A WOMAN'S EXPLORATIONS.

MME. COUDREAU'S WORK IN THE WILDS OF THE AMAZON.

Alone With Her Native Followers She Has Penetrated Regions Never Reached by a White Man—Her Contributions to Science—Work Her Husband Began.

The woman whose picture is given here is likely to be known hereafter as one of the most earnest, faithful and energetic geographical explorers of her time. She is wearing the garb of a man, but this does not detract from her womanly dignity. No other attire is fit for the pioneer routes she blazes through the wilds of the Amazon basin.

No man to-day has greater experience as a South American explorer, than Mrs. Henri Coudreau. Probably no other living explorer has spent so many years as she has given to virgin fields of research in that continent.

Though she has lived most of the years since 1893 in the wildernesses of South America, she is still in the early prime of a woman's life. She has just left France to begin her fourteenth series of explorations in America.

She ought to be a good explorer, for she has the requisite qualities, and, besides, she had the tuition of the renowned Henri Coudreau who took her as his bride when she was a mere girl to French Guiana, and for several years she shared his labors in revealing the innermost recesses of that country and of parts of the Amazon basin.

Her husband taught her how to survey routes, to plot maps, to take latitudes and longitudes and to record natural phenomena and material resources. He gave her more than a smattering of the geological equipment an explorer needs. She learned his methods of handling native assistants, of studying the wild man, and of living in the untrodden forest.

He died in the field in 1899 and his wife buried him in the Amazon wilderness, where he had labored so long. After the most poignant period of her bereavement had passed Mrs. Coudreau, equipped in all respects to follow the career of an explorer, decided to carry on her husband's work and devote her life to pioneer discovery in South America.

The Amazon States of Brazil have as yet only an inkling of the sources of wealth that are scattered through their vast domains. We know the Amazon and some of its large tributaries, but there are scores of smaller streams, large rivers in themselves, that have never seen a white man. Along these streams are Indian tribes no one ever heard of, rubber trees, wild vanilla and many other vegetable products, minerals, and far from the low lying Amazon vast open spaces adapted for tropical grazing and agriculture.

The Amazon States are very desirous of learning about the untouched resources in these virgin regions. They have faith in the efficiency of Mrs. Coudreau and pay the entire expenses of her expeditions.

Thus far she has explored for the State of Para five rivers, each of them hundreds of miles in length. These rivers are the Cumina, Trompetas, Curua, Mapuera and Maycuru. For the past two years she

MME. COUDREAU.

has been in the service of the State of Amazonas, has made a thorough study of the Canuma, a southern tributary of the Amazon, and is now on her way to fulfill other commissions which that State has ready for her.

At least three of her reports—those on the Curua, Maycuru and Mapuera—have been printed, and perhaps her other books are now off the press. The story of her exploration of each river is handsomely produced in small folio form in France, illustrated with her large maps and many beautiful photographs.

They are among the handsomest volumes of exploration that have been produced in recent years. While intended for popular reading they are scientific as well, giving both picturesque narrative and also the solid facts which the explorer was sent out to collect.

Mrs. Coudreau's printed maps of each journey, some of them in five or six large sheets, are all reproductions of her manuscript maps just as they left her hand, with lettering big and plain, and on a scale of about a mile and a half to an inch. The scale is so large that she was able to insert every bend in the rivers, every island, the forms of the land, the brooks and tributary rivers, each village and isolated house, and latitudes and longitudes about every ten miles. They are models of pioneer route mapping and are used by all the best atlas houses to improve their mapping of the Amazon basin.

The explorer is always accompanied by from ten to twenty men, some of whom have been in her service for years and are faithful in every duty. Her men are negroes or mixed bloods, not all of them of the most desirable quality, but the little Frenchwoman is always master of the situation. There may be grumbling, but what she wishes done must be done.

"Madame," said her boatman to her one day, "this is no longer a river. There are more rocks than water. We may work eight days and we shall still be here."

"I am going on, however," she replied. "Unload the boats and carry everything."

She sent two men ahead to see how far the river obstruction continued. In two days the party were afloat above it.

Mrs. Coudreau has failed only once to reach the headwaters of any river she has explored. This little reverse came on the Maycuru River, probably 600 or 700 miles long, one of the big northern tributaries of the Amazon.

The explorer had reason to believe that when her guide was drunk (and he was likely to become besotted on sugar cane brandy when he could get it from the Indians) he had not the slightest idea of what he did or said. So she was sceptical one day when he came to her with tears streaming down his cheeks.

"Madame," he said, "you will not believe me, but we are all going to die. Your food is nearly gone. From here to that lake away off which I have seen there are no fish in the rivers, no game in the forests, and when we reach the lake things will be worse. Oh, I wish I had not come on this journey, for I shall never see my wife and children again."

"I saw," wrote Mrs. Coudreau in her day book, "that it was the sugar brandy that made him talk as he did."

A month later, on that journey, she knew that her guide had told the truth. She was almost out of supplies, the country was a desert, and her men were suffering from their privations.

The obstacles were insurmountable, and she had to turn back. She was forty miles north of the equator, and perhaps the river extended 100 miles further north. But its delineation in the German atlases stops just where the brave little woman faced about toward the Amazon and fled from evils she could not overcome.

For many months at a time she sleeps in one of her canoes, a part of which is enclosed with thatch. She is seldom in this little cabin except in the hours of darkness.

Walls cannot be allowed to obstruct her vision, for she is in the new land to see every aspect of it. She is too busy to engage in cooking or any other work of that sort.

The men under her orders must do everything excepting the tasks of actual observation and research, for which they are not competent. Her life in the wilds has become second nature to her and she longs for the Amazon when she goes back to Paris to supervise the publication of her books.

"I love Amazonia," she writes. "The solitude of the virgin forest has become a necessity of my life. Its mysterious silence attracts me more than anything else in the world, and only when I am in the great woods do I feel that I am at home."

She has learned the art of photography in the tropics, where it is more difficult than in temperate climates. Her photographs are a very valuable feature of her work. Many of them are of Indians now revealed to the world for the first time.

She also illustrates the life of the negro in Amazon regions, shows the tumbledown settlements on the tributaries, the banks of rivers, wooded to the waters edge, the preparation of manioc, the great food resource, and picturesque falls and bits of scenery. In fact, her pictures show all the charm of the unknown she is spending her life to reveal.

Mme. Coudreau has no admiration for the freed negro she has found in the Amazon wilds. "They do no work they can avoid. They plant a little manioc, hunt and fish a little, and will work a day or two when they must have money to buy liquor.

"They are no longer strong and robust as their fathers were; but their fathers were slaves, and it was to the interest of their masters to keep such valuable merchandise in good health and strength. Left to take care of himself, the Amazon negro has deteriorated in his moral as well as physical condition. He knows neither how to work nor how to obey, and is almost like a baby that cannot direct its own existence."

Mrs. Coudreau's great advantage among the rude children of nature, black and red, is that she alone possesses guns. Time and again she and her handful of men have entered the hunting grounds of Indians whose reputation is bad and who have shown their unfriendliness to this explorer. But they have only bows and arrows.

Fear of the gun has spread among all the wild tribes of South America. At no time has this explorer come to blows with unfriendly Indians, though on some occasions she has been in danger. Her guns have served her best as a deterrent of hostile impulse and in the hands of her hunters.

Even monkeys have not come amiss in her camp cookery; and as for the Indians, she never loses an opportunity to show them the wonders of her six shooting revolver. The exhibition has a great moral effect.

She says that the precocity of Indian children is astonishing. She has seen children of 13 living as husband and wife and the girl already a mother. Her books contain numerous vocabularies collected among these Indian tribes.

So this woman is opening highways along rivers of the Amazon basin which the white residents have had neither the desire nor the courage to explore. She has discovered new areas of Hevea, the tree that yields the famous Para rubber.

She has found great forests filled with the finest of building woods, essences that are worth their weight in gold, lands that will yield rich tropical forests and many other resources. She is showing how far the rivers are available for commerce; she is studying the natives and looking at new regions from every point of view and giving her opinion as to the best plans for development.

Mrs. Coudreau is doing a work that will live after her; and all who know what she has done will follow with interest her future career as an explorer.

WINDOW DISPLAYS.

Professional Interest That May Cause Women to Look at Hats.

The exhibits of feminine apparel displayed in the show windows of stores in the shopping districts are a great attraction to women and many women pause to inspect and admire them.

In some parts of the wholesale districts of the city there may be seen window displays that likewise attract women, though primarily for a somewhat different reason. Take, for instance, the sample hats that one might see in the window of a wholesale millinery establishment.

A man might pass that window day after day and week after week and never see anybody looking at these hats and he might fancy that nobody ever did stop to look at them except the buyers for retail millinery stores whose eye might light upon them as they traversed the wholesale districts buying goods, but let him pass here at the hour when the many workshops of the district had discharged their myriad workers and then he may see a solid line of women standing along in front of this window inspecting the hats therein with a keen interest.

They are workers from other wholesale millinery shops pausing on their way home to see what this concern is doing. They know what they are turning out in their own shop—here is an opportunity to inspect the productions of another, to compare the styles of their own designers which they have helped to put into finished shape with the finished work of others. So this display has for these viewers a double attraction, for the hats here seen may appeal to them in a personal way, as all hats do to all women, while at the same time they have for them, besides, the lively professional interest which they awaken as productions of their trade.

Brains of Scientists.

From the Chicago Tribune.

Famous brains are of four sorts. The lowest group contains the minds that are stimulated greatly by alcohol, tea and other drugs, and by impressions derived from the senses; the second group contains the infant prodigies, whose intellectual powers wane in middle age; the third group contains the pathological cases usually terminating in insanity; the fourth and highest group is that of true geniuses, whose powers remain unimpaired until old age. This is Hausemann's classification.

Spitzka has come to the conclusion that men eminent in exact sciences like astronomy and mathematics have the greatest average brain weight. Next come the men of action, including statesmen and artists, and after these come the biologists, geologists and other representatives of the descriptive sciences.

CHEAPER TO EAT IN CLUBS.

PRICES MUCH BELOW THOSE OF HIGH CLASS RESTAURANTS.

More Dining in Restaurants, Perhaps, Now, but the Clubs Still Attract the Particular—Some Comparative Figures From Various Bills of Fare in Both Places.

It was only a few days ago that a London clubman bewailed the influence of restaurants on the clubs of the British capital. He found that all the old delight in a fine cuisine, good wines and quiet dining was passing away. Members of clubs prefer now the restaurants to the less ostentatious dining rooms of their clubs.

It would be idle to deny that New York clubs have been affected by the restaurants in the same way. The club dining rooms are nowhere so full as they were a score of years ago, when both the restaurants and the clubs were much scarcer than they are to-day. The most noticeable change is in the number of dinners given at clubs. Ushers' dinners which were in the past always given at clubs are now invariably held in restaurants. It is true also that men who give stag dinners are much more likely to select a restaurant than a club.

It is easy to understand why a party of four or five men who meet in the evening for dinner should meet at a restaurant rather than a club. In many New York clubs it is impossible for any member to invite his New York friends in to dinner unless he has a private room and gives a special dinner. So several men who want to dine together are compelled to go to a restaurant.

New York clubs, although they are commonly regarded as very expensive, allow their members to dine much more reasonably than they can at restaurants. The expense of a club kitchen usually depends on the extent to which it is patronized. When the club is large and the members use the restaurant frequently, prices will be cheaper. It is a curious fact that a glass of whiskey costs at the Union Club less than it does in a corner barroom. It can be bought at the club for 12 cents, and the quality is of course the best. The man who pays 15 cents in a barroom may get a good drink, but it is certain that the quality will not be impeccable. The cheapness of the club price is due to the lack of desire to make any profit. Wines are for the same reason much cheaper in clubs than in hotels, and many members stock their cellars from their clubs. A doctor explained his membership in a club near his house by saying that his livery bills were so much cheaper that he could not afford to leave the club. It is in their restaurants, however, that the clubs offer the greatest bargains to their members.

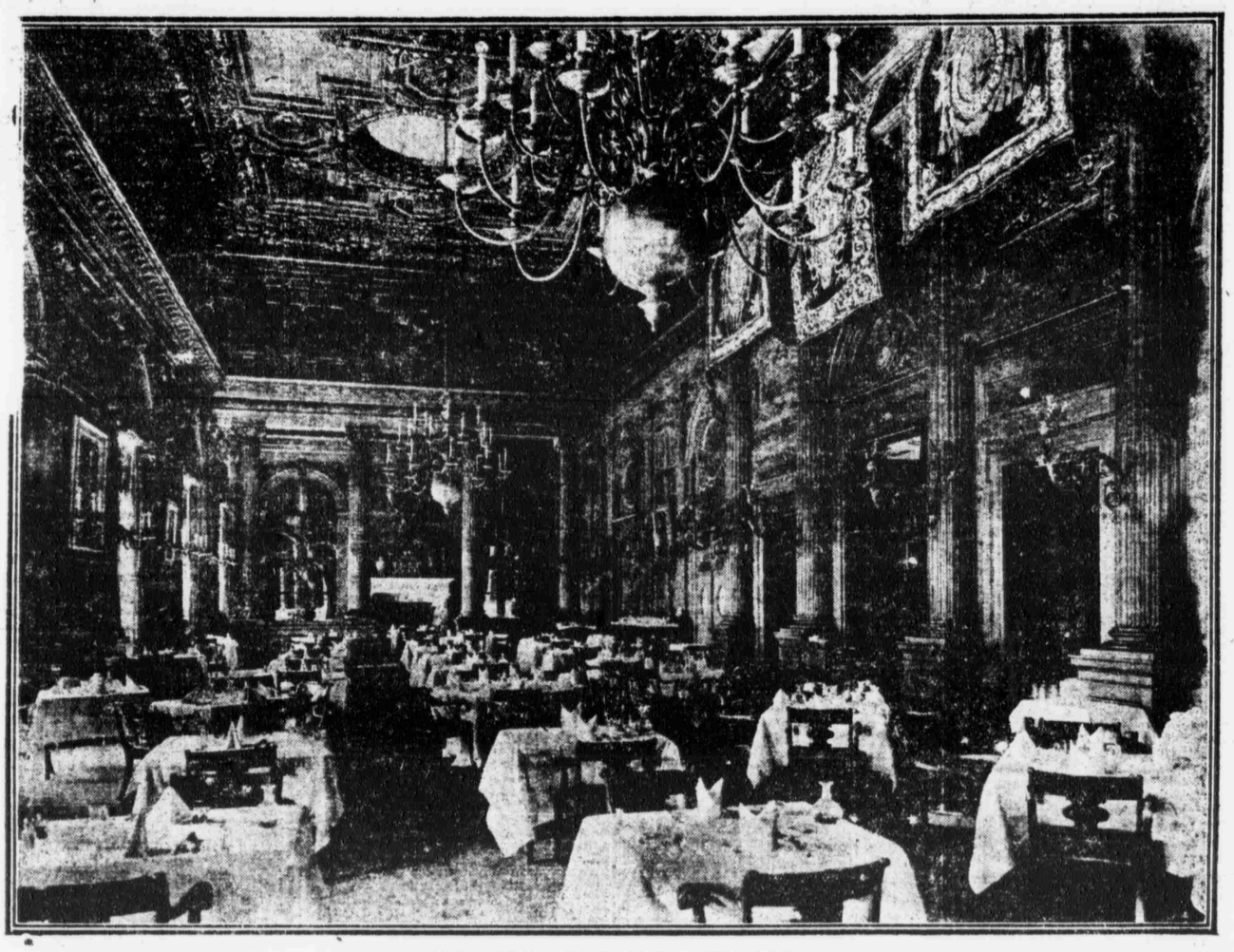
The Knickerbocker is not a large club and its restaurant, although accounted one of the best, has not the extensive patronage of some others. The difference between prices here and at Sherry's, however, is very marked. A canvasback duck at the club costs $3.75, while at Sherry's it is $5 and at Delmonico's $4.50. Ruddy duck at the Knickerbocker is $1.75, at Sherry's $2.25, at Delmonico's $2, at the Union Club $1.75 and at the University $1.50. Canvasback ducks at the University cost only $3.50 and at the Union they are $4.25. The University can make such good terms for the members because of its large patronage and its excellent facilities. It gives its members turkey stuffed with chestnuts for 80 cents, and the Knickerbocker gives its famous breast of capon for only 60 cents. Such a dish in either Sherry's or Delmonico's would cost more than a dollar.

The Racquet and Tennis Club offers its members a comparatively small menu every day, but it puts its prices down to a figure much below the restaurant average in that Fifth avenue neighborhood. The customary dinner bill contains such dishes as rack of lamb, 50 cents; larded sweetbreads with asparagus tips, 75 cents; tenderloin steak with marrow, 60 cents. Terrapin, of which the club makes a specialty, costs $2.75, which is 25 cents more than the same dish costs at the University, while it is seldom less than $5 at the Fifth avenue restaurants.

The Union offers a much more elaborate menu than any other New York club, and the prices are proportionately greater. These are on the daily menu twenty-one different ways of serving a beefsteak and prices range from 60 cents to $2. There are sixteen ways of preparing chicken. Such culinary skill demands genius in a chef and no other club competes with the Union in the extreme refinement of its cooking. The Manhattan has a cuisine that is very much praised, although it is not so distinctively French.

The Union's dinner menu contains daily a list of ready entrees that are much below the restaurant average in price. Brochette of lamb kidney, Bearnaise, costing only 35 cents, half a chicken costing $1, stewed oxtail for 30 cents and breaded veal chops for 50 cents were items on a recent bill. Striped bass was on that day only 35 cents and the Knickerbocker offered broiled bluefish at the same price. Bass at Delmonico's cost 80 cents on the same day. At the University Club it was only 30 cents.

Soups at the clubs average about half the cost in the restaurants. Salads show a smaller difference, not on the average more than 10 cents. String beans cost 40 cents at Sherry's, while they are 25 cents at the University, 30 at the Knickerbocker Club and 15 cents at the Racquet. The difference in the prices of wine in clubs and in restaurants ranges from 25 to 50 per cent. Champagnes are, for some reason, more expensive in clubs than any other wines, and do not show the usual difference in favor of the club member.



DINING ROOM OF THE UNIVERSITY CLUB.

PROPER EXERCISE FOR WOMEN.

DANCING PUT FIRST OF ALL BY AN EXPERT.

Physical Reasons Why Exercises Suited for Men Are Not Adapted to Women—Competitive Games Objectionable—Grace Should Be Woman's Aim in Exercise.

"Should women be encouraged to take part in competitive athletics and sports?" Dr. Luther H. Gulick, president of the American Physical Education Association and head of the department of physical education in the public schools of New York, repeated the question thoughtfully.

"There is a woman's problem in exercise as there is in many other things," he went on. "Fortunately, with reference to exercise the differences between men and women are more tangible and we know the facts upon which those differences rest better than we know those in connection with political organization, for example.

"Years ago when I was beginning this work I believed that the difference between men and women was caused by the difference in their training. I no longer have any such idea. I know that the physique of men and of women differed in the beginning—man to be the fighter, the protector, woman for motherhood.

"To-day the industrial centre has changed from the home to the factory. This elimination of industries formerly occupying women, such as weaving cloth, making the clothes, preparing the food, caring for the domestic animals, &c., is leaving women without suitable outlet for their physical activities.

"The time formerly spent by a girl as an assistant in the home is now spent in school. She goes from school to college, to business, to the factory, to the office, to many different occupations, mostly sedentary.

"This has decreased her physical activities and increased her mental and nervous activities; it has delayed or deterred her from marriage, and her home to-day, if she has one, is an added drain on her mental and nervous rather than upon her muscular system.

"Physical training should assist in adjusting women to their new environment. Business life and independence in women tend to develop certain masculine qualities in them. Physical training should not accentuate these qualities, but rather should help to make girls and women healthier and better able to bear the burdens of womanhood and motherhood. It should develop their feminine characteristics, grace in speech, dress and carriage.

"Physical directors should bear in mind the physiological difference between men and women and between boys and girls.

"At birth boys as a rule are taller and heavier than girls. From the eleventh to the sixteenth year the girls are the taller and from the twelfth to the seventeenth year they are the heavier. From then on to maturity the boys forge ahead in weight, height and strength.

"That men are bigger and heavier than women is obvious. But are they stronger, weight for weight?

"The returns from examinations instituted in our colleges for men and women give a conclusive answer. Bulk for bulk, weight for weight, men are muscularly stronger than women.

"But this is only the beginning of the argument. Women are shaped differently from men. At an equal height and weight, a man's shoulders are broader than a woman's. So that in every form of gymnastics or athletics which depends on leverage and strength of shoulders the man will excel, even if he is not muscularly stronger than the woman.

"A further handicap is placed on woman in the size of her hips. Her trunk also is longer. Therefore, in all gymnastic work in which the weight of the body is held by the arms, such as work on the parallel and horizontal bars, a woman has to support the bulk of her weight further from the bar than does a man. Her center of gravity is lower.

"These physical facts do not differentiate all men from all women, because there are exceptional men who have shoulders and hips such as are usually seen on women; and vice versa, we occasionally find women who are muscularly stronger than most men, women whose bones have the leverage that belongs to men. But I am speaking of the average.

"When we come to severe tests of endurance we find that woman is not less handicapped. In proportion she has decidedly smaller lungs. The red corpuscles in her blood are also smaller than those of the man, so their carrying capacity of oxygen is less.

"The weight of a woman's body in proportion to her breathing power is much greater than that of a man's. For this reason she cannot compete with him in running, any more than she can compete with him in feats of muscular strength.

"A woman's legs are much shorter than a man's, and for that reason she cannot compete with him in running and jumping. If a woman does muscular exercise which is entirely related to her power, as a man's muscular exercise is related to his power, she will be doing what she should do; but she will not be doing work equalling that done by man. As far as exercise relates to the capacity of the individual, the kind of work done by women should be far more moderate than that done by men.

"But there is another side of the problem of exercise for women, the is historical.

"From the beginning man has been the hunter and fighter. Woman has predominantly been the home keeper and the industrial worker.

"During these years when we are exploiting woman, she is developing our industries; but speaking in a large sense of biographical history, woman originated the industries. The physique of the man of to-day is the survival of those men who had to hunt and fight; and the woman's physique is the survival of those who were good mothers and housekeepers.

"Nearly all our athletic sports are descended from the old hunting and fighting exercises, and for that reason men are better suited for them than women. While men developed the qualities required in hunting and fighting, women were developing those that were related to the home, to the arts and the industries. So if we demand of man those exercises which in general have always been related to his life we should also demand of a woman those exercises that are related to her historical development.

"The athletic exercises and games best suited to women are moderate and graceful, not those involving competition and strain—all forms of callisthenics and light gymnastics, archery, lawn tennis, swimming, field hockey, lacrosse, bicycling, rowing, canoeing, golf, skating, fencing and basketball. In all athletic exercises in which women engage good form should be required rather than records.

"Women may be excused for not being as strong and enduring as men, but they cannot be excused for not being more finished and graceful. Good carriage, perfect poise, self-command and exquisite grace and refinement should enter into women's athletic performances.

"I do not mean that girls or women should spend their time attitudinizing but that they should be thoroughly trained in ease and grace of movement. Women so drilled never have to be told what to do with their hands and feet. Whether they enter a drawing room, preside at a meeting or do anything else, they may be depended on to be perfectly natural and at ease.

"Women are especially hard to teach games. By temper and training they are intensely individualistic and do not at first realize the responsibility of being put on their honor. It is hard for them to understand that they cannot cheat, or bluff though, or get credit for what they do not do. They cannot lay the blame on others or deny their own deeds.

"At first when they are defeated they either sneak off in tears or get mad and refuse to play again. It is hard for them to stand together, bravely congratulating their successful rivals. Yes, it is lack of self-control and for some reason women seem to find it hard, much harder than men, to acquire"

"College training should give it, perhaps. It doesn't; not always; of that I had proof only yesterday.

"I saw a college bred woman, far above the average in intellect, clench her fist and stand and scream at the top of her lungs. She had been defeated and she simply made up her mind she would not accept it. Why, she had to, of course. After a time, when she was forced to use her brain, she calmed down and behaved herself.

"But it is the exceptional woman who is willing to work together with others for the good of the gang. They haven't the gang instinct. For success in competitive games that spirit of placing the good of the gang before self must be acquired is absolutely essential.

"In a few team of girls about the most noticeable characteristic is their egotism. It is 'I want to play basket,' 'I want to score,' 'I want to play with the bigger girls,' 'It wasn't my fault, she did that.' Gradually, very gradually, you begin to notice the use of 'we' instead of that predominating 'I'.

"In every game there come opportunities when a little trick, some petty act, will give an advantage. Boys take advantage of such opportunities oftener than they should, but they know they are wrong and feel the disgrace.

"Girls seem to look upon it as the right thing and take advantage of it openly. You may read them the rules of the game, give them a lecture on honor and while they will agree with you in the abstract they will contend that in their special case it was perfectly right. It is that lack which often makes boys treat girls with contempt and drives men to despair with women.

"Games try out these qualities in girls and in that respect I believe they are most beneficial. A game is well nigh perfect democracy.

"Nothing is of more value ethically for a girl than to find out that money, clothes, family, prestige and pull are as nothing, that they do not help her to play ball or become a desirable member of a team. She stands or falls absolutely by what she is and what she can do and realizes that the game makes them all equal.

"But, as I said before, for physical development I prefer moderate and graceful exercise without the spirit of competition and strain. Woman needs vigorous exercise less than man, and she profits by it less. Woman stands continuous work far better than man, and she profits more than man by mild exercise extended over long periods.

"Walking means more to women than to men. Dancing above all forms of exercise is best suited to women.

"I have four daughters of my own. They have been trained in all the healthful out of door exercises, but I would rather have them graceful dancers than the basketball champions of the world.

"Yes, there is a choice of dances. The best are those that bring about the movement of the whole body, such as the Swedish and Russian folk dances. The Spanish dance is also very satisfactory and some of those having their origin in the Oriental countries.

"Of course I except all emotional dances. Such are to be avoided, as it is muscular not emotional exercise that women and girls need.

"I am now engaged in introducing folk dancing into the public schools of New York, and so far they have proved very popular with both the teachers and the public. Girls who have never shown an interest in any other form of physical training are devoted to dancing. Many of my teachers assure me that they look forward to their dancing classes as the most enjoyable part of the week.

"My own daughters, I am thankful to say, prefer dancing to other exercise. I look upon them as only fair examples of the average healthy girls who have been trained in the sports that usually engage active women. If they prefer dancing to more strenuous exercise I believe other girls will find it equally attractive.

"What about the old fashioned preacher who used to thunder against dancing as the wiliest wile of the devil? Well, I'm an old fashioned man myself and I have respect for many old fashioned ideas, but those old fellows who preached against dancing simply didn't know what they were talking about. They knew precious little about women and nothing at all about their physical needs.

"Tell me that the devil prompts a little girl who has never had a wicked thought or emotion in her life to drop her dolls and run and dance! The devil, indeed! It is simply her joy in physical exercise. Every healthy young creature has it.

"It may appear strange to those old fellows who never tried it to see a lot of people take pleasure in shaking their feet and jumping around the floor to music, but it is human nature. It is the elemental pleasure of exercising the whole body, and is only what every healthy human being should feel."

England's Best Shot.

From Tit-Bits.

Lord Walsingham enjoys the reputation of being the finest shot in Britain. He probably is the only man in the world whose aim is so accurate that he is able to shoot wasps on the wing. This requires a marvellous eye and the steadiest of hands. To practise on these pests and other small insects he had a miniature rifle specially constructed.

He holds the record for an unsurpassed grouse bag. After shooting singlehanded for fifteen hours he had accounted for 1,070 grouse. On another occasion, with 1,100 cartridges, he accounted for 842 birds, an amazingly high average. He is also an accomplished writer, one of the first entomologists of the day, a fellow of many learned societies and owner of the finest collection of moths and butterflies in the world.

Mauled by Lions and Leopards.

Brokers Hill correspondence Bulawayo Chronicle.

Now and then a man is brought into camp having been mauled by a savage lion or leopard, which cases never fail to excite interest.

A man named Kelly is now in with his left arm and head badly mauled by a leopard. Another man, Van de Riet, has just arrived from the North with an arm badly maimed by a leopard. Being too far away to get medical aid he healed his arm by applying hot meal poultices.

Mr. Thornton, who had a big lion enter his hut some months ago, and who had both hands fearfully mangled by the brute before his boy could shoot it, has returned to his farm.

THE CHOICE OF FIRE IRONS.

ADVICE FOR PEOPLE WHO HAVE REAL FIREPLACES.

Brass Andirons That You Shouldn't Buy—Ancient and Modern Products—Points About the Fender and the Accessories—Wrought and Cast Iron Fittings.

Not even in the early days, when all the houses of this country were heated by open fireplaces, was there such a demand for fire irons as there has been since the fireplace has been revived for reasons of taste and sanitation. In answer to the new demand the makers of fire irons are turning them out wholesale, and an uncritical public is buying andirons, fenders, tongs and pokers with small regard to their style and quality.

Most of the modern cheap andirons are made of spun brass. Now the brass spinners, who make much of their ware out of rather thin sheets shaped on a lathe, are unable to imitate many of the early shapes, which were in cast brass.

If you will examine the andirons that are set up in the fireplaces of most small apartments, fireplaces where nothing or at best a gas log is to be burned, you will see an example of the cheapest kind of spun brass andiron. It is merely some lengths of thin brass piping and lacquered brass balls strung together on invisible iron frames. A slight blow will dent the brass balls, and you have only to pick the things up and heft them to realize how flimsy they are.

Thousands of home builders who have real fireplaces in which they burn wood furnish them with these cheap and flimsy andirons. Such furnishings will take the charm from the best hearth and mantel.

There are plenty of good cast brass andirons made nowadays, but they cost three times as much as a pair of the spun brass kind. You may buy the latter as low as $2.50 a pair. It is hard to get good modern cast brass andirons for less than $7 or $8 a pair, and they come as high as $100.

It is no longer easy to pick up old cast brass andirons at the junk shops, and the antique shops hold them at high prices. If you keep your eyes open when visiting the country you may still pick up good old andirons at $3 or $4 a pair, and they are usually quite as well made as the best of the modern cast brass.

Some of the best forms are the so-called sugar bowl pattern, those with plain balls surmounting a corrugated upright and those with big corrugated knobs. The small brass andirons with plain knobs were originally much used in the old Franklin stove which often supplanted the regular open fire place something like a century and a half ago.

If you have a chance to get an old pair of brass andirons with scroll base at a reasonable price by all means do it, for they easily fetch from $25 to $60 a pair. All of the old cast brass andirons were made in several pieces to be slipped over an iron spindle and screwed together. In buying antiques of this kind it is wise to uncouple the parts and make sure that the iron spindles are not weakened by rust. Some remain sound at the end of a century in service, but only when they have been well cared for.

If you cannot afford a good set of cast brass andirons by all means get a simple set of wrought iron. Colonial blacksmiths made excellent simple andirons of wrought iron. Few of them have come down to this generation because wrought iron rusts to nothing if not cared for, and there was a long period when hardly any one valued old andirons.

You may buy modern wrought iron andirons of simple pattern at from $3 to $5 a pair, and if you know a country blacksmith and have a little skill in designing you can have a serviceable pair made for a good deal less. There are good cast iron andirons, but unless very simple in form they are likely to be broken by careless handling.

It is a great mistake to buy the ornate wrought iron andirons because their spiral decorations have an unpleasant way of catching and tearing the gowns of passers-by. Some of the simple andirons made of a strap of wrought iron are decorated with brass acorns at the top. This increases the cost, but the effect is very pleasing.

Tongs, poker and shovel should be chosen for their practical usefulness as well as for good looks. As a matter of fact the poker is not needed for the wood burning fireplace.

If the fireplace is large and the andirons are of cast brass corresponding in size the shovel and tongs should be long handled and brass tipped. The shovel should have a plain large scoop so that the ashes can be easily managed. If they be dampened at bedtime and piled on the bed of glowing coals with care the business of covering the fire so as to have a warm hearth in the morning is easily managed without filling the room with dust.

The tongs should be strong enough and wide enough at the jaws to hold a heavy log. Those with springs are apt to prove a delusion, while those loose at the crotch and habitually cross legged will goad the most patient man to profanity.

If you are to get on well with your tongs you must make sure that they will hold the log firmly until you are ready to drop it and then will not stick to it and drag it off the andirons when you loose your grip. A single strong blow on the rivet with a good hammer will often reduce the most malignant of cross legged tongs to order and usefulness.

It is still possible to buy good tongs and shovels for a trifle at the junkshops. In the shops of the dealers in new articles they cost from $1.50 to $10 a pair, according to style and size. The dealers in antiques hold them high, and it is better to buy of the junkman or of the regular dealer.

The best fenders are of perforated sheet brass. Those of perforated sheet iron with brass binding are good looking but not durable. It is almost impossible to protect them from injury by rust. The perforated brass fender with care is indestructible.

There are so-called fenders of brass bars, but they are rather footrests. Neither kind is really an effective protection against sparks. This is furnished by the fender of woven brass or iron, fitting well across the mouth of the fireplace.

The junkshops occasionally have fenders, but most of the old ones reach the antique shops, where they fetch a good price. New, they cost from eight to forty dollars. The simpler patterns are cheaper, and one never tires of them as of the ornate kind.

Most housekeepers apparently think the bellows a necessity of the hearth, but it is not, for a few bits of twisted paper will usually do what one asks of the bellows, and that without raising a dust. The bellows, however, is an ornamental accessory of the hearth.

You may get a good looking and serviceable bellows for two or three dollars, and a richly ornate one, no better for practical purposes, for ten or fifteen dollars. A bellows with a two foot handle of richly carved walnut, oak or mahogany is an absurd accessory of a simple fireplace, but even poor folks occasionally get that kind for wedding presents.

You may pay five or six dollars for a brass-bound hearth broom, but the old fashioned turkey wing of our grandmothers is just as serviceable and much cheaper and homelier. A moderate sized hearth, with good old fashioned cast brass andirons, shovel and tongs to match leaning against the pretty brass rests that are now again made, a neat pierced brass fender and a home cured turkey wing hanging by its brass hook, is a delightful thing to contemplate when the logs glow of a cool spring or autumn evening, and the situation is none the worse for the presence of the squat little kettle between the andirons ready with hot water against the time when host and guests are thirsting for a hot Scotch.