

"Why are not the seasons of equal length?" "They are of equal length," said Sadie to herself at first. "At least I always thought so. What does the question mean? If I could only answer this question correctly, I might come out ahead of Jennie Norton. I know by the expression of her face that she is puzzled. Let me see. The seasons are marked and limited by the arrival of the sun at the vernal equinox, the summer solstice, the autumnal equinox, and winter solstice. The ecliptic is divided into three hundred and sixty degrees, and these principal points of the ecliptic divide into four equal parts of ninety degrees each. I do believe I know why the seasons are not of equal length. I must write as I think, or the time will be up, and farewell twenty credits. The earth's orbit is an ellipse having the sun in one of the foci. The point nearest the sun is perihelion, and the one farthest away is aphelion. Now the earth moves most rapidly at perihelion, most slowly at aphelion, because, the nearer the sun, the more force exerted by the sun. Now, the earth is nearest the sun January 1st, or at perihelion, farthest from the sun July 1st, or at aphelion. Approaching perihelion the earth moves more and more rapidly; approaching aphelion, the earth moves more and more slowly, and as the radius vector of a planet's orbit passes over equal areas in equal times, it must pass over the area between the autumnal equinox and winter solstice, and from the winter solstice to the vernal equinox more rapidly than from the vernal equinox to the summer solstice, and from the summer solstice to the autumnal equinox. So the autumn and winter seasons are shorter than the spring and summer seasons. Also, by counting the days in the months, it will be seen that autumn and winter are shorter than spring and summer."

Sadie drew a long breath when her long answer was written. When the examination was over, and the girls discussed the various questions, Sadie learned that she was the only one who had attempted to answer that about the length of the seasons.

A day or two of expectation followed, and then Professor Moore awarded Sadie not only twenty credits, but twenty-five, because her answer was so full.

Then came the adding of marks. Sadie came out two marks ahead of Jennie Norton, and thirty ahead of Julia.

"How did you ever think of that answer?" asked Julia.

"All Professor Moore said about perihelion and aphelion, and about being nearer the sun in winter than in summer, came to my mind. I thought a good deal about the subject at the time, so it was clear in my mind, though I had never thought that there was any difference in the length of the seasons."

So Sadie won the Christmas prize, and her father gave her a beautiful present for winning the prize.

MATCHES are made of pine-wood splints, which are first covered with a mixture of glue, phosphorus, and chlorate of potash, then heated and dipped in melted sulphur, either by hand or machine, and such quantities are made that one English saw-mill cuts up yearly four hundred timber trees into splints.

GUM-SHELLAC.—An insect in the east, after laying its eggs on the bark of trees, covers them with lac for protection. This lac produces the red dye, from which sealing-wax is made, after it is mixed with resin. When lac is melted and strained the product is thin plates, which are put in use.

THE DRUIDS.—When some one asked me who the Druids were, I thought I had the answer at my tongue's end. But after replying that they were priests of ancient Britain and Gaul, who worshiped

in consecrated groves, I could say no more. There is considerable more to be told. They were termed Druids from Drus, the Greek word for oak, because they worshiped the oak. They offered human sacrifices, and while holding a belief in one God, they had other divinities to whom they gave partial worship. They had some knowledge of astrology, and exercised judicial functions. Their downfall commenced at the conquest of Britain by Caesar, and only the ruins of Stonehenge testify to their existence.

Queen Anne's Doll-House.

Just facing the turn-stile through which one passes into the first hall of the South Kensington Museum, in London, stands a large doll-house, about eight feet high by six wide, an object of great interest to all little girls and most mammas who visit there. This baby mansion, with its doll master and mistress, children and servants, was given originally to a daughter of the Archbishop of York.

The donor was Queen Anne, generally known as "good Queen Anne," probably because the chief desire and aim of her life seemed to be the making others happy. Queen Anne was the last of the unfortunate line of Stuarts, who occupied the English throne, and was, like the present good queen, queen regnant, a term which means one who reigns in her own right. Her husband was Prince George of Denmark, and they lived together in perfect happiness for twenty years.

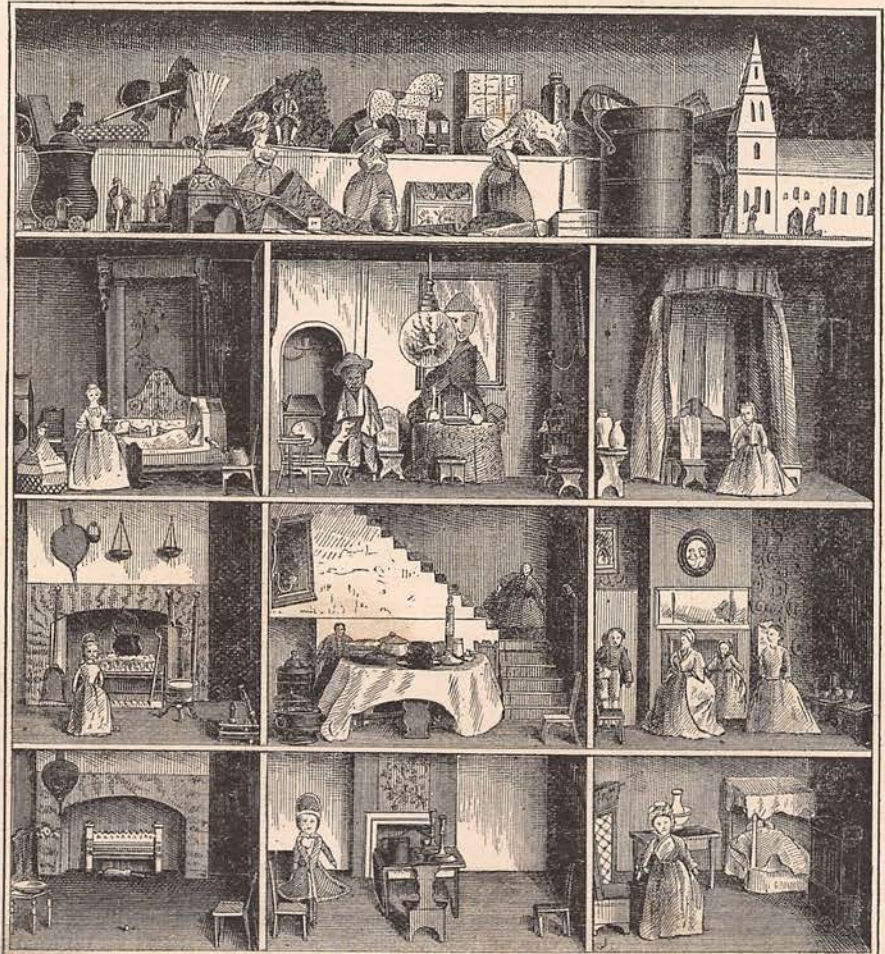
She was the mother of seventeen dear babes, of whom sixteen died in infancy, only one, the Duke of Gloucester, living to the age of eleven. There is a portrait of him at Hampton Court, which

represents a bright and handsome boy, dressed in blue velvet and diamonds. There are many stories told of this young prince, such as his telling King William (his uncle) that he possessed two dead horses and one live one (his Shetland pony and two little wooden horses), and of the king's saying that he had better bury the dead ones out of sight, and his consequently insisting on burying his playthings with funeral honors and composing their epitaph.

His tutor one day asked him, "How can you, being a prince, keep yourself from the pomps and vanities of this world?" To this the child gravely responded: "I will keep God's commandments, and do all I can to walk in his ways."

When only ten years, he was so forward in his studies that he was able to pass an examination four times a year on subjects which included jurisprudence, the Gothic law, and the feudal system! But on his eleventh birthday the little duke was taken ill, and five days after (July 30th, 1700), died at Windsor Castle, in the arms of his grief-stricken mother, who had loved him as only a mother can love who has seen her treasures taken from her, one by one.

We can all fancy how sad her life must have been, though she lived in a palace, and had wealth and splendor at her command, and how sorely she missed the baby voices and baby fingers which mothers always hear and feel, no matter how great the din of life about them. Perhaps this very loneliness and longing made her more thoughtful for other little ones, and caused her to have this house prepared for the tiny maid, whose home was away off in bleak Yorkshire. I can see the little girl now in my "mind's eye," on that Christmas morning nearly two hundred



QUEEN ANNE'S DOLL HOUSE.

years ago, when she received the royal gift. There she stands, in the great hall of the archiepiscopal palace, the huge logs snapping in the open fireplace, the carved oak chimney-piece surmounted by stags' antlers, the walls in their holiday dress of ivy and holly, and a thick bunch of mistletoe berries over the door (do you know what for?)—there she stands, this bright-eyed maid in her scarlet merino frock, her yellow hair tied back with gay ribbons, looking not unlike the robin redbreasts which twittered and chirped then, as now, in the Cathedral Close, picking up the crumbs scattered over the crisp snow for their daily feast.

What fun she and her little friends had over their doll families when lessons were ended, what fasts and feasts, what weddings and funerals, mimicking all the events of this mortal life. And, doubtless, when she grew up and put aside her childish toys, the house, grown somewhat shabby with age and use, still found favor in her eyes, not only for the sake of her who gave it, but because of the fair memories which the sight of it conjures up, of the days when

"She had life like flowers and bees
In betwixt the country trees;
And the sun the pleasures taught her
Which he teacheth everything."

Demorest Cabinet Games, No. 2.

(See the two card sheets.)

This amusing game is presented to every subscriber with Demorest's Illustrated Magazine.

Detach the two cards from the book, and carefully cut each into five parts. First, cut off the large row of letters at the foot of the card. Second, the four rows on the left-hand side, and separate the remaining portion into three cards of equal size.

Divide the eight left-hand rows neatly into separate letters of twelve each, and then the two larger rows at the foot, keeping each style of letters (there are seven) separate.

DIRECTIONS FOR PLAYING THE GAME.

The game can be played by from two to six persons. One of the players must be chosen as "caller;" he takes the twenty-four large letters and places them in a bag, box or anything else suitable for the purpose, and mixes them well together; each of the players (including the "caller") has one of the oblong cards with the corresponding set of twelve letters placed upon the table before them.

The game commences by the "caller" drawing one of the letters from the bag and calling it, each player then looks at his card, and if it has a square upon it containing a *small* letter, as called, he covers it with the corresponding letter from his set of twelve; for instance, if A is called, he, finding a square upon his card contains a small A, covers it with A from his set of letters. The game continues in this manner until one of the players has got one line filled up, that is to say, four squares in a row containing small letters covered in the manner here described. Only one square may be covered at a time.

It is most important in playing this game that each player's set of twelve letters should correspond in design with those on his card, in fact the game cannot be played unless they are so sorted.

OUR SUBSCRIPTION LIST is increasing so rapidly, and is already so large, that new subscribers are requested earnestly to send in advance of the holidays, so that there may be no delay in the reception of Magazines and premiums.

The Most Beautiful of Premiums.

WE must congratulate our readers, as well as ourselves, on the success of our efforts to secure Mr. Reinhart's beautiful picture of "Consolation" as a premium. In the reproduction all the original softness, tenderness and celestial loveliness have been preserved, and it is at once most valuable as an exquisitely conceived and executed work, and a fine embodiment of religious faith and trust. All the mothers will want it.

Three Men of High Degree.

BY JOSEPHINE POLLARD.

THERE were three men of high degree,
Puffy and stuffy as they could be,
Made up their minds to cross the sea.

If you had seen the little craft
They started in, you would have laughed,
And thought the men were surely daft.

They found it lying high and dry
Upon the beach; and said "O my!
It's old; but that don't signify!"

And so these men of high degree
Got in with great alacrity,
And started out to cross the sea.

The waves ran high, the sea was rough,
The boat was made of wretched stuff,
And soon their case was bad enough.

She sprang a leak! On every side
The seams kept gaping; gaped so wide
They gave swift entrance to the tide.

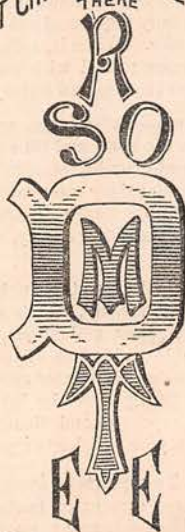
And oh! as sorry as they could be
Were these three men of high degree
That they had ever gone to sea.

The wind came up with whiz and whirr,
And scared them so they couldn't stir;
And they were drowned? Of course they were!

MORAL.

Their folly and fate I beg you'll note,
And never imagine you can float
Across the sea in a leaky boat!

OBEДИENT CHILDREN MAKE THE BEST
THESE



YOUR PA OR MA.

ILLUSTRATED REBUS—SOLUTION IN OUR NEXT.



Dinners.—As a rule, modern dinner giving is one of the most foolish, not to say wicked, and certainly useless forms of entertainment. Persons who are invited to dinners are not those who need them. They are always those who have dinners at home, and who not unfrequently satisfy their appetites before going among strangers, rather than risk the indigestion and disordered stomach which the eating of a great, unusual dinner invariably entails.

Dinners are the least social of almost any form of entertainment, because it is not considered in taste to arrive at the house of one's entertainer until the hour at which the food is put upon the table, and it is a mere chance if the person who is your next neighbor will be congenial, or one whom you care to see, or with whom you can carry on an intelligent conversation.

Dinners are usually a mere parade of glass, china, flowers and *vindes*, which nine out of ten of those who partake of them would feel that they were better without.

Of course, this need not be so. There is nothing more delightful than a really social dinner, where the party, whether small or large (it is much better small), consists of persons who know each other and are in harmony, so far as position and general ideas are concerned.

The fashion of state dinners has really undermined and partly destroyed the genuine hospitality which ought to be an outgrowth of every home, and which admits of the addition of a friend to the family meal without change or confusion. Neatness and liberality in the habits of the household permit this form of dinner giving, which is the best of all, and exercises the most salutary influence upon table manners and customs.

CHRISTMAS DINNERS

are exceptional, and are not bound by the same laws as those which regulate formal and fashionable dinner giving. Whoever has a home, a Christmas turkey, and above all, a Christmas plum-pudding, is delighted, on this occasion, to share them with friends as well as family; and the good will and the welcome being there, it is of little consequence whether the cut glass and the French *entrees* are absent or present.

We subjoin, in addition to the recipes of Christmas dishes, some bills of fare for Christmas dinners, which may serve young housekeepers as a guide to the display of culinary ability:

PLAIN FAMILY DINNER.

Roast Turkey with Oyster Dressing.
Cranberry Sauce.
Celery.
Mashed Potatoes, Peas, or Corn.
Stewed Tomatoes and boiled Onions.
Chicken Fricassee.
Salad.
Plum Pudding, with Sauce.
Nuts. Apples. Oranges.
Coffee.

FAMILY DINNER.

Tomato Soup.
Celery.
Oysters on the half shell (with Lemon).
Roast Turkey, Cranberry Sauce.
Vegetables as preferred.
Plum Pudding.
Pumpkin Pie. Apple Meringue.
Grapes.
Nuts. Raisins. Figs.
Coffee and Tea.