HARRY AND LUCY.

PART I.

Little children, who know the sounds of all letters, can read words, and can understand what is told in this book.

Harry was brother to Lucy, and Lucy was sister to Harry. Harry had just come home to his father's house; he had been left at his uncle's, when he was an infant, and had always lived at his uncle's house.

Lucy lay in a little bed in a closet near her mother's room; and Harry lay in a little bed in another closet.
Early in the morning, whilst Lucy was in bed, the sun shone through the window upon her face, and wakened her; when she was quite awake, she knew that it was morning, because it was day-light, and she called to her mother and said, "Mamma, may I get up?" But her mother did not answer her, for she did not hear what she said, because she was asleep: when Lucy knew that her mother was asleep, she lay still, that she might not disturb her until she heard her mother stir; and then she asked her again, if she might get up; and her mother said, she might.

So Lucy got up, and put on her stockings and shoes, and finished dressing herself, and then went to her mo-
ther, and asked for some breakfast. But her mother told her, that she should make her bed, before she should have any breakfast. Little Lucy began to make her bed; and her mother went into her other closet, to waken Harry; and she said, "Harry, get up!" And Harry jumped out of bed in an instant and put on his trowsers and his jacket, and his shoes; and then he combed his hair, and washed his hands; and, whilst he was wiping his hands, his mother went down stairs.

Little Lucy hearing her brother Harry walking about in the closet, called him and asked, if he had made his bed? Harry said, he had not. "Oh, then," says Lucy, "mamma will give you no breakfast." "Yes," says Harry, "she will: I never made my bed at
my uncle’s, and I always had my breakfast.”

As they were talking he heard his father call him, and he ran down stairs, to the parlour, where his father and mother were at breakfast; and her mother called Lucy down too, and said to her, “Well, Lucy, have you made your bed neatly?”

Lucy. Yes, mamma, I have made it as well as I could.

Mother. You shall have some breakfast then.

His father asked Harry, whether he had made his bed. Harry answered, that he did not know how to make it.

“I will show you,” said his mother; and, taking him by the hand, she led him up stairs, and showed him how to make his bed.
When Harry came down to his father he said, that he did not know that boys or men ever made beds; for, at his uncle's, nobody ever made beds, but the housemaid.

His father told him, that, in some countries,* the beds are made by men; and that in ships, which sail on the sea, and carry men from one country to another, the beds in which the sailors sleep are always made by men.

Lucy's mother observed, that she had not eaten her breakfast; and she asked her why she had not eaten it.

Lucy said, that she waited for her brother. Her mother then gave Harry a basin of milk, and a large piece of

* Here the child, if at a distance from the coast, should be told what is meant by different countries; what a ship is, and what is meant by a sailor, &c.
HARRY AND LUCY. 173

bread; and she set a little table for him and his sister, under a shady tree, that was opposite to the open window of the room where she breakfasted.

Lucy was a good little girl, and had always minded what was said to her, and had been very attentive, whenever her father or mother had taught her any thing. So her mother had taught her to read and to work, and when she was six years old, she could employ herself without being troublesome to any body; she could work for herself, and for her brother; and, sometimes, when Lucy behaved very well, her mother let her do a little work for her, or for her father; and her mother had given her a little thimble, to put upon her finger, and a little housewife, to
keep her needles and thread in, and a little pair of scissors, to cut her thread with, and a little work-bag, to keep her work in; and Lucy's father had given her a little book to read in, whenever she pleased, and she could read in it by herself, and understand all she read, and learn every thing that was in it.

As soon as Lucy had eaten the breakfast, which her mother had given her, she sat down on her stool, and took her work out of her work-bag, and worked some time; then her mother told her, that she had worked an hour, and that she did not choose that she should work any more: so Lucy got up and brought her work to her mother, and asked her, if it was done as it ought to be done? And her mother said, "Lucy, it is
done pretty well, for a little girl that is but six years old; and I am pleased to see that you have tried to avoid the fault, which I told you of yesterday:” then Lucy’s mother kissed her and said to her, “Put your work into your work-bag, and put your work-bag into its place, and then come back to me.”

Lucy did as she was desired to do; and then her mother asked her, if she would rather go out of doors and walk, or stay with her? Lucy liked best to stay with her mother, who, very soon afterwards, went to her dairy.

Lucy followed her, and took a great deal of care not to be troublesome, for
she loved to be with her mother; but she observed whatever she saw, and did not meddle with any thing. She saw that the dairy was very clean; the floor was a little damp, which made her think, that it had been washed that morning, and there were not any cobwebs or dust upon the walls; and she perceived, that the room smelt very sweet; she looked about to find out if there were any flowers, that could make that pleasant smell, but she could not see any thing, but a great many clean empty vessels of different shapes, and a great many round, wide, and shallow pans full of milk: she went near to them, and thought the smell came from them.

When she had looked at a good many of them, she thought they were not all alike; the milk in some of the pans was
a little yellowish, and looked thick, like the cream, that she saw every morning at her mother's breakfast; and the milk in the other pans was a little blue, and looked thin, like the milk that was often given to her and her brother to drink. Whilst Lucy was thinking on this, she saw one of her mother's maids go to one of the pans, that had the yellowish milk in it, and the maid had a wooden saucer in her hand, and she put the wooden saucer very gently into the pan; she did not put it down to the bottom of the pan, but took up that part of the milk, which was at the top, and put it into another vessel; and then Lucy saw, that the milk that was left in the pan was not at all like what the maid had taken out, but was very thin and a little blue.
When Lucy's mother went out of the dairy, she took her little daughter out into the fields to walk with her. Soon after they set out, Lucy said, "Mother, when I was in your dairy, just now, I saw the maid take some milk out of a milk-pan, and it looked like what I see you put into your tea, and I believe it is called cream; but she left some milk in the pan, and that was not at all like cream, but like very thin milk; pray, mother, will you tell me, why all that was in the pan was not cream?" Then her mother said, "Yes, Lucy, I will answer any questions you like to ask me, when I have leisure, because, whenever I talk to you, you mind what I say, and remember whatever your father or I teach you."
"I believe you know, that the kind of milk, which I give you very often for your breakfast and supper, is taken out of the udders of cows. Did you never see the maids with milk-pails, going a milking? They were then going to take the milk from my cows: they call that milking them, and it is done twice every day, once in the morning, and once in the evening. When they have gotten the milk in the pails, they carry it into the dairy, and put it into such milk-pans as you saw, and they let the milk-pans stand still, in the same place, for several hours, that the milk may not be shaken; and in that time the heaviest part of the milk falls as low as it can, towards the bottom of the pan, and the lightest part of the milk remains above it at the top of the pan, and that thick light part is called
cream, as you thought it was. When the milk has stood long enough, the cream is taken from the other part of the milk, and doing this is called skimming the milk; but it must be done very carefully, or else the cream and milk would be all mixed together again.” Lucy told her mother, that when she was in the dairy, she had walked all round it, and that she saw a great deal of cream more, she thought, than came every day into the parlour; and she wished to know what other use it was for, except to mix with tea and fruit, or sweetmeats.

Lucy’s mother was going to answer her, but she looked towards the other side of the field, and said, “Lucy, I think I see some pretty flowers there,
will you run and gather me a nosegay, before I talk any more to you?” Lucy said, “Yes, mother;” and ran away to do what her mother had desired. When she came to the place where the flowers were, she looked about for the prettiest, and gathered two or three of them; but, when she had them in her hand, she perceived that they had not any smell; so she went to a great many more, and, at last, she found some, that had a sweet smell, but they were not pretty; and she gathered some of them, and was taking them to her mother; but, as she passed near a hedge, she saw some honey-suckles growing in it; and she remembered that she had smelt honey-suckles, that were very sweet, and they were very pretty too; so she was glad that she had found some, for she thought her mother would
like them; but when she came close to the hedge, she saw that they were so high from the ground, that she could not reach them. Lucy did not like to go away without taking some honey-suckles to her mother; so she walked slowly by the side of the hedge, till she came to a place where there was a large stone, upon which she climbed, and gathered as many honey-suckles as she liked.

Whilst she was getting down, she held the flowers fast, for fear she should drop them into the ditch, and she felt something prick her finger very sharply; she looked, and she saw a bee drop down off one of the honey-suckles that she had squeezed in her hand: so she thought that she had hurt the bee,
and that the bee had stung her, to make her let him go, and that it was the bee, which she had felt pricking her. Lucy was afraid that she had hurt the bee very much, for she remembered, that when she opened her hand the bee did not fly away, but dropped down; so she looked for it on the ground, and she soon found it struggling in some water, and trying with its little legs and wings to get out, but it was not strong enough. Lucy was very sorry for the bee, but she was afraid to touch it, let she should hurt it again, or that it should hurt her. She thought for a little while what she could do; and then she got a large stalk of a flower, and put it close to the bee: as soon as ever the bee felt it, he clasped his legs round it, and Lucy raised the stalk, with the bee upon it, gently from the
wet ground, and laid it upon a large flower that was near her. The bee was sadly covered with dirt; but, as soon as he felt that he was standing upon his legs again, he began to stretch his wings, and to clean himself, and to buzz a little upon the flower. Lucy was glad to see that the bee did not seem to be very much hurt; and she took up her nosegay and ran as fast as she could, towards her mother; but the finger that the bee had stung began to be very sore.

She met her mother coming to her, who wondered what had made her stay so long; and when Lucy had told her what had happened, she said, "I thank you, my dear, for getting me so sweet a nosegay, and I am very sorry
you have been hurt in doing it; I am sure you did not intend to hurt the poor little bee; and we will walk home now, and I will put some hartshorn to your finger, which will lessen the pain you feel."

Lucy said, "Indeed, mother, I did not mean to hurt the bee, for I did not know that it was in my hand; but when I am going to gather flowers another time, I will look to see if there are any bees upon them."

When Lucy’s mother got home some hartshorn was put to Lucy’s finger, and soon after it grew easier; and Lucy’s mother said to her, "Now I am going to be busy, and, if you like it, you may go into the garden till dressing time." Lucy thanked her, and said, she did like it, but she hoped, that some time, when she was not busy, her
mother would answer what she had asked her about cream.

After breakfast, Harry's father took him out walking, and they came to a field where several men were at work; some were digging clay out of a pit, in the ground; some were wetting what was dug out with water; and others were making the clay into a great number of pieces of the same size and shape. Harry asked his father what the men were about; and he told him, that they were making bricks for building houses. "Yes," says Harry, "but I can run my finger into these; they are quite soft and brown, and the bricks of our house are red and hard, and they don't stick together as the
bricks of your house do!" Saying this, he pushed down a whole hack of bricks. The man, who was making them, called out to desire he would pay for those he had spoiled. Little Harry had no money, and did not know what to do; but said to the man, "Indeed, sir, I did not intend to do any harm." The man answered, "Whether you intended it or not, you have spoiled the bricks, and must pay me for them; I am a poor man, and buy all the bread that I have with the money which I get for these bricks; and I shall have less bread, if I have a smaller number of bricks to sell."

Poor Harry was very sorry for what he had done, and at last thought of asking his father to pay for them; but his father said, "I have not spoiled them, and, therefore, it is not necessary that I
should pay for them." The man, seeing that Harry had not intended to do mischief, told him, if he would promise to make amends at some future time for the mischief which he had done, he would be satisfied. Harry promised he would. "Now you find, Harry," said his father, "that you must not meddle with what does not belong to you."

As they walked on farther they came to a blacksmith's shop; and, as it began to rain, Harry's father stood under the shed, before the door; and a farmer came riding to the shop, and asked the blacksmith to put a shoe upon his horse, which, he said, had lost one a little way off, and which would be lamed, if he went over any stony road without a shoe. "Sir," says the blacksmith, "I
cannot shoe your horse, as I have not iron enough. I have sent for some to the next town, and the person whom I sent, cannot be back before evening."

"Perhaps," said the farmer, "you have an old shoe, that may be made to fit my horse."

The smith had no iron, except a bit of small nail-rod, which was fit only for making nails: but he said, that, if the farmer looked on the road, perhaps he might find the shoe, which had fallen from his horse. Little Harry, hearing what had passed, told his father that he thought he could find a shoe for the farmer's horse. His father asked him, where he thought he could find a shoe.

---

He said that he had observed something, as they walked along the road,
lying in the dirt, which he thought was like a horse-shoe. His father begged that the farmer would wait a little while; and then he walked back with Harry on the road by which they came to the blacksmith's, and Harry looked very carefully, and after some time he found the horse-shoe, and brought it back to the smith's shop; but it was not fit to be put again upon the horse's foot, as it had been bent by a waggon wheel which had gone over it.

The farmer thanked Harry; and the blacksmith said that he wished every little boy was as attentive and as useful. He now began to blow his large bellows, which made a roaring noise, and the wind came out of the pipe of the bellows among the coals upon the hearth, and the coals became red, and by degrees they became brighter and
brighter, the fire became hotter, and the smith put the old iron horse-shoe into the fire, and after some time it became red and hot like the coals; and when the smith thought that the iron was hot enough, he took it out of the fire with a pair of tongs, and put it upon the anvil, and struck it with a heavy hammer. Harry saw that the iron became soft by being made red-hot; and he saw, that the smith could hammer it into whatever shape he pleased.

When the smith had made the shoe of a proper size and shape, he took a piece of nail-rod, and heated it red-hot in the fire, by the help of the large bellows, which he blew with his right hand, whilst he held the tongs in his left.

Harry was going to examine the
horse-shoe that the smith had just made, but he would not meddle with it without leave, as he recollected what had happened in the brickfield.

Whilst he was looking at the shoe, another little boy came into the shop; and, after lounging about for some time, he stooped down to pick up the horse-shoe in his hand; but he suddenly let it drop, and roared out violently, and said that he was burned. Whilst he was crying, and blowing his fingers, and squeezing and pinching them to lessen the pain, the smith turned him out of the shop, and told him, that, if he had not meddled with what did not belong to him he would not have been hurt. The little boy went away whimpering and muttering, that he did not know that black iron would burn him.
THE smith now took the nail rod out of the fire, and it was hotter than the other iron, and it was of a glowing white colour; and, when the smith struck it upon the anvil, a number of bright sparks were struck off the iron, on every side, about the shop: they appeared very beautiful.

The smith then made some nails, and began to fasten the shoe on the horse's foot with the nails. Harry, who had never before seen a horse shod, was much surprised that the horse did not seem to be hurt by the nails, which were driven into his foot; for the horse did not draw away his foot, or show any signs of feeling pain.

Harry's father asked him, whether his nails had ever been cut.

Harry said, that they had.
Papa. Did cutting your nails hurt you?

Harry. No.

Papa. A horse’s hoof is of horn, like your nails; and that part of it that has no flesh fastened to it does not feel pain: the outside of the hoof may be cut, and may have nails driven into it, without giving any pain to the horse.

The blacksmith, who was paring the horse’s foot, gave a piece of the horn, that he had cut off, to Harry, who perceived, that it was neither so hard as bone, nor so soft as flesh; and the blacksmith told him, that the hoof of a horse grows in the same manner as the nails of a man, and requires, like them, to be sometimes pared.

And when the blacksmith had finish-
HARRY AND LUCY.

...cd shoeing the horse, he showed Harry the hoof of a dead horse, that was separate from the foot, and Harry saw how thick it was in that part where the nails were to be driven.

Harry’s father now told him, that it was time to go home, as they had two miles to walk, and it wanted but an hour of dinner-time. Harry asked his father how much time it would take up to walk two miles, if they walked as fast as they commonly did? and his father showed him his watch, and told him he might see, when they got home, how long they had been returning. Harry saw, that it was four minutes after two o’clock, and when they got home it was forty-eight minutes after two; so Harry counted, and found how many minutes had passed from
the time they left the blacksmith, until
they got home.

When Harry came into the garden,
he ran to his sister Lucy, to tell her all
that had happened to him; and she left
what she was about, and ran to meet
him. She thought he had been away
a great while, and was very glad to see
him; but just then the bell rang, and
they knew they must go in directly, to
make themselves clean before dinner.

When dinner was over, Harry and
Lucy were let go into the garden, and
then Lucy begged her brother to tell
her all that had happened, whilst he
was out in the morning. Harry then
told her how he had spoiled the bricks,
and what the brickmaker had said to
him; and he told her, that he had promised to make amends for the mischief which he had done.

He told her, that, to make bricks, men dug clay, and beat it with a spade, and mixed it with water, to make it soft and sticky, and that then they made it into the shape of bricks, and left it to dry: and when it was hard enough to be carried without breaking, it was put into large heaps and burned, so as to become of a reddish yellow colour, and almost as hard as a stone.

``Then, brother,'" says Lucy, "if you will make some bricks, we can build a house in the little garden mamma lent me." So they went to the little garden, and Harry dug some earth with a little spade, which his
father had given him, and endeavoured to make it stick together with some water: but he could not make it sticky, like the clay, that he saw the brick-makers use; and he ran in and asked his father why he could not make it sticky with water. And his father asked him whether it was the same kind of earth, that he had seen at the brick-field. And Harry said, he did not know what his father meant, by the same kind of earth: he saw a man dig earth, and he dug it in the same manner.

*Papa.* But is the earth in the garden the same colour as that in the brick-field?

*Harry.* No: that in the garden is almost black, and that in the field is yellow.

*Papa.* Then they are not the same kinds of earth.
Harry. I thought all earth was alike.

Papa. You find, that it is not; for you see, that all earth cannot be made to stick together with water.

Harry went back into the garden; and, after having looked into a great many places for yellow earth, at last he saw some in the bottom of a hole, that had been dug some time before; and he ran back, and asked his father leave to dig some of it; and, after he had gotten leave, he dug some of the yellow clay, and found, that when it was mixed with water, it became very sticky and tough; and that the more it was mixed, and squeezed, and beaten with the spade, the tougher it became. He now endeavoured to make it into
the shape of bricks: but he found that he could not do it: and Lucy asked him, whether the brickmakers were as long making a brick as he was. "No," said he; "they have a little box, made in the shape of a brick, without top or bottom, into which they put the clay upon a table, and with a straight stick, like a ruler, they scrape the clay, even with the top of the box, and then, lifting up the box, they find the clay in the shape of a brick upon the table." "Harry," says Lucy, "there is a carpenter in the house, at work for my mother; I will go and ask her to get a box made for you: do you know by what name such a box is called, brother?"—"It is called a mould."

Lucy's mother let the carpenter make a brickmaker's mould for Harry; but
the man could not begin until he knew what size it should be: how many inches long, how many inches broad, and how many inches thick it should be. Harry did not know what the carpenter meant; but Lucy, having always lived with her mother, who had been very kind to her, and who had taught her a great many things, knew what the carpenter meant; and as she wished to have bricks of the size of those with which her father's house was built, she went and measured some of the bricks in the wall: and finding, that a great many of them were all of the same length, she said to her brother, that she supposed that they were all alike. Harry told her, that, as the brickmakers used but one mould, whilst he saw them at work, he supposed, that they make a great number of bricks of the same size, and that the
wall would not look so regular as it did, if the bricks were of different sizes.

Lucy therefore thought, if she could measure one brick, it would be sufficient. She easily found the length and the depth of a brick in the wall, but she did not at first know how to find the breadth, as the bricks lying upon each other prevented her from seeing their breadth; but Harry showed her at the corner of the wall, that the breadth of the bricks could be seen; she measured very carefully, and found the length be nine inches, the breadth four inches, and the depth two inches and a quarter. So the carpenter, when he knew the dimensions of the mould, made it; and Harry placed a flat stone upon two other large stones to serve for a table;
and he and Lucy made several bricks; but they were a great while before they could make them tolerably smooth, as they stuck to the mould, unless the mould was wetted. They were very happy making their bricks; but they did not know how they should burn them, so as to make them hard, but they were determined to try.

It was eight o’clock in the evening before they had finished ten bricks, and they were called in, and their mother gave them some bread and milk for supper, and sent them to bed.

The next morning Harry and Lucy got up as they did before; and their father and mother gave them leave to go to look at the bricks they had made; and Harry felt that they were a little harder than they were the night before; and Lucy thought, that
burning them would make them softer; for she had seen butter, and wax, and pomatum, and sealing wax, all made soft by heat, but she did not remember to have seen any thing made hard by heat. But Harry put her in mind of the crust of pies, which is soft and tough, like clay, before it is baked, and which grows hard and brittle by the heat of the oven; and he told her, that the iron, of which the blacksmith made the horse's shoe, when he blew the bellows, was hard and black, before it was put into the fire, but that it became red, when it was sufficiently heated, and so soft, that the smith could hammer it into what shape he pleased.

Lucy believed what her brother said, but was resolved to beg, that her mother would take her to see red-hot iron, and a brick kiln, which Harry told her,
was the name of the place in which bricks were burnt.

Whilst they were eating the breakfast, which their mother gave them, Harry asked his sister, what she had been doing the day before, when he was out with his father; and Lucy told him all she had seen in the dairy, and when she was out a walking. When they had done breakfast, his mother lent Harry one of Mrs. Barbauld's little books for children, and let him read the story of the poor Blind Fidler, with which Harry was very much pleased: and then she let Lucy read the following story.

A man, riding near the town of Reading, saw a little chimney-sweeper
lying in the dirt, who seemed to be in great pain; and he asked him what was the matter; and the chimney-sweeper said, that he had fallen down, and broken his arm, and hurt his leg, so that he was not able to walk: and the man, who was very good-natured, got off his horse, and put the chimney-sweeper upon it, and walked beside the horse, and held the boy on till he came to Reading; and, when he came to Reading, he put the boy under the care of an old woman, whom he knew, there, and he paid a surgeon for setting his arm, and gave the woman money, for the trouble which she would have in taking care of the boy, and the expense which she would be at in feeding him, till he should be able to work again to earn money for himself; and then the man continued his journey, till he got
to his own house, which was at a great distance. The boy soon got well, and earned his bread by sweeping chimneys at Reading.

Several years after that time, this same good-natured man was riding through Reading, and his horse took fright upon a bridge, and jumped with the man upon his back into the water; the man could not swim, and the people, who were on the bridge, and saw him tumble in, were afraid to jump into the water, to pull him out; but, just as he was ready to sink, a chimney-sweeper, who was going by, saw him, and without stopping a moment threw himself into the river, and seizing hold of him dragged him out of the water, and saved him from being drowned.
and when the man was safe upon the bank, and was going to thank the person who had pulled him out of the water, he recollected that it was the same chimney-sweeper, whom he had taken care of several years before, and who had hazarded his own life to save that of his benefactor.

When Lucy had done reading, her mother asked Harry, which he liked best, the man who had taken care of the chimney-sweeper, whom he did not know, or the chimney-sweeper, who had saved the life of the man whom he knew, and who had taken care of him when his arm was broken.

Harry said he liked the chimney-sweeper best, because he was grateful, and because he ventured his own life
to save that of the man, who had been kind to him: but Lucy said, she liked the other man the best, because he was humane, and took care of a poor little boy, who had nobody to take care of him, and from whom he could never expect to receive any benefit.

This is the history of Harry and Lucy for two days. The next Part will be the history of another day, when Harry and Lucy were a year older.
GLOSSARY.

ADVERTISEMENT.

The author does not pretend, that this Glossary contains full and accurate definitions; he is well aware of the difficulty of such an undertaking; and, indeed, is fully satisfied, that nothing is properly a definition which does not contain a perfect enumeration of all the particulars, which relate to the subject in question. What he aims at is to give a popular meaning of the words which he has selected, and at the same time to point out the necessity of accuracy, and of referring to the original root from which words are derived; but, above all, to excite in children an appetite for knowledge.

All objects of the senses, about which they inquire, should be submitted to the examination of children; their obvious qualities, names, and parts should thus be rendered familiar to them.
This Glossary should first be read to children, a little at a time, and it should be made a subject of conversation with them; afterwards they will read it with more pleasure. Young children do not read to gratify their curiosity: their chief pleasure from books arises, at first, from success in having conquered the difficulty of reading.
GLOSSARY.

ABSTAIN. To abstain—not to do a thing, that one is inclined to do.

ACCEPT. To receive with pleasure.

AGILITY. Activity; the being able to move quickly and with ease; to run, and jump, and dance well.

AIR-PUMP. A machine for trying experiments upon air. An air-pump will be described to little people in another place.

ASSOCIATE. To join; to connect. Things, that happen at a time when we feel pleasure or pain, are remembered together at another time. We remember the faces, and dress, and voice of those from whom we have received pleasure, and we remember that we saw or heard, at any place, that we liked much, or that we disliked; and we remember things merely because they happened on the same day, or in the same week.
Some people remember things best by thinking of the places, and some by thinking of the time when things happened; others, by the pleasure or pain they felt at the time when things happened.

**Attention.** To be attentive is to think of what we are about.

**Attracted.** To be attracted by any thing is to be drawn towards it, as a piece of iron is drawn, or moved, towards a magnet, which is placed near it; and as a feather, or a light piece of paper, is made to fly towards a piece of sealing wax, or a bit of amber, or a tube of glass, when they are rubbed by the hand, or by certain other substances.

My little boy or girl, when you read this, ask the person who teaches you to show you a magnet, or to let you try these experiments.

**Barometer.** Little girls and boys may see barometers in many places, but they cannot understand them, without taking a great deal of pains.

**Behaviour.** The manner in which people act.

**Belong.** What is a person's own belongs to him.
BLACKSMITH. A man who makes things of iron.

BLOW. To blow is to make air move; and when air moves it is called wind.

BOTTOM. The lowest part of a thing.

BREACHES. Gaps or holes made in any thing.

BRITTLE. Easily broken.

BUTTON-MOULD. Some buttons are made of metal, others are made of cloth, or thread, fastened about little round pieces of wood or horn, or bone, or ivory. These pieces are called moulds.

MOULDS are sometimes solid, and sometimes hollow. Silver spoons are formed with a hammer upon a solid iron mould. Ornaments of plaster of Paris, or alabaster, and of wax, and clay, and other materials, are cast or worked in hollow moulds. Metal and plaster statues are cast between a hollow and a solid mould. Do you understand this, my little pupil?

BUBBLES are thin hollow globes, filled with air. Bubbles blown from a tobacco-pipe dipped in soap-suds show beautiful colours, when the sun shines on them. Such bubbles could not be made with water only; but the addition of soap makes a clammy or sticky liquor, that can be spread out
by blowing air into it. The air in soap bubbles swells by heat, and bursts its covering.

**Buzzed.** To buzz; to make a noise like that which a fly makes with its wings.

**By degrees.** Not all at once. The word degree properly means a step; by degrees, step after step.

**Care.** To take care of a person is to hinder him from being hurt.

**Clasped.** To clasp is to hold fast round any thing.

**Clean.** What is not dusty, sticky, stained, greasy, &c.; and what has not, or does not look as if it had, a disagreeable smell.

**Cobwebs.** Nets made by spiders to catch flies.

**Collected.** To collect is to gather together.

**Conduct.** People, by thinking whether they are going to do right or wrong, can judge and determine how they ought to act: their judgment conducts or leads them. Judging wisely, and acting accordingly, is good conduct; the contrary is bad conduct.

**Consented.** Agreed to what was asked.
CONSIDERABLE. A quantity worth considering or attending to.

CONVERSATION. Answering what people ask; listening to what others say; hearing from others what they know, and telling them what we know.

COMPARED. To compare is to consider or think of things; to find out in what they are like one another, and in what they are unlike.

CORRECT. To correct is to alter for the better.

COUNTED. Looked or felt to know how many there were.

CYLINDER. What is round like a pencil, or a rolling stone, or a candle. A cylinder may be hollow, as that part of the socket of the candlestick into which the candle is put.

DEAL. A quantity.

DETERMINED. To determine is to think of, and to resolve to do a thing.

DIMENSIONS. The sizes of the different parts of any thing.

DIRECTLY. Soon.

DISAPPOINTMENT. When anything which we expect does not happen, we feel disappointed. Several words in English begin with the syllable
dis: this syllable dis sometimes means different from; as in dis-appointment, dis-inclination, dis-join, dis-prove, and sometimes it means different ways, as dis-sever, dis-play.

Distinctly. In a distinct manner. When things are separate from one another, we see them and can consider them one by one.

Diverted. Turned aside. To divert also means to amuse, because amusement turns aside our thoughts from applying too closely to any thing. Di, in divert and several other words has the same meaning as dis.

Dry. What is not wet.

Earned. To earn is to get any thing by working for other people.

Employ. To employ oneself is to do something.

Endeavour. To try to do a thing.

Entertaining. To entertain is the same as to amuse; it is to give pleasure to the mind, by engaging the attention to something that is agreeable.

Entirely. Entire is what is not broken or divided: what is whole: any thing is said to be done entirely, when every part of it is finished.

VOL. II.
My little pupils will observe, that, to explain one word, it is necessary to make use of others, that are supposed to be understood by those whom we are teaching. Sometimes the words which we use are not understood. You must then ask the meaning of them from your papa and mamma.

Evaporate. To evaporate is to turn some fluid into steam. Steam, when it is very hot, is not visible.

Exactly. With great care.

Examining. To examine is to consider attentively; to look at every side and every part of any thing; to consider the truth of facts, and to judge of reasons for or against any opinion.

Explain. To explain is to make a person understand what he reads, or what is said, or what is shown to him.

Experiment. A trial (v. Johnson). The word trial sometimes means only a trial in a court of justice.

Fear. What we feel when we expect something will hurt us.

Feeling. Nobody can be told what feeling is: every body knows their own feelings, but they cannot tell exactly what others feel.
GLOSSARY.

Fill. To put as much into a thing as it can hold.

Floating. To float means, not to sink in a fluid.

Fluid. Our little pupils must ask the persons who teach them, to show them different fluids, and to let them touch them. Things can sink or float in fluids; they do not sink perceptibly into solids, unless they are very sharp, or heavy. Fluids fill hollow vessels of all shapes: and they can be poured from one vessel into another. Solid, besides meaning what is not fluid, means what is firm, or steady, or strong: We say a solid foundation, solid sense, solid timber: that which is not hollow.

Forge. A place where smiths heat iron, and form it into different shapes.

Form. Shape, figure.

Former. The first of two things which have been mentioned.

For instance. Here the writer of the book wants to explain one thing, by mentioning something else that is like it. For example has the same meaning as for instance.

Full as much. Here the word full means quite—quite as much.

Globes. There are two sorts of globes, ter-
restrial and celestial: terrestrial globes represent the shape of the earth, and the situation of different countries; celestial globes show the situation of the stars in the sky.

Habit. When we have done any thing a great many times, it becomes easy to do it: there are some things, which, from habit, become so easy to be done, that we do not seem to think of them when we are doing them. Some habits are good and some bad: for instance, the habit of attending to what we are about is good; tricks, on the contrary, are bad habits.

Hacks. Brickmakers build their bricks, before they are burned, in long rows, and cover them with turf or straw, to protect them from the rain, and place them in such a situation as will expose them to the wind and the sun, till they are sufficiently dry for the kiln. These rows of bricks are called Hacks.

Happy. People know when they feel happy, or unhappy. Happiness depends upon feelings, and feelings cannot be exactly described by words.

High. What is at a distance from the ground. Things are said to be high, when compared with things that are lower than themselves, though
they are low when compared with other things. A boy of five years old is high, or tall, when compared with a child of a year old; and the same boy is low when compared with a boy of fifteen. A table is high, when compared with a stool, but low, when compared with a chest of drawers.

Honest. A person is honest who tells truth, and who does not take or keep what belongs to other people.

Impression. When any thing hard is pressed upon something which is not elastic, or springy, but which is much softer than itself, it sinks into it, and leaves marks upon it, as a seal does upon bees' wax, or upon sealing-wax softened by heat. The marks thus made are called impressions, because they are impressed upon what receives them. Whatever makes us attend, leaves a remembrance in the mind, which is called an impression, because this remembrance is something like the effect made by one body upon another.

Issued. To issue is to go out of.

Joined. Put close together; made to stick together.

Kept. What is not thrown away.

Kiln. A kind of oven, or furnace, in which
lime, and bricks, and potter's ware are burned. There are several different kinds of kilns.

**Lamed.** Made not able to move without pain or difficulty.

**Latter.** The last of two things, as the former is the first of two things.

**Leave.** To have leave is to be let to do any thing.

**Lever.** A bar of wood, or metal used to lift heavy things. When little boys and girls grow older, the different forms and uses of levers will be explained to them.

**Market.** A place where people meet, on particular days, to buy and sell: both the place and the day are called the market. People say, "To-morrow is the market;" meaning the market-day; or, "This is the market," meaning the market-place. A fair is a very large market, that is not held weekly, but only a few particular days in the year.

**Measured.** To measure is to find out the size of any thing.

**Mellow.** Soft from being ripe.

**Melted.** When anything solid is made fluid by heat it is said to be melted.
Glossary.

Microscope. My little friends must grow older, before they can understand a microscope; but they may perhaps be let to look at one, and see how large the parts of plants appear when seen through the glass of a microscope.

Minded. To mind is to think of a thing, to turn one's attention, one's mind to a thing.

Mistaken. To mistake is to take one thing for another; to mistake the road; to mistake what is said; to mistake the meaning of any thing. Mis, in mistake, &c. means wrong, or ill.

Mixed. To mix is to put things together, so as to make them touch in as many of their parts as we can.

Moderate. Without violence. Moderate properly means what is done by a measure. A moderate quantity: what is usually measured or given for any particular purpose. A pint of milk is a moderate quantity for one person; but a pintful would be an immoderate quantity.

Neatly. Neat is what is clean, smooth, and in order.

Nosegay. A bundle of flowers.

Observe. To observe is to mind what we see, and hear, and touch.
Glossary.

Opportunity. Fit place or fit time (v. Johnson's Dictionary).

Orrery. A machine for showing the motions of the moon and the planets.

My young friends must wait some time, before they can know what is meant by the word planets, and before they can be entertained or instructed by an orrery.

Pay. To give money for any thing.

Pence. Two half-pence make a penny: pence also means more pennies than one.

Perceived. To perceive is to observe some particular thing.

Print. To print means, properly, to make an impression. The print of a man's foot in the sand means the mark or impression of a man's foot in the sand: the print of a seal means its impression. Prints, a kind of pictures, are impressions upon paper, &c. of lines, or figures, carved upon copper: these lines are filled with ink; and when the copper is pressed, by a machine for that purpose, on paper, or silk, or vellum, the ink quits the lines in the copper, and sticks to the paper, &c. The beautiful prints, in Bewick's History of Birds and Quadrupeds, are cut on wood. In
Glossary.

General, prints are engraved on copper, and are therefore called engravings, or copper-plates.

Paddle. A small tool with which weeds are pulled up. It also means a kind of oar with which boats are moved.

Pebbles. Small stones that have been rounded, by being rubbed together by the motion of a river, or of the sea.

Peculiar. What belongs to a particular thing, person, place, or nation.

People. A number of persons. The people means the inhabitants of a country.

I planted himself. To plant is to put a vegetable into the earth to make it grow; it sometimes means to drive any thing firmly into another. To plant oneself in a place means to place oneself in such a manner as to show that we mean to stay there some time.

Pleasure. Pleasure is felt; it cannot be described by words.

Present. At present; what is doing or passing now. Every thing that we think of, or that we perceive, by any of our senses, must be done or must pass at some time. Time may be either present, past, or to come. What is to come is
also called future. When you learn grammar, my little friends, you will read of the present tense, the past tense, and the future tense. Tense means time.

Prevent. To hinder a thing from being done. To prevent, properly means to come before.

Proceed. To go forward.

Process. Method of doing a thing. It properly means the going forward of any thing. Pro, at the beginning of a word, means for, before, in the place of, forward.

Particles. Small parts.

Property. What belongs to a person or to a thing. "My father's horse," means the horse that belongs to my father, or that is my father's property. There is another meaning of the word property: we say, "It is a property of lemons to have a sour taste." Acidity, or sourness, is a property of lemons, and of vinegar, and of sorrel, and of crabs. To live longer than other animals without water is a property of the camel.

Punctuality. Exactness in doing what we have intended to do, or what we have said we would do.

Punished. To be punished is to be made to
feel pain, to prevent us from doing what is wrong.

**Purposely.** Designedly: intending to do it.

**Promise.** To promise is to tell a person that we will do something at a future time, which they wish should be done. People may say, that they intend to do a thing, without promising. When people promise, they speak as if they expected that the persons who hear them should understand that they firmly resolve to do the thing which they say; and that others might afterward, if they failed to keep their word, think that they were not to be trusted or depended upon. If we always speak truth people *must* believe us; if we do not speak truth always, even those who love us best *cannot* believe us.

**Quantity.** Size or number.

**Quarter of the Sky.** Quarter properly means the fourth part of any thing; but it sometimes means not exactly the fourth part, but some part separate from other parts; as “The roads are bad in that quarter of the country;” — “Go to that quarter of the garden;” — “He lives in a different quarter of the country.”

**Readily.** Easily; quickly.
Recollect. To recollect is to collect again from one's memory. Re, at the beginning of words sometimes means backwards, and sometimes means again, as to re-peat, to re-turn.

Repair. To mend; also to go to a place.

Revolution. The going round of any thing to the place from which it set out.

Round. What has no corners or angles, is usually called round, though it may not be perfectly round. A globe is a figure round in all directions.

Set. To set means to place; setting of the sun means its disappearing in the evening. You cannot yet understand what is meant by the motion of the earth, which occasions sun-set and sun-rise.

Set on Fire. To put fire to any thing, so as to make it burn.

Shadow. My little friends, hold a book, or any thing else, between a candle and a wall, or between the sun and a wall, and you will see that what is so held prevents the light of the candle, or of the sun from going to or reaching the wall: therefore, that part of the wall, from which the light of the sun or candle is kept, is
dark. If any hole is in the thing which you hold in your hand, the light will pass through that hole to the wall, and the wall will be light in that place. On the contrary, if a thread, or even a hair, hang at the edge of what you hold, that hair will hinder the light from coming to the wall: and a part of the wall, in the shape of that hair or thread, will be dark.

The shadow you perceive is not a thing; it is only the want of light on some place.

Shed. A roof that is held up by posts, or rails, instead of walls; or what appears like a roof.

Shoes. What are put upon feet, to hinder them from being hurt by the ground.

Shop. A place where people work, or where things are sold.

Soft. What you can press your fingers into; what is not hard.

Solid. Look for the word Fluid.

Soot. Smoke collected in small pieces: condensed steam, or vapour, of oil, grease, wax, pitch, tar, or turpentine, resin or rosin, and of various other substances. You have learned the meaning of the word condensed.

Stamps. Tools of wood, or metal, carved with
Glossary.

different figures. These stamps are pressed upon different substances, to make impressions upon them.

Stalk. That part of the plant upon which flowers or fruits grow.

Steam. Vapour caused by heat.

Stem. The trunk of a plant; that which rises immediately from the root.

Stick. A piece of wood; a small long piece of any thing, as a stick of sealing-wax, a stick of brimstone.

Sticky. What will not fall easily from your hands, when you attempt to let it go.

Still. In this place still means continual; sometimes it means to be at rest.

Store-room. A place where things are laid by to be kept safe. Things laid by for future use are called stores.

Stoutly. Strongly; with courage.

Straight. What is not bent; what is even like a ruler.

Subject. What a person is talking, or thinking, or writing about.

Sufficiently. Enough.

Supposing. To suppose is to imagine that a
thing has happened, or will happen, though, perhaps, it has not, or may not happen; as,
Suppose that the house was to tumble down, it would break the furniture to pieces. Suppose
that we were to have plum-cake at tea, would you give some of your share to your sister?
Now I hope, my young friends, that this last supposition will soon be true.

STRETCHED. Pulled or drawn to a larger size than what it usually is.

TAKE NOTICE. To observe; to pay attention to any thing.

TALLOW. The fat of animals. There is a tree in America, which produces a substance like
tallow.

TAUGHT. To teach is to tell people how to do what they do not know how to do.

THERMOMETER. An instrument for showing the heat of the air and of other bodies. The
thermometer, barometer, orrery, and air-pump, will entertain young people very much, when they have knowledge sufficient to enable them to understand their uses, and the manner in which they are made.
THUNDER-STORM. A storm of thunder: a storm generally means violent wind; it also means snow, hail, and thunder.

TRUST. To trust people is to believe and depend upon their truth and honesty.

TRUTH. To tell truth is to tell what we know about any thing, without adding to it, and without concealing or hiding any thing.

TURF. That part of the ground that is covered with grass. Turf, in some places, means a kind of earth mixed with the roots and leaves of decayed vegetables, which is used for firing.

UDDER. A bag under the belly of a cow, into which the cow's milk comes.

UNDERSTAND. To know the meaning of any thing.

USEFUL. What is of advantage; what contributes to our comfort, or convenience, or pleasure.

VALUABLE. What people wish to keep or obtain; what they like, or love; or what can be sold advantageously.

WAR. People fight with one another when they think themselves injured, or when they are
angry. When the people of one country fight against the people of another country, it is called War.

**Wistfully.** As if he wished for something. Wistfully is a word that is not often used.

My young friends will find, as they read more, and hear more conversation, that there are many meanings for the same word. Many English words are taken from Greek, and Latin, and French, and some from German. When they learn these languages, they will find the original words from which our English words are taken; and this will help them to understand the English language more accurately.
HARRY AND LUCY.

PART II.

After the summer was passed, and after the autumn and winter were passed, another spring came.

Harry and Lucy were now each of them a year older.

And during the year, that had passed, they were become taller and stronger, and had learned a great many things, that they did not know before.

They had learned to read fluently; and they were therefore able to entertain themselves a little, during the winter's evenings, with reading short stories in books, which their mamma gave
them; and they had learned a little arithmetic, and could cast up sums in addition, and subtract.

And they had each of them a little garden. Harry dug the ground when it was necessary, and Lucy pulled up weeds, and helped to wheel them away in her little wheelbarrow; and assisted in sowing seeds of different sorts, and in planting the roots of flowers.

In the summer she and Harry carried water to water the plants and flowers, which they had set and sown in the spring. And they had not only planted flowers, and sown small salad, but Harry had also a crop of peas, and a crop of potatoes, in his garden; for his father had seen, that he was industrious, and for that reason he gave him a piece of good ground to be added to his garden; and as it had been grass-
ground for some time, it was so hard, that Harry was not able to dig it. But his father had it dug roughly for him, and he had a cart-load of dung laid upon it. Harry had observed very attentively how his father’s labourers had set potatoes; and in the beginning of the month of February he dug his ground over again, and marked it out into ridges, with stakes and a line, and spread the dung upon the ridges, leaving sufficient space between the ridges for the furrows. He then cut some potatoes, which his father had given him, into small pieces to plant in the ground for sets. He took care to cut them, so that each piece should have an eye in it: that is to say, that each piece should have one of those little black spots in it, which contain the root of the potatoe; for after the piece of
potatoe has been some time in the ground, it rots away, and the root unfolds, and long fibres spread into the earth.

He scattered these pieces upon the dung, at eight or ten inches from each other; and then he dug earth out of the furrows, that lay between the ridges, and covered the bits of potatoe and the dung with them, laying earth over them both, to the depth of three or four inches.

When he had made any mistake, or had not done the work well, his father assisted him, and showed him how to do it better.

The rain in the following spring, and the heat of the sun in the beginning of summer, had contributed to the growth of Harry's crop, and in the middle of June he had some fine young potatoes fit to eat.
About this time of the year the weather is generally very hot; and one day, as Harry and his sister were sitting under the shady tree, which was mentioned in the former chapter, picking some cowslips for their mamma, Harry observed, that the shadow of the tree reached almost round the stem, and he had seen in the morning, when he was at breakfast, that the shadow of the tree fell only at one side of it. He asked his father, who was passing by, the reason of this, and his father took him to the door of the house, and desired him to look where the sun was; and he saw, that it was opposite the door, and very high in the sky. "Take notice, Harry, where you see the sun now, and observe where you see it this evening, when the sun is setting."

Harry said he knew where the sun
set—that he could not see it from the hall-door; but that he could see it from that end of the house, which was at the right hand of the hall-door, as you go out.

_Father._ Did you ever observe where it rises?

_Harry._ Yes; it rose this morning at the other end of the house.

_Father._ It did so—Now do you know where are the South, and the North, and the East, and the West?

_Harry._ No; but I believe the side of the sky where the sun rises is called the East.

_Father._ It is so; and the side where it sets is called the West. Now you may always know the South and the North, wherever you are, if you know where the sun either rises or sets. If you know where it rises, stand with
your left hand towards that part of the sky, and then the part of the sky before your face will be the South, and that part of the sky behind your back will be the North.

In the same manner, if you know where the sun sets, turn your right hand toward that place, and the part of the sky opposite to you will be the South. But, Harry, you must remember, that there are only two days in the year, when the sun sets exactly in the West, and it rises exactly in the East.

Harry. What days are those, papa?

Father. It would be of no use to you now to know the names of those days; but when one of them comes, I will let you know it. On that day the sun rises exactly at six o'clock in the morning, and sets exactly at six o'clock in the evening.
“Papa,” said Harry, “I have observed several times, that my shadow in the morning, and in the evening, is very long, but in the middle of the day I can scarcely see my shadow.”

Father. You must think about it, yourself, Harry; for, if I tell you everything, that you want to know, without your taking the trouble to think, you will not have the habit of thinking for yourself; and without being able to think for yourself, you will never have good sense.

The bricks, which Harry and Lucy had made the year before, had all been melted away (as the workmen say), by the rain, or broken because they had not been burnt; but Harry had dug some tough yellow clay; of a proper sort, in the month of November before the
usual frosts of the winter had begun: and Harry mixed it well with the spade, and Lucy picked out the little pebbles with a small paddle, and the frost made the clay *mellow*, as the workmen call it. And in the spring Harry made nearly six hundred bricks, and built them into stacks, and covered them with turf, which his father had let him pare off the surface of the ground. And Harry's father, who had been much pleased with his good behaviour and industry, came to the tree where he was at work, and asked him if he would like to go to the brick-field, to see how bricks were burned. Lucy wished much to go with them, and she ran and asked her mother to let her go; her mother very cheerfully consented, and said she would go along with her.
WHILST Lucy and her mother were getting ready to go, Harry ran to his garden, and dug some of his fine young potatoes, and put them into a basket, which he had of his own, and returned to the house; and his father asked him, what he intended to do with them.

"Sir," says Harry, "last year, when I had spoiled the poor man's bricks, I promised that I would make him amends; and I determined, when I set my potatoes, to let him have the first of them, that were fit to be dug, as I was told that early potatoes were more valuable than those that came in later."

Father. But you will not be able to carry such a heavy load so far.

"I will try," said Harry.

He was able to proceed but a little way with his load without resting.

What could he do?
His father was willing to assist him as he had shown honesty and truth in keeping his promise, and good sense in the means which he had taken to make the brickmaker amends for the injury which he had done to him. He asked a farmer, whom he knew, and who was going by with a cart, to take the basket in his cart, and to leave it in the brickfield which was at the road-side.

By the time they had reached the brickfield to which they were going, and to which there was a pleasant walk through the fields, the farmer, who went by the road, had gotten with his cart to the same place.

Harry thanked him, took up his basket, and marched stoutly into the place where the brickmaker was at work.
The man knew him again, and was much pleased with Harry's punctuality. He took the potatoes out of the basket, and said, that they were worth full as much as the bricks that had been spoiled.

Harry's father asked the man to show him how he burned his bricks, to make them hard; and the man said he was just going to set fire to a kiln of bricks, and that he might see how it was done.

The kiln was made of the bricks that were to be burned; these bricks were built up one upon another, and one beside the other, not quite close, but so as to leave a little room on every side of each brick; and in the middle of the kiln, near the bottom, there were large holes filled with furze bushes.
The whole kiln was as large as a large room; and the man went to his house for a few lighted coals and he put them under the furze, which took fire and blazed, and the smoke came through the openings, that were left between the bricks; and the heat of the fire came through them also, and heated the bricks; and the man told Harry's father, that he should supply the kiln with furze, and keep the fire strong for six days and six nights, and that then the bricks would be sufficiently burned.

Harry now said, that he was afraid that he should not be able to build a kiln for his bricks: for he was now grown wise enough to know, that it required time to learn how to do things which we have not been used to do. And he asked the brickmaker, whether
he thought he could build his bricks, so as to be able to burn them. And the man told him, that he believed he could not; but he said, that on some holiday he would go to the place where Harry's bricks were, and would show him how to build a nice little kiln, if Harry's father would give him leave.

---

Harry's father accepted this good-natured offer; and Harry plainly perceived, that good conduct makes friends, and that a poor brickmaker may be of use even to persons, who are not obliged to work for their bread.

Whilst they were talking, Lucy was looking about and examining every thing in the brickfield; and she observed, that at the farthest part of the field some white linen was stretched
upon the grass, to dry, and she saw several bits of black dirt lying upon the linen. They did not stick to the linen, but were blown about by the wind, as they were very light.

Lucy picked up some of these black things, and when she showed them to her mother, her mother told her, that they were bits of soot, which had been carried by the wind from the brick-kiln.

"But, mamma," said Lucy, "I don't see any chimney belonging to the brick-kiln; and soot, I believe, is always found in chimneys."

Mother. No, my dear, soot is smoke cooled; and wherever there is smoke there is soot. A great quantity of thick smoke rises from a brick-kiln; or, to speak more properly, a great quantity of smoke is carried upwards by the hot air that rises from a brick-kiln, and
when this smoke cools, parts of it stick together, and make what we call soot, which falls slowly to the ground. This is some of it, that has fallen upon the white linen; and you see it because it is black, and the linen, upon which it has fallen, is white.

Lucy. Why does it fall slowly?

Mother. Because it is light; if it was heavier, it would fall faster.

Lucy. What do you mean by light and heavy?

Mother. You cannot yet understand all that I mean by those words; but, if you take two things, which are nearly of the same size, in your hands, and if one of them presses downwards the hand, in which it is held, more than the other does, that may be called heavy, and the other may be called light. You must observe, Lucy, that they can be
called heavy or light only as compared together, or weighed in your hands; as, for instance, if you take a large wafer in one hand, and a wooden button-mould of the same size in the other, the button-mould will be readily perceived to be the heaviest; you might therefore, say, that the button-mould is heavy and the wafer is light.

But, if you were to take the button-mould again in one hand, and take a shilling in the other, you would call the shilling heavy and the button-mould light. And, if you were to lay down the button-mould, and were to take a guinea into your hand instead of it, you would find the shilling would appear light, when compared with the guinea.

Lucy. But, mamma, what do you compare the soot with when you say it is light?
Mother. I compare it in my mind with other things of nearly the same size, as bits of saw-dust, or coal-dust, or bits of gravel; but I cannot yet make you entirely understand what I mean. When you have learnt the uses and properties of more things and their names, I shall be better able to answer the questions you have asked me upon subjects which I cannot explain to you now.

As they returned home, they saw a poor little girl crying sadly, and she seemed to be very unhappy. And Lucy's mother said to her, "Poor girl! what is the matter with you? What makes you cry so?"

"O madam," said the little girl, "my mother sent me to market with a basket of eggs, and I tumbled down, and the eggs are all broken to pieces,
and I am sorry for it; for my mother trusted them to me, as she thought I would take care of them; and indeed I minded what I was about, but a man, with a sack upon his back, was coming by, and he pushed me, and made me tumble down."

_Mother._ Will your mother be angry with you when she knows it?

_Little Girl._ I shall tell my mother, and she will not be angry at me; but she will be very sorry, and she will cry, because she is very poor, and she will want the bread, which I was to have bought with the money for which I should sell the eggs; and my brothers and sisters will have no supper.

When the little girl had done speaking, she sat down again upon the bank and cried very sadly.

_Little Lucy_ pulled her mother's gown

_VOL. II._
to make her listen to her; and then she said softly, "Mamma, may I speak to the poor little girl?"

Mother. Yes, Lucy.

Lucy. Little girl, I have some eggs at home, and I will give them to you, if my mamma will let me go for them.

"My dear," says Lucy's mother to her, "our house is at a distance; and if you were to try to go back by yourself, you could not find the way; but, if the little girl will come to-morrow to my house, you may give her the eggs; she is used to go to market, and knows the road. In the mean time, my poor little girl, come with me to the baker's at the top of the hill, and I will give you a loaf to carry home to your mother: you are a good girl, and tell the truth."

So Lucy's mother took the little girl to the baker's shop, and bought a loaf,
and gave it to her; and the little girl thanked her, and put the loaf under her arm, and walked homewards, very happy.

As he was going over a stile, Harry dropped his handkerchief out of his pocket, and it fell into some water, and was made quite wet; and he was forced to carry it in his hand, until they came to a house, where his father told him he would ask leave to have it dried for him. And he asked the mistress of the house to let Harry go to the fire to dry his handkerchief. And while he held it at the fire, Lucy said she saw a great smoke go from the handkerchief into the fire; and her mother asked her, how she knew it was smoke?

Lucy. Because it looks like smoke.
Mother. Hold this piece of paper in what you think like smoke, and try if you can catch any of those black things, that were in the smoke you saw in the brick-field.

Lucy. No, mamma, it does not blacken the paper in the least; but it wets the paper.

Mother. Hold this cold plate in what you call smoke, that comes from the handkerchief.

Lucy. Mamma, I find the plate is wet.

Mother. What is it, then, that comes from the handkerchief?

Lucy. Water. The water with which it was wetted, when it fell into the ditch.

Mother. What makes the water come out of it?

Lucy. The heat of the fire, I believe.
Mother. At tea, to-night, put me in mind to show you water turned into steam, and steam turned into water.

When they had gotten home, Harry and Lucy went immediately, without losing any time, to cast up two sums in arithmetic, which they were accustomed to do every day.

Harry could cast up sums in common addition readily: and Lucy understood the rule called subtraction: and she knew very well what was meant by the words borrowing and paying, though it is not easy to understand them distinctly. But, she had been taught carefully by her mother, who was a woman of good sense, and who was more desirous that her daughter should understand what she did, than that she should merely be able to go on as she was told.
to do without knowing the reason of what she was about.

And after they had shown the sums, which they had cast up, to their mother, they sat down to draw.

Lucy was learning to draw the outlines of flowers, and she took a great deal of pains, and looked attentively at the print she was copying. And she was not in a hurry to have done, or to begin another flower; but she minded what she was about, and attended to every thing that her mother had desired her the day before to correct. And, after she had copied a print of a periwinkle, she attempted to draw it from the flower itself; which she had placed in such a manner, as to have the same appearance as the print had, that she might be able to compare her drawing
from the print with her drawing from the flower.

She found it was not so easy to draw from the latter as from the former; but every time, that she tried, it became easier. And she was wise enough to know, that it was better to be able to draw from things themselves, or from nature, as it is called, than from other drawings; because every body may everywhere have objects before them, which they may imitate: and by practice they may learn to draw or delineate objects so well, as to be able to express upon paper, &c. to other people, whatever curious things they meet with.

The habit of drawing is particularly useful to those who study botany; and
it was her love of botany that made Lucy fond of drawing flowers.

She had a number of dried plants, the names of which she knew; and she took great pleasure in the spring, and in the beginning of summer, in gathering such plants as were in flower, and in discovering, by the rules of botany, to what class, order, genus, and species they belonged.

Harry also knew something of botany; but he did not learn to draw flowers. He was endeavouring with great care to trace a map of the fields about his father's house. He had made several attempts, and he had failed several times; but he began again, and every time improved.

He understood very well the use of a map; he knew, that it was a sort of picture of ground, by which he could
measure the size of every yard, or garden, or field, or orchard, after it had been drawn upon paper, as well as it could be measured upon the ground itself. He could also draw a little with a rule and compasses; he could describe a circle, and make an equilateral triangle, and a right angle; and he had begun to learn to write.

After they had drawn and written for one hour, it was time for them to go and dress before dinner.

Harry's walk to the brick-field had made him very hungry, so that he ate heartily.

Whilst he was eating, his mother told him, that she intended to send him into the garden, after dinner, for some strawberries, that were just ripe; and
she advised him not to eat so much pudding, if he wished to eat strawberries.

Now Harry had learned from experience, that if he ate too much it would make him sick; he therefore prudently determined not to have another spoonful of pudding.

A little while after dinner, Harry and Lucy went with their mother into the garden; and Lucy was desired to gather six strawberries, and Harry was desired to gather four strawberries. And when they were put together, Harry counted them, and found that they made ten. Lucy was not obliged to count them, for she knew by rote, or by heart, as it is sometimes called, that six and four make ten.

Each of them next brought five strawberries: and Harry knew, without counting, that, when they were put to-
gather, they would make ten. And Lucy knew, that the parcel of strawberries, which they gathered first, which made ten, would, when added to the second parcel, which also consisted of ten, make twenty.

They now went and gathered ten more. One gathered three, and the other gathered seven; and this ten, added to the former number, made thirty. And they went again, and brought ten more to their mother; this ten was made up of eight and two; and this ten added to the thirty they had gathered before made forty.

Whist they were eating them, Harry asked his sister if she knew what was meant by *ty* in twenty and thirty. Lucy laughed at him for supposing that
she did not know it, and said her father had told her. Harry said, that he knew before, that *teen*, in the words thirteen, fourteen, &c. meant ten; but he did not know, that *ty*, in twenty, and thirty, &c. meant ten. And he said he did not know, why ten should have three names, ten, teen, and ty.

Lucy said she could not tell; but they asked their father; and he told them, that *ten* meant ten by itself, without any other number joined to it; but that *teen* meant ten with some other number joined to it; and he asked Harry what thirteen meant.

*Harry.* I believe, that it is three and ten; for three joined or added to ten, make thirteen. Fourteen is plainly four and ten; fifteen five and ten. But why, papa, is it not three-teen, instead of being called thirteen?
Papa. Because it is easier to say thirteen than three-teen.

Lucy. But why is it called twelve? It should be two-teen.

Harry. And eleven, papa, should be one-teen.

Papa. I cannot now explain to you, my dear, the reason why we have not those names in English; but you perceive that it is easy to remember the names of fourteen, fifteen, sixteen, &c. because we remember that four, five, six, come after one another, and we perceive that all that is necessary is, to add teen to them. You see, that fourteen means four and ten—four added to ten.

Harry. But does ty in forty mean four added to ten?

Lucy replied, that it did not.

Papa. No—It means four times ten: not ten added to four, but ten added
together four times—And fifty means ten added together five times. So you see, that it is useful to have three names for ten, which differ a little from one another, but which are also something like each other; for teen is like ten, and ty is like teen. Teen is always used when ten is added to any number, as far as nineteen; and ty is always used when more tens than one are counted, as far as a hundred.

**Harry.** Then twenty should be two-ty; and thirty should be three-ty.

**Papa.** I told you before, my dear, that thirteen is used instead of threeneen, because the former word is more easily pronounced than the latter. Thirty is used instead of threety, for the same reason.

**Harry.** But why is not twenty two-ty?
Papa. Twenty is made up of ty and of twain, a word that was formerly used for two: the word twain joined to ty, makes twainty, which when spoken quickly, sounds like twenty.

Harry. But, papa, will you tell me another thing?

Papa. No, Harry; we have talked enough about numbers at present; you will be tired by thinking any longer with much attention, and I do not wish that you should be tired, when you attend to what you are about. Thinking without tiring ourselves is very agreeable; but thinking becomes disagreeable if we tire ourselves; and as thinking with attention is useful and necessary, we should take care not to make it disagreeable to ourselves.
It was now tea-time, and Harry and Lucy usually supped at the same time that their father and mother drank tea: so that they had an opportunity of hearing many useful and entertaining things, that passed in conversation; and Lucy, recollecting that her mother had promised to tell her, at tea-time, something more about smoke and steam, put her in mind of what she had promised. Then her mother called for a lighted wax candle, and for a lighted tallow candle, and she desired Lucy to hold a cold plate over the wax candle, and Harry to hold another cold plate over the tallow candle, and in a short time a considerable quantity of smoke, or soot, was collected upon each of the plates. Another cold plate was held over the tea urn, in which water was boiling, and from which there issued a large
quantity of steam, or vapour of water. This steam was stopped by the plate, which, by degrees, was covered with a number of very small drops, not so large as the head of a minikin pin. After the plate had been held over the steam a little longer, these drops became larger—they attracted one another; that is to say, one little drop was joined to another and made a large drop; and so on, till at length the drops ran so much together, as to lose their round shape, and to run over the plate. Harry and Lucy were much entertained with this experiment. Harry observed that the vapour of water was very different from the vapour of a candle.

Papa. I am very glad to find that you have so readily learned something of the meaning of the word vapour, which I have purposely made use of in

2 & 3
the place of the word steam; but you are mistaken, my dear, in saying vapour of a candle. Lamp-black, soot, and smoke, are formed from the vapour of the oily part of burning bodies. Formerly people made use of lamps instead of candles, and the soot of those lamps was called lamp-black, though it should properly be called oil-black. Now, pray, Harry, do you know the meaning of the word evaporate?

Harry. I believe it means, being turned into vapour.

Papa. Did you observe any thing else in the experiments which I have just shown to you?

Harry. Yes, papa—I saw that the vapour of oil was solid, when it was cold.

Papa. Condensed.

Harry. Yes, condensed.
Papa. And did you not observe, that the vapour of water, when condensed, was fluid? And what did you observe, Lucy?

Lucy. I thought, papa, that the soot, or lamp-black, which you told me was the vapour of oil, did not seem to turn into oil again, when it was condensed, but that it had entirely a different appearance from the tallow and wax from which the oil came; and yet, that the vapour of water, when it was condensed, became water again.

Papa. I do not think, my dear children, that my time has been thrown away in showing you this experiment. And as I wish to make you like to attend to what is taught to you, I will endeavour to make it agreeable to you, by joining the feeling of pleasure to the feeling of attention in your mind, by
giving you pleasure, or the hope of pleasure, when you attend.

Harry. I know what you mean, papa; for, if we had not attended to what we were about, you would have endeavoured to give us pain.

Papa. No, Harry; you are a little mistaken. I don't wish to give you pain, unless when I want to prevent you from doing something that would be hurtful to yourself, or to other people; and then I wish to associate, that is, join, pain with such actions. But I do not expect, that little boys and girls should be as wise as men and women; and if you do not attend, I only abstain from giving you pleasure.

Harry. But, papa, what pleasure were you going to give us?

Papa. I was not going to give you any immediate or present pleasure, but
only the hope of some pleasure to-morrow. Your mamma and I intend, to-morrow, to walk to breakfast with her brother, your uncle, who has come to live at a very pretty place not quite three miles from this house. He was formerly a physician, and he has several curious instruments—a microscope, an electrifying machine, an air-pump, and a collection of fossils, and a few shells and prints: and he knows very well how to explain things to other people. And the pleasure that your mamma and I meant to give you was to take you with us to-morrow morning. Harry and Lucy were very happy, when they were going to bed, from the remembrance of the day that they had passed, and from the hope of being happy on the day which was to come.
At six o'clock in the morning Harry wakened; and, as they were to set out for Flower Hill at seven, he got up, and dressed himself with great alacrity; and Lucy did the same. But alas! their hopes were disappointed: for a violent thunder-storm came on before seven o'clock, which prevented their walk to their uncle's.

Harry planted himself at the window, and examined every cloud as it passed by, and every quarter of the sky, in expectation of fair weather and sunshine; but his sister, who was older, knew that her standing at the window would not alter the weather; and she prudently sat down to study botany before breakfast, and to examine some flowers, which she had gathered in her walk the day before.

When Harry had stood some time at
the window and had seen no appearance of a change in the sky, he turned about, and looked wistfully round him, like a person who did not know what to do with himself. His mother, who at that instant came into the room, could not help smiling at the melancholy figure which she saw before her; and she asked Harry what was the matter. Harry owned, that he felt sorry and sad, because he had been disappointed of the pleasure which his father had promised him.

Mother. But, Harry, my dear, your father did not promise you fine weather.

Harry (laughing). No, mamma, I know he did not; but I expected that it would be a fine day, and I am sorry it is not.

Mother. Well, Harry, that is all very natural, as it is called; or, to speak
more properly, it is what happens commonly. But though you cannot alter the weather, you may alter your own feelings, by turning your attention to something else.

**Harry.** To what else, mamma?

**Mother.** You have several different occupations, that you are fond of; and, if you turn your thoughts to any of them, it will prevent you from feeling sad upon account of the disappointment that you have met with. Besides, my dear Harry, the rain must, in some respects, be agreeable to you, and it is certainly useful.

**Harry.** O yes, mamma, I know what you mean—my garden. It was indeed in great want of water, and it cost me a great deal of trouble to carry water to it twice every day. My peas will come on now, and I shall have
plenty of radishes. Thank you, mamma, for putting me in mind of my garden; it has made me more contented.

Harry's father now came in, and seeing that he was cheerful, and that he bore his disappointment pretty well, he asked him if he had ever seen a cork garden.

**Harry.** No, papa; I remember I have seen a cork model of a house; but I never saw the model of a garden made of cork.

**Papa.** But this is not the model of a garden, but a sort of small garden made upon cork. Here it is.

**Harry.** Why this is nothing but the plate, or saucer, that commonly stands under a flower-pot, with a piece of cork, like the bung of a barrel, floating in water.

**Papa.** Notwithstanding its simpli-
city, it is capable, to a certain degree, of doing what a garden does. It can produce a salad. Here are the seeds of cresses and mustard; sprinkle them thinly upon this cork, and lay it in the closet near the window that is towards the south.

Harry. When may I look at it again?
Papa. Whenever you please. But do not touch or shake it; for, if you do, it will disturb the seeds from the places where they now rest, and that will prevent them from growing. In two or three days you will see, that cresses and mustard plants have grown from these seeds.

Harry. Pray, papa, will the seeds grow on the cork, as they grow in the ground?
Papa. No, my dear; it is not the cork that nourishes the plant, but it is
the water which makes it grow. If you cover the bottom of a soup plate with a piece of flannel, and pour water into the plate so high as just to touch the flannel and scatter seeds on the surface of the flannel, they will grow upon it in the same manner that they grow upon cork.

**Harry.** But if it is by the water only that the seeds are made to grow, would they not grow as well, if they were put upon the bottom of the plate, without any cork or flannel?

**Papa.** No, my little friend, they would not; because, if there were only so much water in the plate as to cover only half of each of the seeds, it would be so shallow as to be evaporated (you know what that means, Harry) before the seeds could grow. Perhaps, also, the surface of the plate may be so
smooth, as to prevent the fibres of the roots from taking hold of it. And there are many more reasons, which occur to me, why it is probable that they would not grow.

Harry. But we can try, papa.

Papa. Yes, my dear, that is the only certain method of knowing.

Lucy's mother recollected, that she had promised her the last year, to show her how butter was made; and, as the rain in the morning had prevented Lucy from going to her uncle's, her mother thought it would be a good time to take her into the dairy, where the dairy-maid was churning. Little Harry was permitted to go with his sister.

They remembered the wide shallow pans, which they had seen the year
before; and they recollected, that their mother had told them that the cream, or oily part of the milk, which was the lightest, separated itself from the heaviest part; or, to speak more properly, that the heaviest part of the milk descended towards the bottom of the pans, and left the cream, or lightest part, uppermost; and that this cream was skimmed off twice every day, and laid by, till a sufficient quantity, that is to say, five or six, or any larger number of quarts, was collected.

They now saw twelve quarts, or three gallons, of cream, put into a common churn; and the dairy-maid put the cream in motion, by means of the churn-staff, which she moved up and down with a regular motion, for seven or eight minutes: when she appeared tired, another of the maids took the churn.
staff from her, and worked in her stead; and so on alternately for about three quarters of an hour, when the butter began to come, as it is called, or to be collected in little lumps in the cream. Harry and Lucy were much surprised when the lid or cover of the churn was taken off, to see small lumps of butter floating in the milk. They saw, that the cream had changed its colour and consistency, and that small pieces of butter were swimming on its surface. These pieces of butter were collected and joined together into one lump by the dairy-maid, who poured some cold water into the churn, to make the butter harder, and to make it separate more easily from the milk, which had become warm with the quick motion that had been used to make the butter come. Then she care-
fully took it all out of the churn, and put it into a wooden dish, and pressed and squeezed it, so as to force all the milk out of it. She then washed it very clean, in cold water, a great many times; and, with a wooden thing called slice, which is like a large flat saucer, she put the lump of butter that she had made into pieces, in order to pull out of it all the cow's hairs, that had fallen into the milk, of which the cream had been made.

Many of those hairs stuck to the slice, and others were picked out, which appeared as the butter was cut in pieces. The butter was then well washed, and the water, in which it had been washed, was squeezed out of it. The butter was now put into a pair of scales, and it weighed nearly three pounds. Some of it was rolled
into cylinders, of about half a pound weight each, and some of it was made into little pats, and stamped with wooden stamps, which had different figures carved upon them; the impression of which figures was marked upon the butter.

Lucy asked what became of the milk, or liquor, which was left in the churn: her mother told her, it was called butter-milk, and that it was usually given to the pigs.

Lucy. Mamma, I have heard, that in Ireland, and in Scotland, the poor drink butter-milk, and are very fond of it.

Mother. Yes, my dear; but the butter-milk in Ireland is very different from the butter-milk here. We separate the thick part of the cream from the rest for the purpose of making
butter; but, in Ireland, they lay by the thinner part, which is only milk, as well as the thick cream, for churning, and they add to it the richest part of the new milk, which is what comes last from the cow when she is milked: and what is left, after the butter is made, is, for this reason, not so sour, and is more nourishing than the butter-milk in this country.

Lucy. Do not they sometimes make whey of butter-milk and new-milk?

Mother. Yes, my dear; whey is made of butter-milk and skimmed milk; but it is not thought so pleasant or useful in this kingdom, though it is much liked in Ireland; probably because the butter-milk here is not so good as it is in Ireland. I am told, that it is frequently preferred in that country to any other kind of whey, even by those
who are rich enough to have wine whey. You see, my dear Lucy, that small circumstances make great differences in things. I have heard it said, that the Irish poor must be very wretched indeed, if they be forced to use butter-milk instead of milk: but the fact is, their butter-milk is so much better than ours, that they frequently prefer it to new milk. To judge wisely, we must carefully make ourselves acquainted with the facts about which we are to judge.

**Harry.** Pray, mamma, why does dashing about the milk with the churn-staff make butter?

**Mother.** The process of making butter is not exactly understood. Cream consists of oil, whey, and curd, and an acid peculiar to milk. You know what is meant by an acid?
Lucy. Not very well, I know it means what is sour.

Mother. Yes, my dear, sourness is one of the properties of acids; and when you have acquired a knowledge of a greater number of facts, that you can compare with one another, I shall be better able to explain to you, what is meant by many terms that I cannot at present make you understand.

Harry. But, mamma, you have not yet told us why churning makes butter.

Mother. My dear, it does not make butter; it only separates the oily or buttery parts of the cream from the curd, or cheesy part, and from the whey. We do not know exactly how this is done by churning; but it is probable, that, by striking the cream with the churn-staff, or by shaking it violently,
the oily parts, or particles, are from time to time forced nearer together, which enables them to attract each other.

Harry. Yes, mamma, I know what that is—just as globules of quicksilver run together, when they are near enough.

Mother. Globules! Harry, where did you find that new word?

Harry. Papa told it to me the other day, when I was looking at some quicksilver that he had let fall. He told me, the little drops of quicksilver, or mercury, which look like balls, were called globules, or little globes.

Lucy. And, mamma, the drops of dew and rain stand on several leaves separate from one another. On a nasturtium leaf I have seen drops of water almost as round as drops of quicksilver
and when I pushed two of the drops near one another, they ran together and formed one large drop.

Mother. They were attracted together, as it is called.

Lucy. But the larger drop, which was made of the two drops, was not twice as large as either of the two small ones.

Mother. Are you sure of that, Lucy?

Lucy. No, mamma; but I thought so.

Mother. Two drops of mercury of the same size, or two drops of any other fluid, when they join, do not form a drop that is twice as large in breadth, or diameter, as one of the small drops, but such a drop contains exactly as much, and weighs as heavy, as the two small drops.
Harry. I do not understand you, mamma.

Mother. I will, by degrees, endeavour to make you understand me; but it cannot be done at once, and you have attended enough now. Lucy, it is time to read—let us go on with the account of the insects, which you were reading yesterday.

Then Lucy, and Harry, and their mother, left the dairy, and returned to the drawing-room.

Mother. Here, Harry. sit down and listen to what your sister reads. You will soon be able to read to yourself without assistance, which, in time, will become an agreeable employment.

Lucy now read in the Guardian,
No. 157, a very entertaining account of the industry and ingenuity of ants.

Both Harry and she wished much that they could find some ants' nests, that they might see how they carried on their works. Their mother said, that she could show them an ants' nest in the garden; and, as it had done raining, she took them into the garden, and showed them two little holes in the ground, where the ants had formed cells, which served them for houses to live in, and for store-houses to keep their eggs and food. They were busily employed in making a road, or cause-way, from one of these holes to the other. Great numbers were employed in carrying earth to repair breaches, which had been made in their work by the rain.

Harry laid some dead flies, and some
small crumbs of bread, upon the track where the ants were at work; but they were not diverted from their labour by this temptation: on the contrary, they pushed the dead flies and the crumbs out of their way, and went steadily on with their business. Harry’s mother told him, she had tried the same experiment before, and that, perhaps, another time the ants might choose to eat, instead of pushing away the food that was offered to them.

Harry and Lucy staid patiently watching the ants, till it was time to dress for dinner.

After dinner, Harry’s father told him, that the weather was sufficiently fine for their jaunt to Flower Hill: and Harry now saw, that it was not such a great misfortune as he had thought it in the morning, to have his walk de-
ferred; and he and Lucy set out joyfully with their father and mother, to go to see their uncle.

Their way was through some pretty fields, and over stiles, and through a wood, and along a shady lane. As they passed through the fields, Harry, when they came to a corn-field, was able to tell the name of the grain, which was growing in it; and Lucy told him the names of several of the wild flowers and weeds, which were growing amongst the corn, and under the hedges.

During the last year, Harry had learnt to be very active in body as well as in mind; and when he came to a low stile, he put his hands upon the top rail, and vaulted nimbly over it. And Lucy ran almost as fast as her brother, and was very active in every
exercise that was proper for a little girl.

They soon came to a windmill, which went round with great quickness. It was not necessary for his father to warn Harry, not to go too near the arms, or sails of the wind-mill, as he had read, in a "Present for a Little Boy," how dangerous it is to go within the reach of a wind-mill's sails. He was not, however, foolishly afraid, but wisely careful. He kept out of the reach of the sails, but he was not afraid of going to the door, or to the wheel and lever by which the top was turned round; and he counted, with the assistance of his father, the number of turns which the sails made in a minute.

His father looked at his watch during one minute; and Harry counted the number of revolutions, or turns, that
the sails made in that time. He found, that they went round forty-five times in a minute.

Lucy observed that the middle of the sails moved round through a very small space, but that the ends, or tips of them, went very fast.

_Papa._ My dear, you see a black spot in that part of the cloth of the sails, which is near the centre of the arms, goes as often round as the tips of the sails—What, then, do you mean by saying, that the tips move very fast?

_Lucy._ I mean, that they go a great way in a little time.

_Papa._ What do you mean by a great way?

_Lucy._ I am afraid that I cannot explain myself clearly—I mean, that the tips of the windmill sails go through a great way in the air—I believe, I should
say, that they describe a very large circle; and the part of the sails, that are near the centre, describe a small circle.

**Papa.** Now I understand you distinctly; the circle, which the tips describe, is very large, *when compared* with that described by the part near the centre. I have tried several times how fast the tips of wind-mill sails move; and, when there was a brisk wind, they moved a mile in a minute.

**Harry.** That is very fast indeed. But how could you tell this, papa?

**Papa.** I cannot explain to you now; but some time hence I will.

They now went through a wood, where they saw squirrels jumping from tree to tree with great agility; and rabbits, sitting up on their hind legs, looking about them, and running from
one hole to another, as if they were at play. Harry asked several questions about the squirrels and rabbits, and about woodpeckers, and other birds that he saw. By these means, he and Lucy got some knowledge in their walk, and were amused the whole way to their uncle's.

Harry. Papa, this walk puts me in mind of "Eyes and no Eyes," in Evenings at Home. I feel very glad to find, that things, which I have read in that book, are like real things, and that what I have read is of use to me.

Neither Lucy nor Harry had ever seen their uncle B——; and they expected, as he was called Doctor, that he must be a very grave old man, who would not take the trouble to talk to
little children: but they were much mistaken: for they found, that he was very cheerful, and that he talked to them a great deal. After tea, he took them into his study, in which, beside a great many books, there were several instruments and machines of different sorts.

They had both seen a barometer and thermometer at home; but the barometer at Doctor B——'s was much larger than what Harry had seen before; and it was not fixed up against the wall, but was hung upon a stand with three legs, in such a manner, that, when it was touched, it swung about; and the shining quicksilver withinside of it rose and fell, so as to show, that it did not stick to the tube which contained it. There were an air-pump, and a microscope, and a wooden orrery,
in the room, and a pair of very large globes.

Doctor B—— let Harry examine them; and he was so good as to answer all the questions that either Lucy or Harry asked him.

Harry asked him what that shining liquid was, which he saw in the tube of the barometer.

*Doctor B*. It is a metal called quicksilver; and it is found in mines under ground.

*Harry*. My papa showed me quicksilver the other day, and it was liquid, and was spilt on the table and on the floor; and how can that be a metal? I thought metals were all solid.

*Doctor B*. So they are all when they are sufficiently cold.

*Harry*. Then is quicksilver hotter than iron?
Doctor B——. I cannot explain to you at present, what you want to know.

Harry. What is that globe made of?

Doctor B——. Of pasteboard and plaster.

Harry. How is it made round? I thought pasteboard was made of flat sheets of paper, pasted upon one another.

Doctor B——. Flat pasteboard is; but the pasteboard upon this globe is made round by means of a round mould, upon which it is formed. You know, I suppose, what a mould is?

Harry. Yes, I do, pretty well. But how can the pasteboard, after it is all pasted together, be gotten off a round mould?

Doctor B——. After it is dry it is cut all round with a knife; and then it
will come off the mould in two caps, as the shell of a nut, when it is opened with a knife, comes off the kernel.

Harry. What is the use of this machine, which you call an air pump?

Doctor B——. To pump air out of that glass vessel, which you see.

Harry. I do not quite understand you, sir.

Doctor B——. No, my dear, it is not probable that you can; but I will soon give you a little book, which will teach you the uses of several instruments of this sort.

Harry. My dear uncle, I cannot tell you how much I should be obliged to you.

Harry and Lucy were much delighted with what they saw at their uncle's; and, as they had not been troublesome, he asked their father and mother to
bring them to Flower Hill, when they came next to see him.

They returned home that evening just before it was dark, and went to bed by moon-light.

Thus ends an account of three days passed by Harry and Lucy. One day when Harry was about five, and Lucy six years old; and two days a year afterwards, when Lucy was seven, and Harry six years of age.

END OF VOL. II.
WORKS FOR YOUNG PERSONS.

By Maria Edgeworth.

EARLY LESSONS. Four vols. half-bound - - - 11 0

ROSAMOND: being a Sequel to Rosamond, in the Early Lessons. Two vols. half-bound - - - 5 0

FRANK: being a Sequel to the Story of Frank, in the Early Lessons. Three vols. half-bound - - - 9 0

HARRY AND LUCY, concluded; being the last part of Early Lessons. Four vols. half-bound - - - 17 0

Looking merely at its literary merits, this is a delightful book; considered merely with a view to its object, it is a very important one. Miss Edgeworth, in her "Harry and Lucy," makes use of fiction as the vehicle of instruction. This is no new undertaking, but it is the most successful we have ever met with. Nothing is so curious as attempts of this kind, except in the failure of them, the young reader generally greedily devouring the invention, and leaving the instruction, if not untouched, at least untasted. Miss E. has managed the book before us with so much skill as to render this separation impossible: the business of the characters is the communication or the acquirement of knowledge, and one cannot follow them without becoming entangled in their pursuits. For evidence of its higher merits we therefore expect every body, young and old, to read this work, convinced as we are that there are few who will not profit in some particulars, by it; and that every one who peruses it will do justice to the utility of its design, and the ingenuity with which it is executed. — London Magazine.

THE PARENT'S ASSISTANT; or, Stories for Children. A New Edition, complete in three volumes, 18mo., with fine Engravings on Steel, from Drawings by Harvey. Half-bound and lettered - - - - 10 6

LITTLE PLAYS FOR CHILDREN; being a Continuation of the Parent's Assistant. 18mo. half-bound - - - 3 6

I feel convinced that one of Miss Edgeworth's "Stories for Children" is worth all the questions and answers that have made History easy, or Geography light. — Miss Landon.

POETRY EXPLAINED. 18mo. half-bound - - - 2 6

READINGS IN POETRY. 18mo. half-bound - - - 3 0

COMIC DRAMAS. 12mo. boards - - - - 7 0

ESSAYS ON PRACTICAL EDUCATION. Three vols. 12mo. boards - - - - - - 16 6


THE SWISS FAMILY ROBINSON; or, Adventures of a Father and Mother and Four Sons on a Desert Island. A new Edition, with twelve Engravings. 12mo. price 7s. 6d. neatly half-bound.

A COMPLETE EDITION OF ROBINSON CRUSOE, in one handsome volume, 12mo., printed by Whittingham, with forty-nine characteristic Wood Engravings by Smith, from Harvey's Drawings. Price 8s. water-lined canvas, and lettered.


These tales are meant to be submitted to the young reader, as an introduction to the study of Shakespeare, for which purpose his words are used whenever it seemed possible to bring them in; and in whatever has been added to give them the regular form of a connected story, diligent care has been taken to select such words as might least interrupt the spirit of the beautiful English tongue in which he wrote; therefore, words introduced into our language since his time have been as far as possible avoided.

A DISCOURSE on the OBJECTS, ADVANTAGES, and PLEASURES of SCIENCE, published under the superintendence of the Society for the Diffusion of Useful Knowledge; being the Preliminary Treatise to that Library. In foolscap, beautifully printed, and illustrated by fine cuts. Price 5s. in cloth.