

35,909,000 miles, Venus 67,087,000, Mars 141,384,000, the minor planets 193,000,000 to 395,470,000 miles, Jupiter 482,786,000, Saturn 885,105,000, Uranus 1,779,990,000, and Neptune 2,788,800,000. This makes the diameter of the solar system, so far as at present known, about 5,578 millions of miles. Across this vast space light travelling at the rate of 186,300 miles per second would take eight hours nineteen minutes to pass.

"But vast as this diameter really is compared with the size of our earth, or even with the distance of the moon, it is very small indeed when compared with the distance of even the nearest fixed star, from which light takes over four years to reach us. The most reliable measures of the distance of Alpha Centauri, the nearest of the fixed stars, places it at 275,000 times the sun's distance from the earth, or about 9,150 times the distance of Neptune from the sun. If we represent the diameter of Neptune's orbit by a circle of two inches in diameter, Alpha Centauri would lie at a distance of 762 feet, or 254 yards, from the center of the small circle. If we make the circle representing Neptune's orbit two feet in diameter, then Alpha Centauri would be distant from the center of this circle 9,150 feet, or about 1½ miles. As the volumes of spheres vary as the cubes of their diameters, we have the volume of the sphere which extends to Alpha Centauri 766,000 million times the volume of the sphere containing the whole solar system to the orbit of Neptune. If we represent the sphere containing the solar system by a grain of shot one-twentieth of an inch in diameter, the sphere which extends to Alpha Centauri would be represented by a globe 38 feet in diameter.

"It will thus be seen what a relatively small portion of space the solar system occupies compared with the sphere which extends to even the nearest fixed star. But this latter sphere, vast as this is, is again relatively small compared with the size of the sphere which contains the great majority of the visible stars. Alpha Centauri is an exceptionally near star. Most of the stars are at least ten times as far away, and probably many a hundred times further off. A sphere with a radius 100 times greater than the distance of Alpha Centauri would have a million times the volume, and therefore 766,000 billion times the volume of the sphere which contains the whole solar system! From these facts it will be seen that enormously large as the solar system absolutely is, compared with the size of our own earth, it is, compared with the size of the visible universe, merely as a drop in the ocean."

#### TAKING CARE OF THE CAT.

Where the presence of any kind of poison is suspected prompt and energetic action is necessary. A liberal dose of luke-warm water, slightly salted, will almost always act as an emetic, but when the case is urgent it is better to administer at once a generous quantity of sweet oil or melted lard. After such an experience the cat will usually need a course of cod liver oil and a generous diet, and if there seems to be resultant inflammation of the stomach—the symptoms of which are frequent vomiting and refusal of food—one grain of trisnitrate of bismuth twice a day will be found beneficial. A little powdered sulphur made into a paste with lard or unsalted butter and smeared

upon the front paws now and then is an excellent thing to keep a cat in good condition, but care should be taken that there is no exposure to cold or wet until after the effects of the medicine have passed off. Raw meat should never be given save in cases where other food is refused and it is necessary to build up the system; then it should be given in small quantities, and be perfectly fresh and free from fat. Florence Percy Matheson in *June Ladies' Home Journal*.

#### STEVENSON'S YOUTHFUL APPEARANCE.

In those early days he suffered many indignities on account of his extreme youthfulness of appearance and absence of self-assertion. He was at Inverness—being five or six and twenty at the time—and had taken a room in a hotel. Coming back about dinner time, he asked the hour of the table d'hôte, whereupon the landlady said, in a motherly way: "Oh, I knew you wouldn't like to sit in there among the grown-up people, so I've had a place put for you in the bar." There was a frolic at the Royal Hotel, Bathgate, in the summer of 1879. Louis was lunching alone, and the maid, considering him an eligible quantity, came and leaned out of the window. This outrage on the proprieties was so stinging that Louis at length made free to ask her, with irony, what she was doing there. "I'm looking for my lad," she replied. "Is that he?" asked Stevenson, with keener sarcasm. "Veel, I've been lookin' for him a' my life, and I've never seen him yet," was the response. Louis was disarmed at once, and wrote her on the spot some beautiful verses in the vernacular. "They're no bad for a beginner," she was kind enough to say, when she had read them.—"Personal Memories of Stevenson," by Edmund Gosse, in the *Century*.

#### ROBERT COLLYER'S SUPREME MOMENT.

Thirty years ago next summer I went over to my old home in England, after an absence of fifteen years, to find "the woman who most influenced me"—my mother, writes the Rev. Robert Collyer, D.D., in the series of "The Woman Who Most Influenced Me," in the *June Ladies' Home Journal*. She was sitting in the old rocking-chair where she had nursed all her children, but could not rise at once, because the sudden shock of her joy held her there some moments, and the years had wrought such a change in me that she looked up with a touch of wonder, but when I said "mother" she held out her arms and cried, "My lad, I did not know thy face but I know thy voice."

There were only a few threads of silver in her hair when I left home, but now it had grown all white. I noticed the threads coming soon after my father died suddenly while he was working at his anvil on a blazing July day twenty-one years before this time, and she was much changed now, but not at all for the worse with the years, only, I thought, as a sound rosy apple changes toward the perfect ripeness.

In response to a request from Rev C. A. Salmond, asking for information on Romanism and Ritualism, Edinburgh F. C. Presbytery have agreed to hold a private conference on the subject. Dr. McEwan stated that in five of the Episcopal churches of that city the confessional is in full swing.

## Our Young Folks.

### THE RAIN COACH.

Some little drops of water,  
Whose home was in the sea,  
To go upon a journey  
Once happened to agree.  
A cloud they had for carriage,  
Their horse a playful breeze,  
And over land and country  
They rode awhile at ease.

But ah! they were so many  
At last the carriage broke,  
And to the ground came tumbling  
These frightened little folk.  
And through the moss and grasses  
They were compelled to roam  
Until a brooklet found them  
And carried them all home.

### HENRY KINGSLEY'S STIRRING STORIES.

Do young men read Henry Kingsley nowadays? Or men of any age, in fact? And if not, why does not some one of our essayists use his opportunity to call renewed attention to three or four of the best books of their kind in the language? For if "Austin Elliot" and "Ravenshoe" and "Geoffrey Hamlyn" do not belong, with "Tom Brown at Oxford" and a few more, in the first rank of the expressions of young manhood, let us have an overhauling of the standards, and see what we have done to improve them so that these books no longer appeal to us. The publication of a new and excellent edition of Henry Kingsley's works not long ago led me to hope they were to have large renewal of popularity, and perhaps this may have followed; certainly I think no man ever made his first acquaintance with them, at any time of life between eighteen and thirty, without handing them on to at least one other.—From "The Point of View," in the *January Scribner's*.

### THE ROBBER BLUEBIRD.

Once upon a time there lived in a beautiful house two little brothers, called John and Harry, and they were almost always good boys.

But one day they got angry at each other.

What do you think all the quarrel was about? Why, nothing but a little piece of cake that the cook had given to Harry. Now just as they were going to strike one another, they saw a beautiful bluebird, with a lovely crest upon its head, fly down into the yard and pick up a large worm.

He was just going to fly off with it, when another bird, just like himself, dived down and tried to take the worm from the one that had first found it.

Before the two brothers could say a word, the two birds were flying at each other, and tearing off their beautiful crests and coats.

Harry and John stood watching them and quite forgot that they had a fight on hand of their own.

Just as the naughty bird who was trying to rob his brother bluebird had seized the worm, and was about to fly away with it, there was a sudden rush and flash, and Pussy Cat ran under the house with the wicked little robber tight between her teeth.

Then the other bird, trembling with fear, flew away.

"O John!" cried Harry, "just think if that had been you and me, and a lion had come and carried one of us off, and atous up!"

"Only—only it would not have been you, Harry. He would have carried me off, because it was I began the quarrel."

"Yes, and you can have half of my cake, John."

"And I hope my little boys will never do so again," said mamma, who had been watching, and heard all. — *Harper's Young People*.

## A DOG STORY FROM SCOTLAND.

Some time ago a family living at New Mills, Berwick, got a collie dog pup and put him alongside a kitten, and the pair seemed to get on very well for a time. Jealousy was not long in springing up, however, and the puppy began to get snappy whenever tabby was favoured. This took a remarkable turn some days ago, when the puppy was seen to lift the kitten in its mouth, carry him to the back of the house, and cautiously looking round to see that no one was looking drop the kitten into the ashpit. Pussy was recovered, however, and, like an invalid, received a double share of attention for some time after. This must have still further intensified the dog's jealousy, for his next move was even more remarkable. For some time he had been noticed to occasionally lift the kitten in his mouth and carry it some distance. On this particular occasion, however, he lifted tabby in the usual way, took a circuitous route to Whitadder Bridge, about three hundred yards from the dwelling, and, trotting to the middle of the bridge, halted, put his head through between the metal uprights, and dropped tabby into the river from a height of twenty feet. He then began to jump about and bark, evidently an expression of satisfaction at the success of his murderous plan. The noise the dog was making served to attract the people of the house, who, on going to the bridge, found the cat struggling in the river. It was rescued, but how the pair will get on in future remains to be seen.

### DO DOGS THINK.

So many wonderful and intelligent deeds have been and are constantly being performed by dogs, that the question naturally arises, "Do dogs really think like human persons, only in a less degree?"

Among the stories of this animal's intelligence and affection which have recently fallen into my hands one of the most interesting is that of Hero and Midget, which is recorded by the *Christian Intelligencer*.

Mr. Lane and his family lived in the country, and were the owners of the two dogs, Hero and Midget. Hero was a fine, large dog, while Midget, as you might guess from the name, was a little one. The two dogs were very fond of each other, and had many gay games together.

One summer the Lane family went to make a visit to some friends who lived in a village some seventeen miles away. Midget they took with them but, Hero they left behind.

Near the house where the Lane family were staying was a hotel, where lived a very large dog who was not always very friendly. One day Midget went out for a walk. As he was passing the hotel, the large dog came out and commenced to fight with poor little Midget. The little dog was dreadfully beaten, and crept to the house quite crestfallen.

The next day Midget was missing right after breakfast, and all search after him was in vain. Later in the day, who should be seen coming along the dusty road but Midget, and with him Hero. The little dog had gone all the way home after his friend.

The two dogs went to the house where their friends were, ate a hearty meal, and then trotted off straight for that hotel and found the hotel dog. Then Hero gave that dog such a whipping that I do not think he bothered small dogs for some time. Then he turned about and went all the way home again.—*Rain's Horn*.