to their minimum, the effort being to make a succession of subdued, dissimilar movements, the contrasts and harmonies of which will be appropriately made in unison with the contrasting and harmonizing notes of music

THE CHANGE is made either sideways, forward, or backward, and is, as its name implies, a changing of the weight from one foot to the other, making a slight spring at the same time. The change is made by bringing the heel of one foot up to the heel of the other, and immediately raising the latter so that it is lifted from the floor ready for any motion next required of it. For instance, the side change (illustrated by two drawings) is made thus: Beginning with the right foot in the second position (see illustration), bring or close the right heel to the left heel, and as the right heel strikes the left heel, immediately raise the left foot so that it is lifted from the floor, ready for the next required motion. (See illustration.) As the changes occur only between other motions they can be best practiced between two of the slides, leaps, or steps, remembering that in "changing," the weight of the body is transferred from one foot to the other in every instance. The side change from left to right is made in the same manner as described and illustrated, reversing the feet.



BEGINNING OF SIDE "CHANGE."

END OF "CHANGE."

[OVER]

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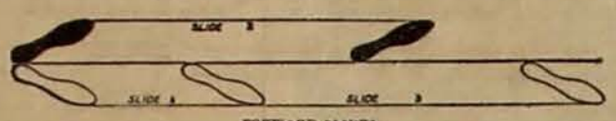
The change forward is made by bringing the heel of the foot which is behind, up to the heel of the forward foot, in first position, and as the heel of the foot which was behind strikes the heel of the forward foot, immediately raise the latter, which will bring it off the floor, free to make any motion required of it.

The change backward is made by bringing or closing the heel of the foot which is in advance, back to the heel of the other foot, in the first position, and as the heel of the foot which is brought back strikes the heel of the other, immediately raise the latter, so that it is lifted off the floor ready for the next motion which may be required of it.

In making the change, a slight spring is made from the foot which first held the weight of the body, to the other foot, bending the knee of the leg with which the spring is made, very slightly, in beginning the spring, and immediately straightening it again as the change is made.

THE SLIDE, which is the second motion, is not difficult, being merely an advance of one foot without lifting the toe from the floor. The side slide is made as follows: With the right foot in the second position, slide with it ten inches to the right, keeping the heel off the floor until the slide is completed, and then transferring the weight of the body to the right foot. Slide to the left in the same manner.

For the slide forward (see diagram, with left foot designated in black, right foot in white), slide the right foot forward about twenty inches, then slide the left foot past the

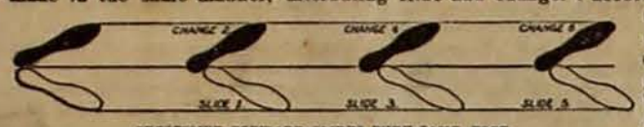


FORWARD SLIDES.

right the same distance, advancing as in walking, lifting the heels, but not the toes, from the floor.

For the slide backward, slide the feet backward alternately, as in sliding forward.

Slides, either forward or backward with the same feet, require a change between each slide and the one following (see diagram). Thus: Slide right foot, counting 1, change to left, 2; slide, 3; change to left, 4; slide, 5, change to left foot, 6, etc. Backward slides with the same foot are made in the same manner, alternating slide and change.



SUCCESSIVE FORWARD SLIDES WITH SAME FOOT.

The forward change thus connected with the slide—or other motion—is precisely like the motion made to catch the step when walking with a friend and being "out of step."

THE STEP, which is the third motion, requires no illustration, being simply for the forward step, a step as in walking on the toes. The backward step is the same as in walking backward. Alternate steps succeed each other the same as alternate slides, but successive steps with the same foot require the introduction of a change, as in the successive slides.

THE LEAP is the fourth motion, best defined as a light, springing step from one foot to the other, bending the knee of the leg from which the leap is made, very slightly in beginning to leap. Do not make the mistake of jumping; simply bend one knee, and step with a light spring upon the other foot, carrying the weight of the body in the direction the leap is made.

For the side leaps, stand with the right foot in the second position. Bend the left knee gently and take a springing step ten inches to the right with the right foot. Same to the left.

Forward and backward leaps are made alternately, like the slides. The diagram of slides and changes will also illustrate how the changes are to be illustrated in a succession of leaps in one direction with the same foot. Practice these in all directions. The leap and change are especially to be practiced, for these are the most likely to be ungracefully executed by the beginner.

THE HOP, the fifth motion, is made by one foot alone, quite independently of the other, and is executed by rising and falling slightly on one foot, without removing the toe from the floor. The hop should be inconspicuous, and reduced to a very gentle motion.

THE HALT, the sixth motion, is simply made by bringing the heels together in the first position, and stopping.

Having practiced these motions well, it will not be found difficult to combine them in the arrangements composing the waltz and polka steps, which are the bases of all round dances. The leap, slide, and change occur in both waltz and polka, but in different combination. Many will find the polka easiest to learn, and may begin with that, but the waltz is first described as being the most important.

IN PRACTICING THE WALTZ, it will be found necessary to acquire the successions of motions before really beginning to dance them. The diagrams of the waltz-steps arranged on squares will show how these motions follow each other. The first step, as described in the foregoing article, is the leap; the second, the slide; the third, the change; the fourth, the leap (backward); the fifth, the slide (backward); the sixth, the change. The steps are precisely the same for the gentleman as the lady, the reason they appear different in dancing being that while the lady is making the first three steps, the gentleman is making the last three, and *vice versâ*, and so on in succession.

The diagrams of squares on the opposite page show the left foot in black, the right foot in white, and the directions taken by the moving feet are indicated by dotted lines and arrows, while the positions just left by moving feet, are shown by feet with dotted outlines.

Beginning with the feet at the lower right-hand corner of a twenty-inch square chalked on the floor (or, if the eye is accurate, one may follow an imaginary square), leap with the right foot (see square No. 1) from the lower to the upper right-hand corner of the square, counting 1; slide the left foot forward and sideways to the upper left-hand corner (see square No. 2), 2; change by bringing right heel up to left, lifting the left foot (see square No. 3), 3, leap backward with the left foot to the lower left-hand corner (see square No. 4), 4; slide right foot backward and sideways to lower right-hand corner (see square No. 5), 5, change, by bringing the left heel to the right heel, lifting the right foot so that it will be lifted from the floor ready to commence the forward leap again, 6. These six motions in the above succession comprise the waltz-step and are made to two bars of music. The dancer must count so as to make the six motions in a uniform time. If to count 1, 2, 3, 4, 5, 6, seems less easy than to count 1, 2, 3, 1, 2, 3, the latter will be best, recommencing the count 1, etc. at the fourth motion.

When these motions have been practiced until they become a memory of the muscles, and can be executed to a rapid, even count of 1, 2, 3, 1, 2, 3, etc., begin to practice the "reverse," also illustrated with black and white feet on a square diagram. The reverse in waltzing is not merely a reverse in turning, as some suppose, but a reversing of the use of

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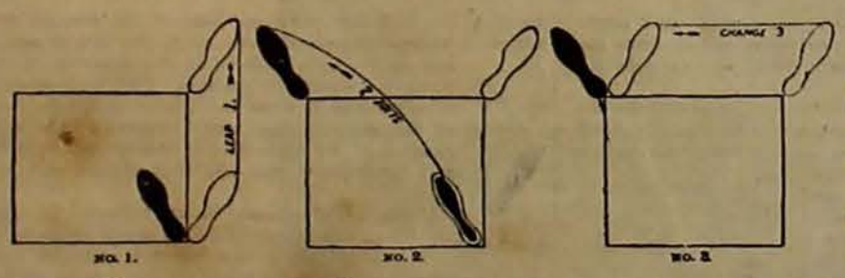
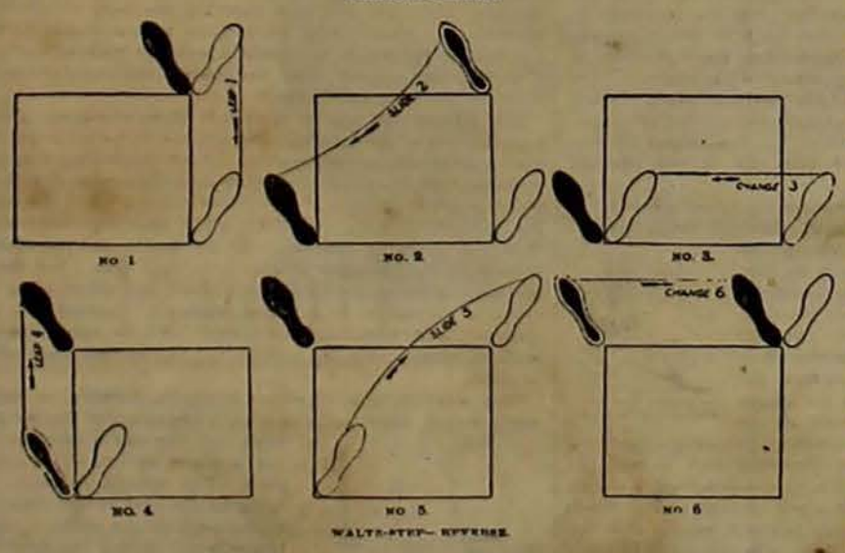


WALTZ-STEP—RIGHT.



WALTZ-STEP—REVERSE.

the feet, making each motion correspondingly as in beginning with the right foot, only beginning with the left, and continuing to substitute the left foot for the right and the right foot for the left, throughout, in the turn turning to the left also.

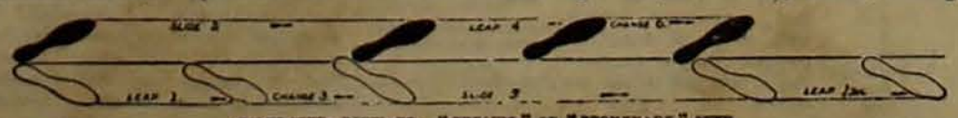
To practice the reverse for the waltz follow the square diagram, as illustrated. Beginning at the upper right-hand corner (and with the backward movement first, instead of forward), leap backward with the right foot to the lower right-hand corner (see square No. 1 of reverse), counting 1, slide left foot backward and sideways till in a line with the right and at the lower left-hand corner (see square No. 2 of reverse), 2, change by bringing the right heel to the left, lifting the left foot (see square No. 3 of reverse), 3; leap forward with left foot to the upper left-hand corner (see square No. 4 of reverse), 4, slide right foot forward and sideways to upper right-hand corner (see square No. 5 of reverse), 5, change by bringing the left heel to the right, and immediately lift the right foot from the floor, ready to commence the backward leap again, 6.

THE WALTZ FORWARD AND BACKWARD, also called the "pursuit," or "promenade step" is next to be practiced. In this (see diagram) going forward, begin with the right foot, leap forward in a straight line about twenty inches, counting 1, slide forward with the left foot—keeping it at the angle shown in the diagram—about twenty inches in advance of the right foot, 2; change forward to right, bringing the right heel to the left and immediately raising the left foot from the floor ready for the following leap, 3; leap forward with the left foot about the same distance as with the right, 4; slide forward with right foot, 5, change forward to left by bringing the left heel to the right, and immediately raise the right foot from the floor, ready for the leap to follow, 6. The following leap, 1, recommences the series.

The backward waltz is begun with the left foot (see diagram on next page). Leap backward with left foot, counting 1, slide backward with right 2, change to left 3, leap backward with right, 4, slide backward with left, 5, change to right leaving the left foot raised for the next backward leap, 6; etc.

After the above four movements have been learned so that the dancer can make them to rapid waltz music, or a quick count of 1, 2, 3, etc., the next thing is to learn to turn. Two bars and one series of waltz motions—six—are required for each turn, as shown in the waltz figured to music in the above article.

THE WALTZ, TURNING TO THE RIGHT, is illustrated by a diagram, the dotted curved lines showing the turns and corresponding with the turns shown above and below the music bars as illustrated in article above. Stand with the feet each side of the waltz line (as shown in diagram). Leap forward with the right foot, about twenty inches, counting



WALTZ-STEP—FORWARD, "PURSUIT" OR "PROMENADE" STEP.

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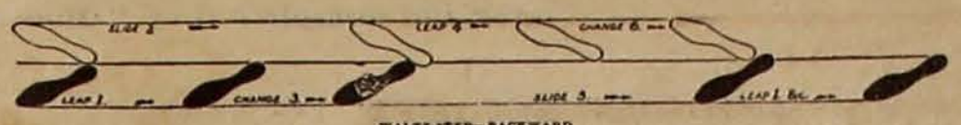
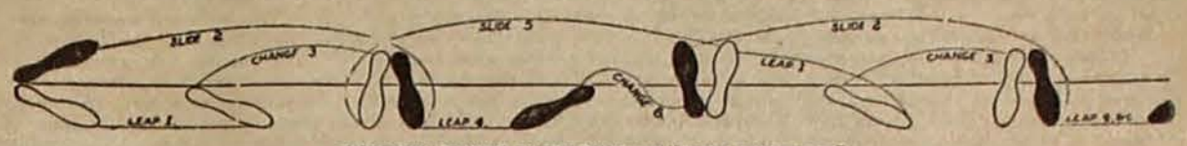


WALTZ-STEP—BACKWARD.

1; slide the left foot forward, following the direction taken by the right foot, turning in so doing towards the right, and bring the left foot across the line about ten inches forward of the right toe, 2; change to the right by bringing the right heel back to the left, and immediately raise the left foot from the floor 3; leap backward on the straight line with the left foot, 4; slide backward with the right foot, turning again to the right, bringing the right foot about ten inches back of the left foot, across the same line, in the opposite direction, 5; change to left, by bringing the left heel up to the right one, completing the second half turn, and immediately lift the right foot, ready to recommence,



WALTZ-STEP TURNING TO THE RIGHT, OR "RIGHT WALTZ-STEP."

counting 6. Then leap forward with the right foot, 1, etc., as shown for three counts farther on the diagram, and so on in succession.

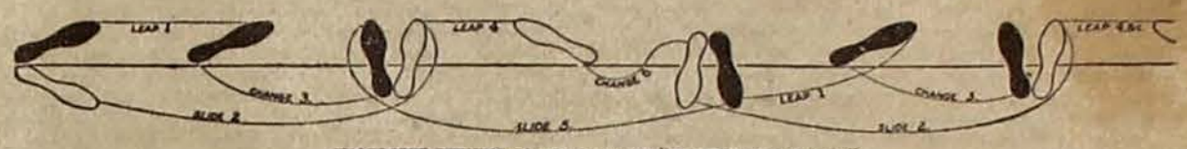
In practice it will be well for a lady to begin at 1, and for a gentleman to begin at 4, continuing to make the motions and turn as they follow on the diagram. A tendency to make the turn distributed on the three movements is natural, and is not to be checked, remembering that the turn is in reality a movement of the body, which carries the feet with it in the lines shown, and not a movement of the feet, rigidly confined to certain lines.

THE REVERSE WALTZ is also shown in diagram. Beginning with the left foot to leap forward, the motions succeed as in the waltz turning to the right, not forgetting to turn to the left. In beginning the change from the waltz turning to the right, to reverse, it is necessary to dance one bar as in the "pursuit," or promenade step, either forward or backward, the lady making the forward three motions, and the gentleman the backward three motions to the bar.

TO CHANGE FROM THE WALTZ-STEP TURNING TO THE RIGHT, to the reverse step, with forward motions, the lady will execute the first three motions as shown in the diagram for waltz forward, which will leave the left foot raised for the leap which follows, and then begin with the left foot, as shown on the diagram for the reverse waltz.

TO CHANGE FROM THE RIGHT TO REVERSE STEP with backward motions, the gentleman will make the first three motions to one bar, as shown in the diagram of backward waltz, which will leave the right foot behind, raised for the backward leap which follows, and then begin the reverse at 4 (the leap backward with right foot), as shown in the diagram of reverse waltz, and continue. The gentleman will never allow the lady to take the backward change to reverse, unless absolutely necessary to avoid collision.

When all these steps have been learned alone a couple may practice them together to music, as shown above it being customary for them to make a slide and change to the music of whatever bar is being played at the time of beginning the lady sliding the right foot, the gentleman the left foot, in order to begin with their feet in the proper position to take the first waltz-step.



WALTZ-STEP TURNING TO THE LEFT, OR "REVERSE WALTZ STEP."

THE POLKA having one more movement than the waltz, viz., the hop, and being in two-four time, must be danced more rapidly, the turns and accent being made on the bars of music as shown previously.

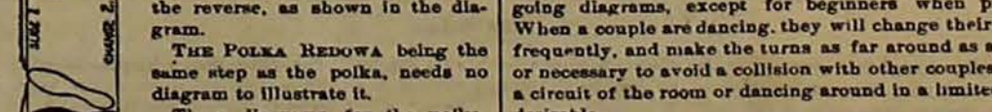
THE POLKA FORWARD may be practiced as shown by the accompanying diagram, beginning with the right foot.

Slide right foot forward about twenty inches, counting 1, change to left, 2; leap forward with right, 3 hop, 4 and repeat.

THE POLKA BACKWARD is simply the reverse. Slide backward, 1; change, 2, leap backward with the same foot that made the slide, 3, hop with same foot, 4; and repeat.

THE POLKA SIDEWAYS, has already been described.

THE POLKA TURNING TO THE right is illustrated by the accompanying diagram. The gentleman begins with the left foot, thus: slide forward counting 1; change turning a little to the right, 2; leap with left foot still turning, 3 hop on left foot, bringing right around to begin the next



POLKA-STEP—FORWARD.

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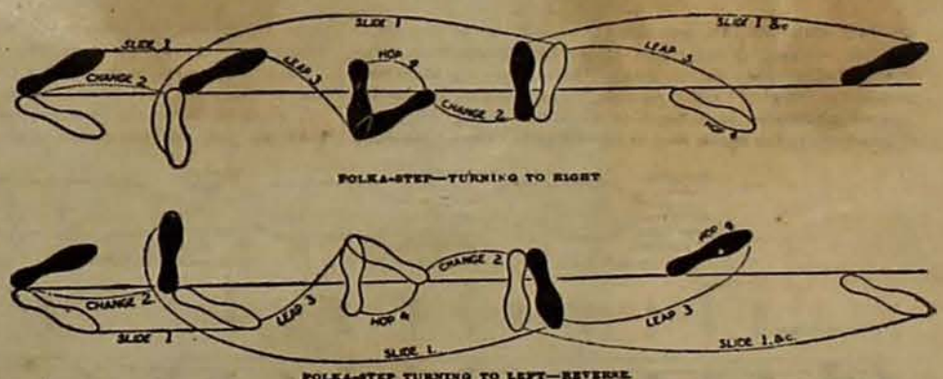
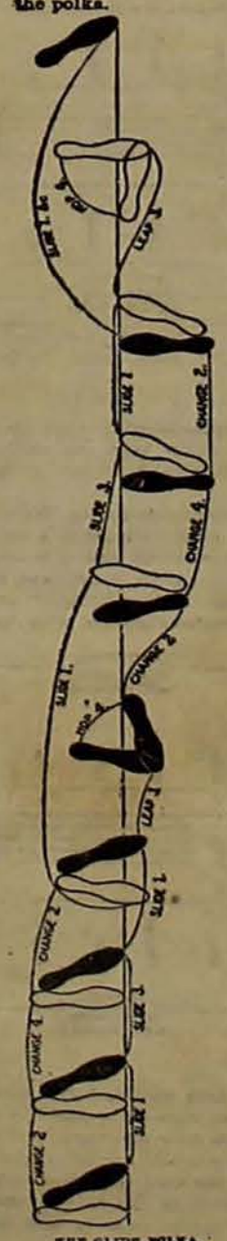
slide, 4; and so on along the line. Even if not intending to learn the waltz, the learner of the polka will do well to read the directions for waltzing so as to understand them, as they will be of assistance also in learning the polka.



POLKA-STEP—TURNING TO RIGHT.

POLKA-STEP TURNING TO LEFT—REVERSE.



THE GLIDE POLKA.

THE POLKA REVERSE is made with the same motions (see diagram), turning to the left instead of the right, while revolving. To change from the right to the reverse, dance one bar (four motions), forward for the lady, backward for the gentleman, which will bring the feet of both in the proper positions to begin the reverse, as shown in the diagram.

THE POLKA REDOWA being the same step as the polka, needs no diagram to illustrate it.

These diagrams for the polka, having been prepared for the dancer to practice alone, show the feet, in starting at the end of the line, pointing in the same direction; but when a couple dance together, they should stand on opposite sides of the line, the lady below, the gentleman above, the line, facing each other.

THE GLIDE POLKA, also called the "Three-slide Polka," and the "Esmeralda," is illustrated for practice with a diagram like the above, beginning with the left foot. As will be clearly seen, the motions to the first four counts (or one bar of music) are made sideways along the line, the couple in practicing together standing on opposite sides of the line as in the polka. Beginning as for the gentleman (see diagram), slide left foot about twenty inches, counting 1; change to right foot, 2; slide left foot, 3; change to right foot, 4; then slide, change, leap, and hop, turning to the right as in the polka, one half-turn, then begin the "Esmeralda," or slides, again, with the other foot, slide right, 1 (in practice the lady will begin with this slide); change to left foot, 2; slide right, 3; change to left foot, 4; then polka half-round, as shown on the diagram, and also on the preceding diagrams of the polka.

According to this diagram of the Glide Polka, which starts off with the gentleman's step, the gentleman stands on the left of the line, facing it: the lady should stand on the right of the line, facing him. As shown in the music to this dance given in the preceding article and running across the page, the gentleman stands above the line, and the lady below facing him.

It is by no means necessary to make all steps of uniform length or to turn precisely as far as indicated in the foregoing diagrams, except for beginners when practicing. When a couple are dancing, they will change their direction frequently, and make the turns as far around as agreeable or necessary to avoid a collision with other couples, making a circuit of the room or dancing around in a limited space if desirable.

For the benefit of young dancers desiring to learn and practice the "Yorke," the "Bohemienne," or Heel-and-Toe Polka, the Military Schottische, or "Dancing in the Barn," the "Caprice," or "McGinty," the new Varsovianna, the "Berlin," etc., full descriptions and illustrations of those dances will be given in the next number of this Magazine,—the March number.

Correspondence Club.

The increased number of our correspondents, and the difficulty of finding time to examine or space to answer all their letters, render it necessary to urge upon them, **First** — *Brevity.* **Second** — *Clearness of statement.* **Third**—*Decisive knowledge of what they want.* **Fourth**—*The desirability of confining themselves to questions of interest to others as well as themselves, and to those that the inquirer cannot solve by a diligent search of ordinary books of reference.* **Fifth**—*Consideration of the possibilities of satisfactory answers to the queries proposed.* **Sixth**—*A careful reading to see if the questions are not already answered in separate articles and departments of the Magazine. We wish the Correspondence Club to be made interesting and useful, and to avoid unnecessary repetition. We are obliged to confine it within a certain space, and we ask for the co-operation of our intelligent readers and correspondents to further the objects. Inquiries respecting cosmetics, medicine, or surgery, will not be noticed.*

"W. B. C."—Of course anyone can take the massage treatment at home, if the services of a professional *masseur* can be commanded. It would not be advisable for anyone to undertake such treatment without the advice of a physician or experienced nurse. Massage requires to be given by a skilled hand to be of very much benefit. There are machines which are advertised to give self-massage, but these are another affair, and cannot be recommended, without some knowledge of the benefit desired to be obtained by their use.

"Mrs. M. E. B."—A stylish dress for early spring wear, for a lady thirty-three years of age with dark red hair and brown eyes, would be a brown cloth suit made in tailor style, with jacket to match having brown velvet sleeves.—Face your black Jersey jacket with wide Hercules braid, all around, and use black crocheted frogs for fastening in front, instead of buttons.—You can use your old-fashioned pair of tongs as an ornament without "fixing them up," unless they are black, in which case you might bronze them.

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"MRS. J. L. M."—Since your hair is so thick as to make a single coil uncomfortable in any arrangement, divide it in two parts and coil one on top of your head and the other at the back, just below the crown. At thirty-three a woman is not too old, by any means, to wear her hair in looped braids pinned at the back of the head, if the hair is all her own, and such an arrangement is becoming to her.—Dr. Kate Bushnell is an evangelist of the Department of Social Purity in the World's W. C. T. U. She was born in Central Illinois, and educated in the public schools of that State, and in the Northwestern University, where she took up the study of medicine. Later she went to the Chicago Woman's Medical College, and afterwards went as a medical missionary to China, where she remained two years and a half. In 1888 Dr. Kate Bushnell visited Wisconsin on one of the most heroic trips ever made by any woman, and went among the dens of iniquity in the Wisconsin pineries, where women were kept in most depraved slavery. This trip was undertaken at the request of officers of the W. C. T. U. Dr. Bushnell is now about thirty-five years of age, and is about to begin the greatest work she has yet attempted. She has been chosen by the World's W. C. T. U. to make a trip around the world in the interest of the department to which she is devoted. She will go to Germany, in June, to study for some months, and will then go to England, and later set out on her world-wide trip. She is a member of the Methodist Church, and devoted in her efforts to assist and uphold the fallen and unprotected of her sex. As Miss Willard says in a recent sketch of this noble woman's life-work, lately published in the "Union Signal," "Prayers may be offered by our host of women for the health, prosperity, and success of Dr. Bushnell in the great undertaking to which she has consecrated her heart and hand," and that the truth of those beautiful lines,

"He always wins who sides with God,
To him no chance is lost,"

will again be proved.

"GHUSSIE."—There are various troches and lozenges for clearing the voice, many of which are very useful. Nearly all public speakers and singers have their favorite. It is related that when the great *diva* Adelina Patti-Nicolini met the "Grand Old Man" Mr. Gladstone, that the two celebrities solemnly exchanged their favorite troches and opinions of each. White of egg beaten up in lemon-juice is very good for clearing the voice.

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"G. E. S."—Black-silk crocheted passementerie will be a very suitable garniture for your gray cashmere, as black is still much used in combination with colors.

"BETTIE S."—No doubt you could sell your picture of cotton stalks painted from nature. It seems to be more probable that you would sell it to better advantage in some town near your own residence than in New York, because you would undoubtedly have to pay a considerable commission to an art dealer to sell it for you, and the express charges will be quite an item. If you could get some jeweler or dealer in stationery to place it in his show-window with the mark "For Sale," or the price-mark, upon it, you might sell it to some visitor from the East or West, who would like it as a souvenir of places visited. Judging from what you say of it, and the use you intend to make of the money you receive for it, viz.: to go to an art school in New York City from June till autumn, you set a high value upon it. Write to some art dealer in New York who can tell you about the possibilities of disposing of it. We wish you all success in so doing.

"GEO. A."—Kosciusko was born on February 12, 1746, in Lithuania; he died in Switzerland, October 16, 1817. He assisted the Americans in their Revolutionary struggle, and then returned to Poland and struggled for the independence of his own country. February 12 is also the birthday of Abraham Lincoln, the sixteenth President of the United States, who was born in Larue County, Kentucky, February 12, 1807. The story of his death is, alas! too well known to Americans. The historian Merle d'Aubigne says: "The name of Lincoln will remain one of the greatest that history has to inscribe on its annals."

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"M. W."—A plain black silk wrap with cut jet ornaments and black goat-hair fringe will be really a more elegant wrap for a lady a little beyond middle age than one of black brocade. The goat-hair fringe is usually called llama or Angora fringe. As for the *satin de Lyon* dress for the same lady, as she is somewhat stout it will be best to make it not too plain in front, like the "Octavia" drapery (illustrated in the February number), and with plain plaited back. The fringe could be used with a black *satin de Lyon* and plush-and-corded striped goods, but you do not describe it except as black silk fringe, so the use of it must be a matter of your own discretion. —Make up your dark blue serge, with tailor jacket and "Circle" skirt, like the "Cloth Costume" on page 248 of the February Magazine. The vest could be of black silk or of light cloth, or of the serge; our own taste would incline to a black-braided cloth vest with a jacket of blue serge and striped skirt.

"HAZEL."—At a quiet home wedding, where only relatives and friends are invited, the bride wearing white *crêpe de Chine*, it is simply a matter of taste as to the arrangements. A veil is always appropriate for a bride in white, but of course it is not necessary or obligatory in any sense. The bride may enter the room on her father's arm, the bridegroom having taken his place near the clergyman and waiting for her; or he may wait at the parlor door for her and lead her in the room himself. It is usual for the bride to stand at the left of her intended husband, and in grouping the family previous to the entrance of the bride, it is a pleasing way to have the bride's relatives at the left and the bridegroom's at the right of the pair as they face the clergyman. The presents, if exhibited, are usually arranged in a separate room for the friends to inspect. The bride and groom after receiving the congratulations of their friends and relatives should lead the way to the refreshment-table, where the bride will be served first, and afterwards the others.

"MRS. P. H. E."—Window draperies for two bay windows in matched parlors should be of similar material and draped, if not precisely alike, at least with strong similarity in the draping. It depends upon the decoration of the rooms what the draperies should be. If the papering, etc., is somewhat rich in effect, plain chenille curtains in dark red, terra cotta, or old blue would look well. These curtains are inexpensive and very pleasing in effect. If, on the contrary, you desire an elaborate drapery, use lace curtains of cream Colbert lace or antique lace made up with scrim foundations, and striped brocade silk curtains.

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