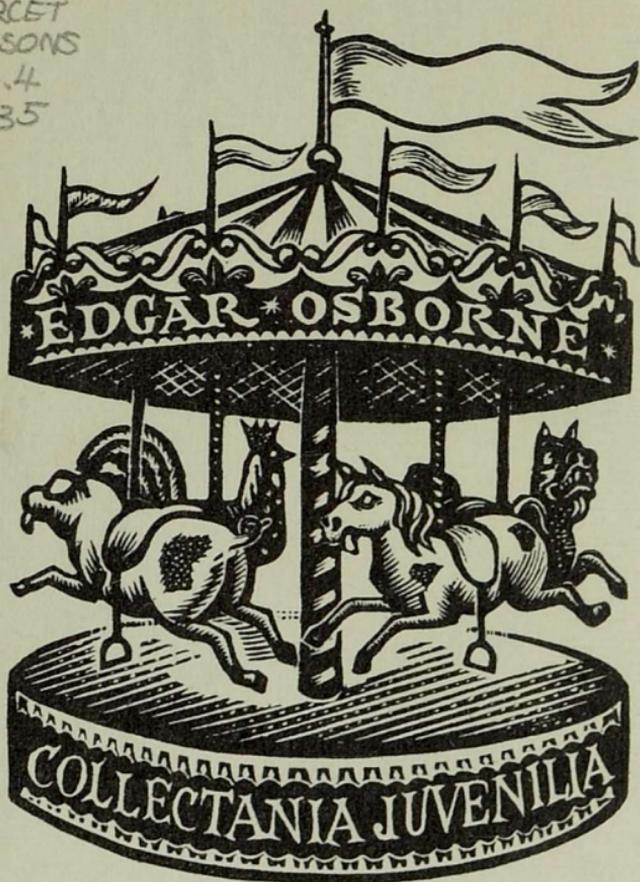
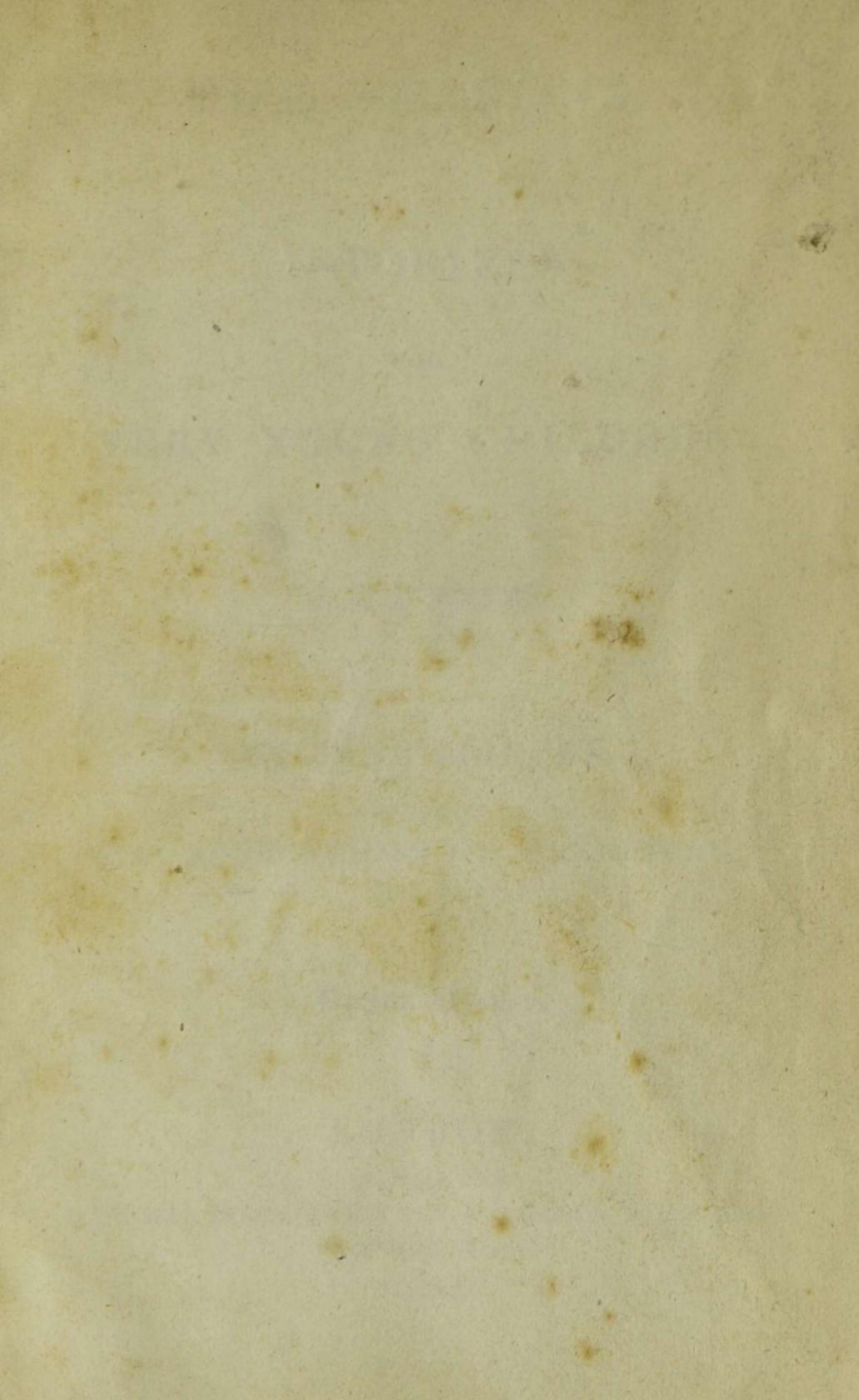


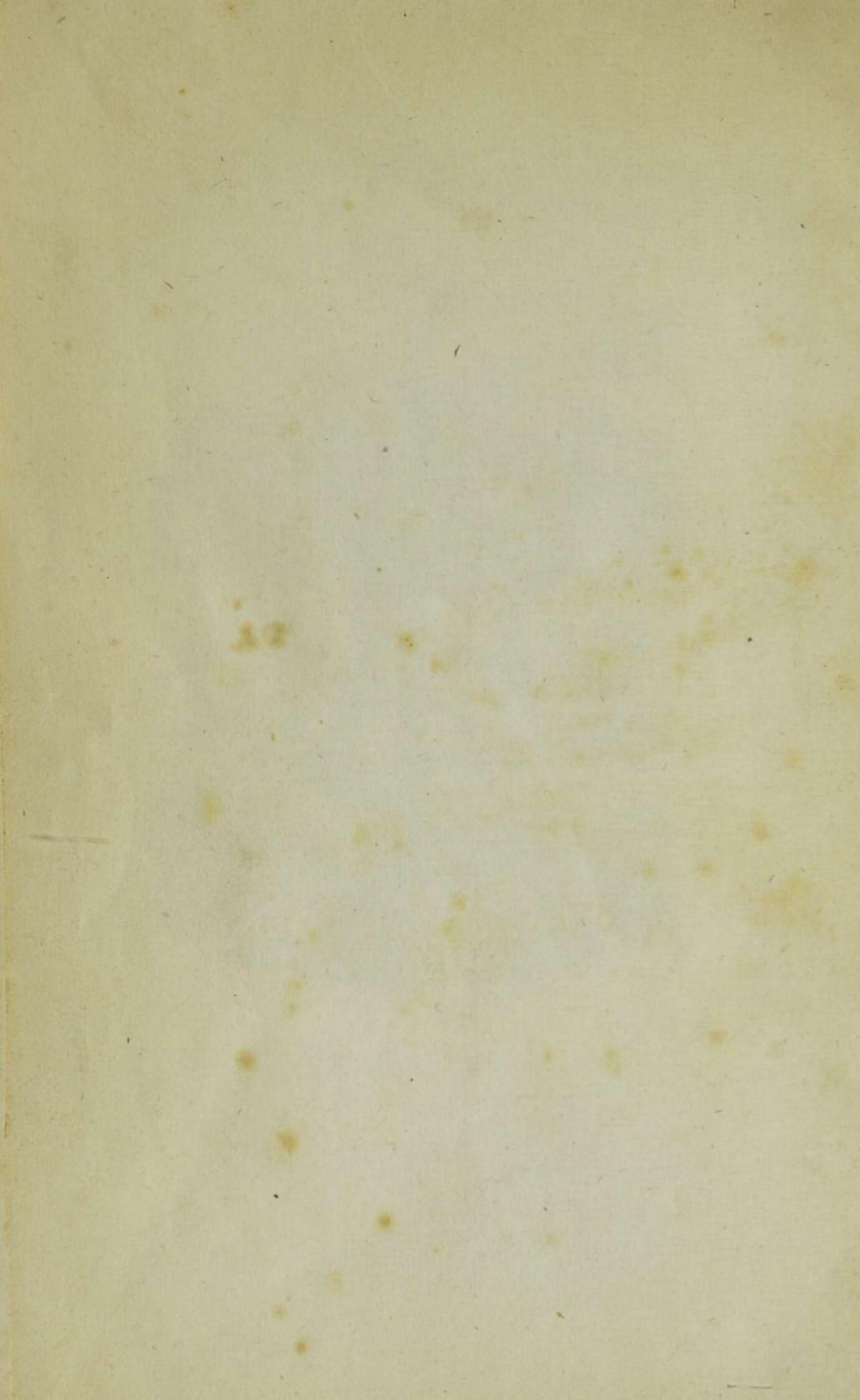
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THE SEASONS.

STORIES

FOR

VERY YOUNG CHILDREN.

AUTUMN.

BY JANE MARCET,

AUTHOR OF

“CONVERSATIONS ON CHEMISTRY,”

. &c. &c.

Second Edition.

LONDON:

PRINTED FOR

LONGMAN, REES, ORME, BROWN, GREEN, & LONGMAN,
PATERNOSTER-ROW.

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THE SEABOARD

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STORIES

FOR

VERY YOUNG CHILDREN.

AUTUMN.

THE HARVEST.

It was now the beginning of August, and the reapers were in the fields cutting down the corn. This was a great treat to Willy, who fancied he could cut it down himself. "Look what little tiny scythes they have, Mamma," said he; "they seem more fit for little boys than for grown up men."

“They are not called scythes,” replied she, “but reaping hooks, or sickles. The wheat must be cut down with much greater care than grass; it is not food for cattle, Willy, but for ourselves.”

“Oh, yes,” said Willy; “wheat makes bread, I know; but it does not look like bread at all.”

His Mamma then gathered an ear of wheat, and showed him the seeds it contained; she rubbed it in her hands, and all these seeds fell out of the husks. “Look,” said she, “these husks are small leaves which covered the seed; they grow upon the stalks close together, and make this long thing which is called

an ear. Now, if wheat were mown down like grass, it would be shaken in falling on the ground, and many of these seeds or grains of corn would be shaken out of the husks, and be lost on the ground. So the reapers hold the wheat with one hand, whilst they cut it with the other ; and then lay it upon the ground very carefully, that the grains may not fall out." She then gave him a few of the grains to taste, and he observed that they were much harder than bread. " We shall see, by and by," said she, " what is done to make them softer."

A little while after the reapers left off their work, and went and

seated themselves under the shade of some large spreading trees, to eat their dinner. "How funny," said Willy, "to dine out of doors! I should like to dine with them." But when he saw them unpack their baskets of provisions, and take out some dark brown bread, a piece of fat lard, and some cold meat, and potatoes very much broken, he no longer wished to join their party.

"What a bad dinner, Mamma!" whispered he; "do let me go to the cook, and ask her for something nice to give them. I am sure they do not like to eat that black, dirty-looking bread."

"It is not dirty, my dear; but

it is made of coarse brown flour, instead of fine white flour.”

“I am sure it cannot be so good, Mamma, as white bread.”

“No; that is true,” said she; “yet look, now they are eating it, how they seem to like it.”

“Yes, indeed,” said Willy, “they eat it as if they were very hungry, and thought it very good; and that white stuff they spread upon the bread, Mamma, it does not look nice like butter; — and then only cold meat, and the potatoes all broken to pieces. Oh, the poor men!”

“Which do you think enjoy their dinner most, Willy — you or these reapers?”

“Oh, me, a great deal, Mam-

ma; my dinner is so much nicer; then I have pudding and meat too."

"But you have not worked so hard as they have, when you eat your dinner, and are not half so hungry as they are. Now, being so hungry makes them like their dinner more than you do yours. Do not you remember one day, when you had been taking a long walk, that you were very hungry and impatient for your dinner; and when it came, you cried out, 'Oh, what a nice dinner!' and enjoyed eating it more than usual?"

"Yes," said Willy, "I thought it a much better dinner than other days."

“That was only because you were so very hungry. Now, these men who work hard are always very hungry at dinner-time, and so I do believe they like their dinner better than you do yours.”

“Well, I am very glad they like their bad dinner,” said Willy, “as they have not got any better. But look at that little girl and boy, Mamma; they do not give them any dinner.”

“Those children brought the dinner for the reapers, and, I dare say, ate their own before they left home; but if you like to give them something for a treat, you may go and ask cook; she can spare you something for

them, but she would not have enough to give to so many as all those reapers."

Willy was delighted with this permission; he scampered away, and soon returned with his pinafore laden with provisions.

"I have brought them some bread, Mamma, because I thought that white bread would be a treat to them, as cake is to me. Then here is some cold pudding, and a bit, but a little bit, of chicken for each: I could hardly persuade cook to give it me; she said it was for your luncheon. But I told her I knew you would rather the poor children should eat it than your own self. Now, was I not right,

Mamma? they will think it so nice—perhaps they never tasted chicken before; and you know you eat chicken as often as ever you like.”

Mamma was not at all displeased that Willy had given her luncheon to the poor children. They were very thankful, but would not eat it then, as they said they had already dined, and were not hungry; but they would take it home to their mothers. Willy was disappointed; he wanted to see them enjoy the good things he had brought them.

“They might eat the chicken now,” said he to his Mother;

“it is so nice that they would like it without being hungry.”

“But they will like it much better when they are hungry ; so if you make them eat it now, you will not give them so much pleasure as they would have in eating it to-morrow.”

“Well, but I went to fetch it for them, Mamma.”

“And so, because you brought it them, you think they ought to mind pleasing you better than pleasing themselves. They feel so much obliged to you that I dare say they will do so if you desire it ; but would it be right, Willy, to think of your own pleasure instead of theirs ?”

“ Oh, no ; I was thinking of nothing but their pleasure when I went to fetch the things.”

“ Then think of their pleasure still, and do not ask them to eat when they are not hungry.” KNFA

When the men had finished their meal, and rested themselves, they returned to their reaping ; and the children picked up all that was left, put it into their baskets, and carried it home. Willy asked his mother whether that dark bread was made of wheat, as well as white bread.

“ Yes,” replied she ; “ I will show you what it is that makes the difference of colour. She then took a grain of wheat, and showed him that the outside was

brown. "Brown bread," said she, "is made of the whole of these seeds, and white bread is made of the inside only, which is quite white." She cut open the grain, and he saw it was quite white.

They now went to another part of the field, where there were both men and women at work. They took up the corn which the reapers had left lying on the ground, and tied it up in bundles with bands of twisted straw; the ears were all at one end of each bundle, and the stalks at the other. They then placed a number of them upright on the ground, but

leaning a little against each other, that they might not fall.

Willy watched how they twisted the straw, and taking up a few straws, tried to do it himself; but he found it much more difficult than he supposed.

“It looks so easy when they do it,” said he.

“And it is easy,” replied his Mother, “to them, because they have done it very often, and have learned how to do it. You can do nothing well without learning, Willy. Besides, these men and women are older and stronger than you are, and are, therefore, able to do more than you can.”

“And what will they do with

these bundles of wheat afterwards, Mamma?"

"These bundles are called sheaves," said she; "and when all the wheat is made up into sheaves, the cart will come and carry them away to the rick yard, where they will be made into a rick, as the hay was."

"But must not they stay in the field first for the wind and the sun to dry them?"

"Corn does not want so much drying as hay, for it is almost dry before it is reaped; look, it is yellower than the hay when it has been made, and feel how dry it is already."

"Yes," said Willy, squeezing up some of the straw in his hand, "hear how it crackles."

“That is very lucky; for if they were obliged to toss about the wheat to dry it as they do the hay, the seeds would fall out into the ground.”

“They are stacking a rick now, Ma’am,” said one of the reapers, “if you like to take young master to see it.”

“Do, pray, Mamma,” said Willy; and away they went to the rick yard. There they saw men piling the sheaves one upon another. “Look, Mamma, they move them much more carefully than they did when they made the rick of hay; that is for fear of losing the seeds.” He observed that the men put the head of the

sheaf—that is, the end at which the ears were—inside the rick, and left the stalks outside. His Mamma told him, that if the ears were left outside, the birds would come and pick out all the grains, and there would be none left to make bread.

“ You know how fond birds are of seeds.”

“ Yes ; but are the grains of wheat, seeds ? ”

“ Certainly,” replied she, “ they are the seeds of the wheat ; and the stalk, when it is dry and yellow, as you see it now is, is called straw.”

“ Oh ! what, the straw that is put into the stables for the horses to lie down upon ? ”

“ Yes ; so you see, Willy,” said she, smiling, “ we keep the seeds for ourselves, and give the stalks to the cattle.”

“ Is that fair, Mamma ?” asked Willy, doubtingly.

“ Yes, my dear ; men and women are better than cows and horses ; besides, cattle eat hay.”

“ But horses eat corn too, Mamma.”

“ True ; but not this sort of corn. There are many different kinds of corn. This is called wheat. The corn the horses eat is called oats. She then took him to a field of oats, and gave him a handful to look at.

“ Oh, this is quite another sort of corn,” said Willy ; “ it is not

the same shape as wheat ; I think it is much prettier ; and see how nicely it shakes about.”

“ The grains of oats,” said his Mother, “ do not grow close together in the form of an ear, like wheat, but in bunches. Each little grain has, you see, a little stalk of its own ; and it is that which makes them shake so easily. But,” continued she, “ it is not so good to eat as wheat is. In some countries, where there is not plenty of wheat, the poor people make bread of oats ; but it is not so nice as wheaten bread.”

“ Oh !” cried Willy, squeezing his fingers together, “ oats have thorns that prick.”

“ They are not thorns, my dear, but these long stiff hairs which pricked you ; they are called beards.”

“ What, because they hurt like Papa’s beard sometimes when he kisses me.”

“ Or rather,” said she, “ because they grow in long hairs like the beards of animals.”

In returning home they passed through a field of barley. “ Here,” said his Mother, “ is another sort of corn that grows in ears like wheat, and yet it is bearded. This is called barley.”

“ What great beards this corn has, Mamma ; I am afraid it will prick me if I touch it.”

“ The beard all points the

same way; so that if you take care how you handle the barley, it will not hurt you." She then gathered an ear, and showed him how to hold it with safety.

"And is barley for men and women to eat, or for horses?" asked Willy.

"For us," replied his Mother; "it is sometimes made into bread, but not often in this country. What do you think we do with it here? we do not eat it, we drink it."

"Oh, Mamma, you are joking; you cannot drink things that are not like water or milk, or those sort of things."

"Those sort of things," replied she, "are called liquids;

and it is true that you cannot drink things that are not liquid.”

“ Well ! I am sure this barley is not liquid ; besides, it would stick in your throat and prick you.”

“ I will tell you,” replied his Mother, “ how it is managed. The grains of barley are soaked for a long while in warm water, and we drink the water the barley has been soaked in.”

“ That is like making tea,” said Willy ; “ for you soak the tea leaves in hot water, and then pour it out and drink it. Is it called barley tea, Mamma ? ”

“ No, it is called beer ; the beer you drink at dinner is made

of barley soaked in water, and some other things added to it. The first time we brew, I will show you how it is done.”

Willy wondered. Barley, he thought, looked so little like beer: he chewed some of the grains; they did not taste the least like beer: but he saw that his Mamma was in earnest, so he knew that what she said must be true.

As they were walking home, Willy exclaimed,—“ How many sorts of corn there are, Mamma! and how many names they have got! There is wheat, and oats, and barley.”

“ They must each have a different name, to distinguish them

one from the other," replied she.

"And besides that, Mamma, they are all called corn."

"Yes, my dear; that name shows that they are all a good deal like each other."

"How funny," cried Willy, "to have one name to show they are alike, and another to show they are not alike!"

"It is to show they are not quite alike," said his Mother; "for if they were not at all alike, they would not all be called corn."

"Oh, but, Mamma," said Willy, with eagerness, as if he had just made a discovery, "they have got another name

besides those two. They are vegetables; so they have three names, as well as animals."

"Both animals and vegetables," said his Mother, "have not only three names, but often many more; but three are quite enough for you to know, at your age, Willy."

THE WINDMILL.

WILLY was one morning awakened very early by a loud knocking. He called to Ann, who was asleep, to ask what that noise was. Ann did not like to be disturbed before it was time to rise ; so she said, — “ It is only the thrashers : turn about, and go to sleep again, Willy ; it is too early to get up yet.” Willy turned about as he was bidden, but it was not so easy to go to sleep again : he heard the knocking still, and he wanted sadly to know who the thrashers were,

and what they were doing. He sat up in his bed to peep at Ann; but seeing that her eyes were shut, he did not dare to disturb her again. So he tried to lie quiet, and that made him fall asleep, though the noise was still going on.

When morning came, the first thing that Willy said was, "Now, Ann, that you are quite awake, do tell me all about that noise we heard in the night."

"It was not night," said she, "for it was daylight, but very early in the morning, for the thrashers begin their work before sunrise."

"And what do they do that makes such a noise?"

“ You shall see,” replied she ; and before breakfast she took him to the barn, which was not far from the house, and there he saw four men, with long sticks, beating a quantity of wheat that was spread upon the floor. They struck it as hard as they could, one after the other, which made four blows following one another ; and it was the noise these blows made that had awakened Willy so early.

“ Well, I am glad the poor corn cannot feel,” said Willy ; “ how sadly they would hurt it. What are they doing that for ? is it only to amuse themselves ? ”

“ Oh, no,” said Ann ; “ poor folks do not work so hard for

amusement ; they are too much tired with working to get money to buy what they want : and your Papa pays them wages for doing this work.”

“ Wages ! ” said Willy ; “ what is that ? ”

“ Wages is the money you pay people when they work for you.”

“ I think the poor people are always working to get money, Ann ; what do they want so much money for ? ”

“ They have no money but what they get by their labour ; so if they did not work to earn money, they would have none to pay for their breakfast and dinner, or clothes, or any thing else. The work these men are doing

is to beat the corn, to make the grains fall out of the ears.”

“ But Mamma said, that the reapers took great care the grains should not fall out, for fear they should be lost.”

“ That was when the corn was in the field,” said Ann ; “ because, if the grains had fallen into the ground, they would have been lost ; but here there is a nice smooth floor for them to lie on, and you will see, presently, how they will be picked up.”

“ But why do the men have broken sticks ? ”

“ They are not broken sticks,” replied Ann, “ but flails, and are made of two sticks fastened together ; one of them serves for

a handle for the man to lay hold of, and the other strikes the corn like the lash of a whip. I will show you how they are fastened together, when the men have done thrashing, but I do not like you to go near them while they are at work, for if you went within reach of their flails you would be sadly hurt; for you can feel," added she, laughing, "though the corn cannot."

Willy shrunk back, for he thought the flails looked terrible, and he had no wish to feel them. They then went to the cow-house, to get some of Nanny's good milk; and after breakfast they returned to the barn. The thrashers had just finished their

morning's work, "So soon!" cried Willy; "why, I have not been up long."

"We have worked a good number of hours," said one of them, "for we began long before you were awake, Master."

"The noise of your flails waked me," replied Willy; "I wanted to get up, and come and see you thrashing, but Ann said it was too early."

One of the men was busy sweeping up the straw which had been thrashed; and when it was cleared away, they saw a great quantity of grains of corn lying on the floor. A thrasher took up a handful, and gave it to Willy to look at.

“ This is not all seeds,” said he ; “ there is something else mixed with it.”

“ That is chaff,” said the man ; “ it is the husks of the corn that are beaten out of the ears with the grain.”

“ And is that good to make bread ? ”

“ Oh no, Master ; we throw away the chaff, and take care only of the grain to make bread.”

“ What a deal of trouble it must be,” said Willy, “ to pick out all the grains from the chaff.”

“ Nothing more easy,” replied he ; “ I will show you how we do it.”

He then took up with a shovel

a quantity of the grains and chaff, which were mixed together on the floor, and put them into a very large basket, so shallow that it was almost flat. He held it by two handles, which were both on the same side of the basket, and shook it three or four times as hard as he could shake it. This made the grains of corn and the chaff jump up from the basket; but the chaff, being very light, flew up highest, and was blown away by the wind, and fell down on the floor. The grains of corn, which were heavier, and did not jump up so high, fell back again into the basket. "There, Sir," said the man, "the chaff is now

blown away, and here are the grains of corn remaining in the basket. You see how well this fan separates the corn from the chaff."

Willy thought it was done very cleverly. "But that basket is not at all like a fan," said he, "except that it makes a wind."

"It is the wind that blows the chaff away," said the thrasher.

Willy felt with his little hands whether he could feel any chaff left in the fan, but it was all gone. "And how do you make these grains into bread?" asked Willy.

"Oh, that is not our business, Master. There is a deal to be done before it can be made into

bread. It must go to the mill to be ground into flour, and then to the baker's to be made into bread."

Willy did not fail to ask his Mamma to take him to see the mill that ground the corn into flour, and enquired of her what it was like.

"It is the windmill on the hill," replied she, "which you have often seen from a distance."

"Oh, that mill with the great fliers, that the wind pushes round?"

"Yes; and it is called a windmill, because the wind makes it turn."

"But cannot we go into it,

Mamma, to see how it grinds corn into flour?" — Mamma consented, and they set off to walk to the mill, which was about a mile from the house, and soon reached the hill on which the mill was built. Willy had never been so near it before: the fliers appeared to him much larger than he had expected; and as they were moving round very fast, he seemed half frightened, and shrinking close to his Mother, asked whether they would not hurt them if they went any nearer.

"If we were within their reach," replied she, "they would hurt us extremely; they might even kill us."

Willy stuck still closer to his Mamma, and held tight by her gown. "Look, Mamma, they come close to the ground sometimes; if they should catch hold of us, they would carry us up there all round, and we should be dashed to pieces."

"Observe," replied she, "that when the fliers come near the ground, it is always to the same place exactly."

Willy looked attentively for some little time, and then replied,— "Yes, just by that little bush."

"Well, then," said she, "if we do not go near that bush, we shall be quite safe."

"But are you sure they always

come down to the same place, Mamma?"

"Yes, perfectly sure. You see the fliers are all of the same length, and are fastened together in the middle like a wheel, so that they move round just in the same place every time they turn."

"Yes," said Willy, "they turn round upon a thing like the axle of the wheel of the carriage, only a great deal larger."

"Exactly," said she; "and it is called an axle."

"But the fliers are not called a wheel, are they, Mamma? for there is no hoop round them as a wheel has, and then they are not at all like spokes."

“The fliers move like a wheel, my dear ; but it is not called a wheel.”

“And the wind pushes it round,” said Willy, “instead of horses pulling it as they do carriage wheels.”

“Do you not observe,” said his Mother, “some pieces of cloth stretched over the fliers ? it is the wind blowing against them that pushes the fliers round, just as the wind pushes up your kite.”

“But it does not make my kite turn round, Mamma.”

“No ; because your kite is not fastened to an axle, as the fliers are ; they cannot get away

from the axle, so the only way they can move is to turn round it.”

“ Now let us go into the mill; the door is on the other side, so we may walk round without going near those tremendous fliers.”

The inside of the mill appeared all confusion to Willy: he saw one man carrying a sack of flour on his back; another shovelling away grains of wheat, but where they went he could not tell; then the mill turning made a great noise, and every thing looked so strange that he was quite bewildered; his Mamma pointed out to him two very large stones, flat and round;

they were placed one over the other, and were turning round.

“Why, they go round like the fliers, Mamma; and what a great axle they have to turn upon!”

“The axle turns with them,” said she; “and it is the fliers outside the mill that makes it turn. It is these two great stones that grind the corn into flour.” She then showed him a man who was emptying a sack of wheat down a hole, which made the grains fall between the two mill-stones; and these stones turning round crushed them to pieces. Then they went to another part of the mill, where they could see the crushed grains come out from between the

stones, and Willy was quite surprised to see that the corn was turned into flour. "This is the wheat so bruised and crushed between the mill-stones that it comes away in tiny bits like powder, and this is called flour."

"Look at the men; how funny the men are, Mamma, all covered with white."

"Yes," said she, "they are covered with flour; it is so light, and blows about so much, that they cannot help it."

"Well, it will not dirty them, Mamma, it looks so nice and clean; it is not like poor Johnny when he was covered all over with black soot."

"No," said she; "and if any

of it gets into their mouths, you know it is very good to eat.”

As they were walking home, Willy said, — “ I think I should like to be a miller, Mamma, if it was not for those great fliers ; I should be afraid they would catch me up one day when I was not thinking about it.”

“ But how would you turn the mill-stones without the fliers ? ”

“ Could not men turn them, Mamma ? ”

“ They would not be strong enough,” replied she, “ unless there were a great many ; and it would cost the miller a great deal of money to pay so many men their wages. Now, he does

not pay any thing to the wind for turning the fliers.”

“No, to be sure,” said Willy, laughing; “the wind does not want any wages; it has got nothing to buy. Well, but, Mamma, why could not horses turn the mill-stones? they are stronger than men, and they do not have wages any more than the wind?”

“But,” said his mother, “the horses must be fed, and the hay and corn they eat costs a great deal of money.”

“And the wind does not eat or drink,” said Willy, laughing still more; “you need not buy hay or corn, or any thing, for the wind.”

“Then horses must have a

stable to live in," said his Mother, "and men to clean them, and feed them, and take care of them."

"And the wind does not live in a house," replied Willy; "and it does not want any coachmen to take care of it, does it, Mamma?" and he fell a-laughing again with all his heart. Nothing seemed to amuse him so much as comparing the wind with men and with horses; and as soon as his fit of laughter was over, he said,—"Well, and what else, Mamma?"

"Why, Willy, I think you have heard quite enough to convince you that it is better that the

wind should turn the mill, than either men or horses.”

“ Oh, yes ; but pray go on, Mamma, it is so funny ! ”

“ Well, then, ” said his Mother, “ the best of all is that the wind is never tired, though it can work all day and all night ! ”

“ No, to be sure, ” said Willy ; “ Ha, ha, ha, ha ! how could it be tired, for it cannot feel ? it is very odd that the wind should be so strong, and work so hard, and yet not feel ! How good it is to work so hard, and all for nothing ! ” then interrupting himself, he added, “ Oh no, it is not good, because it does not do it on purpose. But how clever it

is! — No, it is not clever neither, because it does it without knowing it.”

“It is He who made the wind to work for us, my dear, that is good and wise; and we should thank God for giving us wind to help poor men so much in their work.”

Willy then asked how flour was made into bread. His Mamma said she could not tell him then, but that the next time they made bread at home she would show him how it was done.

FAKN

THE STEAM-BOAT.

PART I.

ONE morning Willy was told by his Mamma that they were going to Richmond to spend a few days with his uncle, and that they were to go part of the way in the steam-boat. This delighted him.

“ I remember how very large the steam-boat was, Mamma,” said he, “ when we went to Richmond in it last summer. It was as big as a house ; and it had rooms in it, and great wheels that made such a splashing as they went along ! ”

They went from Ash Grove in the carriage to the river side, to meet the steam-boat. When they got there it was not yet arrived. They got out of the carriage to wait for it, and looked down the river to see if it was coming; but nothing was to be seen but a few small boats, some rowing, and others sailing about. Soon after Papa called out,—
“There is the steam-boat.”

“Where?” asked Willy; “I can see nothing but a little boat down there.”

“That is it,” replied Papa; “it looks little, because it is so far off; you will see it more distinctly, and it will look larger, as it comes nearer to us.”

“ Oh, but it can never be large enough to have rooms in it ! ”

“ Remember the sun, Willy,” said his Mother, “ which looks so small ; and you know it is really larger than the whole world . ”

“ But, Mamma, the steam-boat is not so far off as the sun is . ”

“ No, nor is it so large as the sun is . ”

As they were talking, the steam-boat approached, and Willy observed that it seemed to grow bigger and look darker. — “ Now,” said he, “ I can see the tall black chimney, and the smoke coming out—such a quantity ! It looks like clouds. See, Mamma, how it goes up high

in the sky ; it will stay there, and make a cloud, I dare say."

" Do you remember what clouds are made of, Willy."

" Oh!" cried he, " I had quite forgotten ; clouds are made of water, and smoke is made from coals burning ; so smoke cannot make clouds. Then where does the smoke go to, Mamma, up in the skies ?"

" It is blown about by the wind, and spread so thin in the skies that you can no longer see it ; but it comes down again at last."

Willy began now to be struck by the increasing size of the steam-boat.

" How big it gets, Mamma !" cried he ; " I do believe it has

rooms in it, for I think I see some little tiny windows.”

Papa then called a small rowing-boat, and they all got into it, and a man rowed them with two oars towards the steam-boat.

Willy observed that every time the man dipped the oars into the water, he seemed to push hard against the water, and that made the boat go on; and once, when the man stopped rowing (to turn round and look how near the steam-boat was), the small boat stood still. When they had proceeded a little way, Willy called out,—“ It gets large faster now than it did before. See, Mamma, it looks like a house.”

“ We are going to the steam-boat, and the steam-boat is coming to us,” said his Mother; “ so that we approach each other quicker, and shall meet sooner, than if we had waited for it on shore ; and, the nearer we get, the larger it looks.”

“ I can see the men and women in it, now !” cried Willy ; “ they seem to be no bigger than dolls, but I know they are real people, and they look so tiny only because they are far off.” After a short pause, he continued ; “ There, now they look as big as the boy did at the top of the hill, who was a man, after all, when he came close to us.”

“ And these little people will

turn out to be men and women, after all, when they are close to us," said his Mother.

In a few minutes more the rowing-boat reached the steam-boat; Willy was lifted up into it; and when he was set down on the deck he was so much pleased and surprised with all he saw, that he stood quite still, with his mouth wide open, but without saying a word. His silence, however, did not last long, for he soon exclaimed, — "Oh, Papa, look, how funny! all the trees and houses there are going along."

"And what is the steam-boat doing?" said his Father.

"It seems as if it stood still," replied he.

“Do you think it is not moving, Willy? look at this wheel, how fast it goes round!” His Father then showed him one of the great wheels, which was moving at such a rate that it made the water splash about, and get so frothy and white, that Willy thought it was turned into milk.

“No,” said his Father, “water and milk are quite different things; water cannot be turned into milk, but it looks like it, because it has a white froth, as beer has when John lifts the jug very high to pour it into the glass.”

“But nobody pours the water up high there to make it froth,”

said Willy, pointing to the water about the wheel.

“It is the wheel moving round so fast in the water that makes it froth and splash about so.”

“Yes,” said Willy, “just like the carriage wheels when they make the mud splash up against the windows; and one day, Papa, only think! the window was open, and all the dirt came in upon my frock; but Ann was not angry, because you know it was not my fault.”

“Do you think the wheels of the steam-boat are like the wheels of a carriage, Willy?”

“To be sure, they go round just the same.”

“Would these wheels do to fasten on to a carriage?”

“Oh, no; they would be a great deal too large; and then they would not do to go along the road, because they have not got a great hoop round their outside, like carriage wheels; besides,” continued he, after a pause, “all those things that go splashing into the water, one after the other, are not at all like spokes; they would stick into the ground, and make the carriage stand still instead of making it go on.”

“But the turning of carriage wheels does not make the carriage go on Willy.”

“Oh, no,” replied he; “I re-

member it is the horses pulling the carriage on that makes the wheels go round."

"Now, the wheels of the steam-boat," said his Father, "are what make the vessel go on. Those things which dip into the water are called paddles; they strike against the water just as the oars of the rowing-boat struck against it, and made it go on."

"But the wheel is not at all like the oar," said Willy; "the oar was a great long stick, and the wheel is round."

"The wheel moves round," said his Father; "but the paddles are like a number of short broad oars which go into the

water one after the other as fast as they can go.”

“Oh, yes,” said Willy, “I see them; they do not look like oars, but they do the same as oars. What a great number there are in the wheel, Papa! And there is another wheel on the other side too,” said he, “with as many more paddles; yet we had but two oars in the little boat, Papa.”

His Father told him to observe how much larger and heavier the steam-boat was than the rowing-boat.

“And besides, Papa, it goes a great deal faster. Look how fast we do go!” said he, fixing his eyes on the water.

“ Why, just now, you said, Willy, that the steam-boat seemed to be standing still ! ”

“ But did the wheels go round then, Papa ? ”

“ Yes, just the same as they do now. ”

Willy was puzzled ; he raised his eyes from the water to look on the land, and there he again thought he saw the houses and trees moving along, while the boat he was in seemed to be standing still. He looked back again at the water, and the boat seemed to be going on. “ I wish I could look at both at once, ” said he : but that was impossible ; so he kept turning his eyes first to one, and then to the

other, till he was quite confused.

“What are you about, Willy?” said his Mother; “your head turns like a whirligig.”

“I want to see which it is that really moves, Mamma—the houses and trees, or the steam-boat—and I cannot look at both at once.”

His Mamma then explained to him that it was the steam-boat that really moved, and moved very quickly, much more so than a carriage; but that when the wheels of a carriage went over any rough ground, the carriage was jolted, and you felt the motion.

“To be sure,” said Willy, in-

interrupting her, “there are no stones in the water for the wheels to knock against and jolt—and yet, Mamma, I often throw stones into the water, and so do all the boys; so I do not know why there should not be stones in the water: what becomes of them?”

“You can find out that by yourself, Willy, if you think a little; and I shall not answer your questions when they are too easy, any more than when they are too difficult.”

Willy thought a little, and then said,—“Oh yes, to be sure, all the stones that fall into the water go through it to the bottom; the water is not strong

enough to hold them up, excepting just for a minute, when we play at ducks and drakes."

"Certainly," replied she, "stones are much heavier than water, and the heaviest things go to the bottom. Well, then, as there are no stones swimming about in the water for the wheels to knock against, and no rough ground for them to roll over, the steam-boat glides so smoothly along that you cannot feel it move, as you do the carriage. When you look at the water splashing round the wheels, and the stream the boat leaves behind, you see very well that we are going on fast; but when you do not look at the water, as you

feel no motion, you fancy the boat is standing still, and that all the trees and houses you pass by are moving on, and going the other way.”

“ Well, Mamma, but now that you have explained it to me, I don't think that the houses and trees move half so much — hardly at all ; and I am sure that the boat is moving very fast.”

“ Think a little more, Willy, and you will be as sure that the houses and trees are not moving at all, but standing quite still. You know that plants cannot move about, nor houses either, for they are not even alive.”

She then sent Willy to play about with some little girls and

boys who were in the steam-boat; for she began to be tired of answering his questions, and thought that if he asked any more then, he would not be able to remember the answers; and that a little play would be better for him.

THE STEAM-BOAT.

PART II.

WILLY amused himself very much, playing with the children, for about half an hour. Then, being quite out of breath, he came back to his Mamma, and sat down quietly beside her, watching the wheels as they went round; but he had no sooner got breath than his questions began again. “Papa says that those wheels make the steam-boat go on, but how can they go round by themselves? for they are not alive, and there are no horses to pull the steam-

boat along as they do the carriage.”

“The wheels do not move of themselves, they are moved round by the steam; and that is the reason that the vessel is called a steam-boat.”

“What! is it like the steam that comes out at the top of the urn? That can never be strong enough to turn those large wheels.”

“It is exactly the same sort of steam,” said his Mother, “but there is much more of it.”

Just then they heard a bell ring. It was a signal for the boat to stop to take in passengers. The steam was then let off by the steam-pipe, and Willy

saw it rushing out with a whizzing noise from the top of the pipe. “ Oh, look ! look, Mamma ! ” cried he ; “ there is a great deal more steam comes out there than from the tea-urn. How fast it pushes out ! and how strong it seems ! There it goes, up, up, up, in the skies.” Then, after a pause, he added, — “ And it may stay there if it pleases, and make clouds ; for you know, Mamma, clouds are made of water — little tiny drops of water just like steam.”

“ Excepting that they are not hot like steam,” replied his Mother.

“ Oh ! it will be cool by the time it gets up to the clouds.”

Mamma laughed heartily at Willy's clouds; but she said that it was very possible that some of the steam might get up to the clouds, and remain there.

“Look, Mamma!” said Willy, pointing to the shore, “the trees do not move now—I mean, they do not look as if they moved now.”

His Mother asked him, what it was that made them seem to move?

Willy thought a little, and then said,—“Oh! it was the boat going on; so now the boat stands still, it cannot make them seem to move.”

The new passengers being now all in the boat, it went on again.

“Where is the steam gone to now?” asked Willy; “it does not come out there any more.”

“We are going on again, my dear; so the steam must turn the wheels.”

“Yes,” said Willy, “if it went all away into the skies it could not turn the wheels.”

“When we stopped to take in passengers,” said his Mother, “the wheels stood still; the men would not let the steam get to them to turn them round; so they opened a little door inside this long narrow chimney, and then up went the steam out of the chimney, and left the wheels standing still. Then when they wanted the vessel to

go on again, they shut this little door; so then the steam could not get out any more, and it staid below and made the wheels move.”

“ But the steam that went out did not come back again, did it?” said Willy, sadly afraid that it should have been stopped in its way to the clouds.

“ Oh, no, my dear; but more steam is made to turn the wheels.”

“ What a great tea-kettle there must be boiling to make such a quantity of steam!” exclaimed Willy.

“ Go to Papa, and ask him to show it you.”

He ran to his Father, who

could not understand what he meant by a tea-kettle.

“ Well, perhaps it is a tea-urn,” said Willy, “ that makes all the steam; but I thought that tea-urns were only for drawing-rooms, for cook has a tea-kettle in the kitchen, and so has Ann in the nursery.”

“ Oh ! I guess what you mean now,” said his Father, smiling; and he took him down stairs, and showed him the large boiler full of hot water.

“ What a great thing ! ” said Willy; “ why, it is not like a tea-kettle, nor a tea-urn, one bit ! ”

“ Nor is this place like a drawing-room, or a kitchen, or a nursery, one bit, I think, Willy.

As a great quantity of steam is wanted to move the wheels, there must be a very large boiler full of hot water to make steam."

"Yes, and a great big fire to make so much water boil; look how it blazes, Papa!" said Willy, pointing to the fire.

"And a great quantity of coals to make the fire burn," said his Father, pointing out the man who was putting coals on the fire.

Willy then asked what was that great long thing that went backwards and forwards—up at one end and down at the other. "It looks so big and strong,"

said he, "as if it would knock you down if you went near it."

"It is a beam," replied his Father; "this beam is pushed up and down by the steam, and the beam moving in this manner makes the wheels turn round."

"Look, Papa, how it moves up and down; it is just like the song in my story book," and he repeated — "Here we go up, up, up; and here we go down, down, downy; here we go backwards and forwards," ——"and there we go round, round, roundy," added his Father, pointing to the wheels.

"Oh, so they do!" said Willy, laughing; "well, does not it seem as if the song was made on

purpose for the steam-boat, Papa? but it is not; for it is the song nurse sings to Sophy, when she is dancing her up and down; and then, at the end, she turns round with her, just like the wheel, and that makes Sophy laugh.”

Papa laughed too at Willy's application of his nursery rhymes to the steam-engine.

“But, where is all the steam that makes the beam move up and down? I do not see any.”

“It is shut up in that brass vessel,” said his Father, showing him the cylinder; “if it could get out, it would fly away, as it did from the steam-pipe when we stopped; and then you know

the beam stood still, and the wheels did not move.”

“ And how does the beam make the wheels turn round, Papa ? ”

“ Oh, that is too difficult, Willy : you have now seen all you can understand, so let us go up on deck.”

Willy was eagerly telling his Mamma all he had seen below, and how his Papa had explained it to him, when his former companions came to call him to play with them ; he stayed with them some time, and when he returned to his Mother the wind had risen, and he observed the boughs of a great tree on the bank of the river blowing about.

“ Look Mamma ! ” said he, “ that tree is really moving now. ”

“ Its branches are, ” replied she, “ but not of themselves ; they are blown about by the wind. ”

“ But there is no wind in the boat, Mamma. ”

“ We do not feel it, my dear, because the wind and the boat are both going the same way, so it goes along with us, instead of blowing against us. ”

“ Then, if the wind went the other way, it would blow against us, and we should feel it ? ”

“ Oh yes, ” said his Mother, “ going against the wind we

should feel it more than if we stood still."

"When I run against the wind," said Willy, "I feel it a great deal; and when I run the same way as the wind, I hardly feel it at all."

"And when you stand still you feel the wind more than if you ran the same way as the wind, and less than if you ran against it. When the wind strikes against us, and we go against the wind, we hit each other a pretty hard blow. If you clap your two hands together, it hurts you more than if you held one hand still and slapped it with the other."

"Oh yes; now look, Mamma," said he, extending his arms, —

“this hand shall be the wind, and this other hand shall be me going on in the steam-boat.” He then struck his hands together as hard as he could. In his eagerness to show his Mamma what he meant, he gave himself a harder blow than he had intended ; and he could not help squeezing his fingers together, and crying out in good earnest, “ Oh, how it hurts ! ”

His Mamma began laughing, and said, “ Pray do not make the wind blow so hard, Willy.”

As soon as the pain was over, Willy said, “ Well now, Mamma, I will make believe, with this hand, to be standing quite still on the ground ; I

mean the land out there by the river side. And the other hand shall be the wind again." He then held one hand still, and struck it with the other. "Oh no," continued he, "it does not hurt half so much, nor nearly."

"I do not think the wind blew so hard," said his Mother, laughing, "or else it would have hurt you just half as much as it did before."

"You mean the make-believe wind of my hand, Mamma, don't you?"

"Oh, to be sure," replied she.

Willy then saw several men hauling up a sail, and enquired what they were doing. His Mo-

ther told him, that as the wind now blew hard, and the same way as the boat was going, the sailors thought that if they stretched out a sail, they should make the vessel go faster.

Willy did not at all understand that; he saw them spreading out a large sheet — but a sheet was neither a horse to pull the boat on, nor wheels for the steam to push on. So he expressed his wonder to his Mother. “A sheet, Mamma! why that is only to lay on beds, it can never make us go on faster.” However, when the sheet was spread out, Willy saw that the wind blew against it, and made it hollow on one side, and bulge

out on the other. "The wind pushes the sail," said he.

"Yes," replied she; "but it is tied to the mast, so the wind cannot blow it away."

"No," replied Willy; "but the wind trying to blow it away pushes the steam-boat on."

"It does so, and now that the steam pushes the wheels round, and the wind pushes the sail on, we shall go on faster than ever."

"Only see how fast we go!" exclaimed Willy. They went so fast that they soon came in sight of his Uncle's house. They saw him walking on the lawn before his house by the river side, watching the arrival

of the steam-boat ; and as soon as he perceived it, he stepped into a small boat and was rowed up to the steam-boat. “ Oh, there he is ! there is Uncle William ! ” cried Willy, and he jumped for joy. In a few minutes, the rowing boat reached the steam-boat, and Uncle William opened his arms to catch Willy as he leaped into his boat.

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THE ROBIN RED-BREAST.

As Willy was one day walking out with his mother, he heard something rustle among the bushes; and looking about to find what it was, he saw a poor little bird lying on the ground, which could neither fly nor hop, for one of its legs was broken.

“ Oh, poor little bird,” cried Willy, picking it up; “ let us take it home, Mamma, and make it well.” Though he held it carefully in his arms, that he might not hurt it, the bird struggled to get away: he stroked and caressed him, but the bird did not understand

his kindness, and as he could not get free, he lay in Willy's arms, trembling and panting with fear. When they got home, Mamma sent for a bird-cage, at the bottom of which she put some soft wool, for the bird to lie on. She then took a narrow slip of old linen, and bound it round its broken leg.

“Pray mind, Mamma, that you put the two pieces of broken bone close to each other, or else they will not grow well together. Do not you remember Papa said so, when Johnny broke his leg falling down the chimney?”

“I cannot do it so well as the surgeon,” replied his Mother; “but I will do the best I can.”

The bird squeaked a little while his leg was binding up, and was sadly frightened; for he felt that he was hurt, and he had not sense to know that it was to do him good afterwards. He was then put into the cage, and he was so tired, that he was very glad to lie and rest upon the soft warm wool. He would not eat, and a thin skin came over his eyes, so that Willy thought he had fallen asleep. He took great care not to disturb him; but he put some crumbs of bread and a cup of water into the cage, near him, that he might eat and drink as soon as he awoke. He was then left under Ann's care in the nursery; and Willy went

into the drawing-room with his Mamma; for she told him, the best way to cure the bird, was, to leave him to rest quietly.

Every now and then, Willy went very gently into the nursery, and found the poor Robin quietly nestled in the wool; but the last time he went up, to his great delight he saw him standing on the leg which was not broken, and pecking the crumbs of bread. He then dipped his little beak into the cup of water, and afterwards lifted up his head as birds do to swallow their drink.

Willy was quite happy, for he thought the bird was cured; but Ann told him the broken bone

would not grow together for several days, and that the bird must be kept quiet in the cage all that time.

“Look, what a pretty red neck it has, Ann!”

“Yes,” replied she, “it is called a Robin red-breast, because the feathers on its breast are red. They are very tame birds, and very fond of their young; and I dare say the mother of this bird is not far off, grieving for its loss.

The next day the cage was placed in an open window, that the poor little Robin might have light and air. When he was there he began to call out twee, twee, twee.

“I dare say,” said Willy, “that now he can see the trees, he wants to get out and fly about.”

“Perhaps,” replied Ann, “he is calling after his mother.”

“Poor little bird !” exclaimed Willy: “what a sad thing it is to have lost its mother !”

Willy then sat down to look at a book of prints, and Ann was at work. They were both very still, and there was no noise in the room, excepting when the bird cried out twee, twee, twee. All at once, what should they see, but a larger Robin red-breast fly to the window and peck at the cage? Willy was just going to start up; when Ann caught hold of him, and said, in

a low voice, "Do not stir, or you will frighten the old bird away. I dare say that is the mother of the young one come to seek for him."

"Oh yes," said Willy, whispering in return; "hear how the little one cries twee, twee, — and tries to get out to its mother; shall we open the door of the cage?"

"No," replied she "we must not let it out, for it cannot fly till its leg is well."

Willy, in turning round to see better, moved his chair, and made a little noise, which frightened the old bird away.

"Oh dear!" exclaimed he, "the old Robin has flown away;

see how the young one wants to go after her. Poor little Robin," said he, opening the door of the cage, and patting him; "how sorry he must be! I should not like to see Mamma fly away without me; and I do not think she would, Ann, even if she had wings; I am sure she would not if I had broken my leg."

"I dare say," replied Ann, "now that the bird knows where her young one is, she will come back another day." FNAK

Willy ran eagerly to tell his Mamma what had happened. She thought, like Ann, that it was very likely the old bird would return; so the next morning she took her work and

sat in the nursery in hopes of seeing it. Every thing was quiet, but Willy could take no pleasure in looking at his book of pictures, so constantly was he looking towards the window, which had been left open on purpose.

At length the old Robin was seen flying about near the window, and when she found there was nothing to alarm her, she came close to the cage. She had brought something in her beak, which she put between the wires of the cage and fed her little one. Willy was delighted; but he took care not to express his joy in a noisy way, as

he usually did, for fear of disturbing the birds.

The old Robin returned every morning, for several days ; and the little bird seemed to grow so strong, that at length they unbound the leg, and felt that the bone was grown together, and that the bird was cured.

“ Now it will be able to fly away,” said Mamma. “ Shall we open the cage and set it free the next time its mother comes ? ”

Willy looked grave and hesitated : — “ Then it will go quite away, Mamma, and I shall never see it any more.”

“ I am afraid you will not see it again,” said she ; “ for it will be so happy with its mother,

and it is so unhappy shut up in the cage, that it would not like to come back again.”

“But, Mamma, you and I were very good to it, and cured its leg, and the bird ought to love us for that.”

“The bird has not sense enough to know that you kept it shut up in the cage for its good ; it only felt the confinement, and the being parted from its mother, and the pain of having its leg being bound up. But the bird loves you for feeding him ; he will peck out of your hand you know, and is not afraid of you as he used to be.”

“Then if he loves me, Mam-

ma, we might keep him a little longer.”

“ He loves his mother a great deal better than you, Willy. Would you like to keep him from her, now he can fly ? ”

“ No, ” said Willy, sorrowfully ; but he could not bear the thoughts of losing the bird, and burst into tears.

“ Willy, ” said his Mother, “ you should have courage to do what is right : let me see whether you cannot command yourself. If you think it right to let the poor bird go back to its mother, do it with a good will, and not with tears. Think how happy they will be flying together again, after having been so

long parted. Besides, if you do good to the two birds, it will please your Papa and me ; and most of all remember, that it will please your Father which is in heaven.

Willy felt the force of what his mother said ; he thought he no longer wished to keep the bird, so desirous was he of doing what was right.

The next morning, when the old Robin came again, his courage failed a little ; but he tried to remember what his Mamma had said, and he thought to himself, I will command myself, and be good. So he went up to the cage, and opened the door.

This frightened away the old bird.

“ Stop! stop!” cried Willy; “ little Robin shall fly away with you;” but the old bird knew not what Willy said, and kept flying on.

By this time the young bird had tried its wings, by fluttering about a little while in the cage, and finding that it was able to fly, it spread them wide, and was out of the window in a moment.

“ That way, that way,” cried Willy, calling after the little bird, and pointing in the direction the old bird had flown. “ Oh, Mamma, it is going the

wrong way, and will not find its mother."

"But the mother will find its young one," said she, taking Willy up in her arms and kissing him; and in a few moments, the old Robin wheeled round in the air, and flew back to join the young one. They then went off together, and settled in a thick tree; and Willy could see them no longer.

"How glad the little Robin must be now, Mamma!"

"Yes," replied she; "think how happy he is, and you will not be sorry for your loss."

THE FALL OF THE LEAF.

WILLY'S Mamma very often took a book, and went to read, seated on a bench near the house. It was shaded by a large horse-chestnut tree, and Willy played about under the tree, whilst his Mamma was reading. For some time past she observed, that whenever she came to the bench she found it covered with the withered leaves of the horse-chestnut.

“How tiresome these leaves are,” said Willy; “always falling! I saw Johnny clean the

bench this morning, and now it is covered again.”

“ We cannot prevent the leaves from falling in autumn,” replied his Mother: “ at this time of the year they wither and die ; and then the slightest wind blows them off the branch.”

“ But if there were no wind, Mamma, would they stay on it ? ”

“ No ; the stalk, when it was quite dry, would snap, and the leaf would fall.”

“ But all leaves do not fall in autumn, Mamma ; look at that laurel, it is quite fresh and green.”

“ The leaves of laurel, and all other evergreens, live

throughout the winter, and that is the reason they are called evergreens.”

“Then do their leaves last for ever? do they never die?” asked Willy with some surprise.

“Oh no, they begin to wither and grow yellow in the spring, and fall off just when the new leaves are coming out; sometimes it is the young leaf budding, which pushes off the old leaf; just as if it said, ‘Go away, you old dry leaf, you are good for nothing now; let me have your place; I am young and healthy, and can do the work better than you.’”

“ But do the leaves do any work, Mamma? ”

“ Certainly ; whatever God Almighty has created is made to do some good and useful work. They do not work with a needle and thread, as Ann does ; nor do they work like the labouring men in the fields. The work they have to do, is to help the water that the roots suck up to feed the plant. Some day or other you will learn how they do this, but it is too difficult for me to explain to you now.”

“ I think, Willy,” added she, “ if you had a little broom, you might help to keep this bench clean for me. Come with me,

and let us see if we cannot get one.”

“ There are no shops here in the country to buy a broom, Mamma.”

“ No, but we can contrive to make one.”

They then went to the wood-house, and got Mark to choose a stick out of the faggots, of a proper size to make a broom-stick for Willy. He afterwards cut a number of small twigs from the faggots, and tied them round one end of the stick to make a broom. Willy looked on very earnestly, and every now and then gave a jump for joy, when he found that the great stick in the middle, and the little twigs

round it, began to look like a broom.

“ See, Mamma,” cried he, when Mark had finished it, and given it to him, “ now it is quite turned into a broom ;” and off he ran towards the bench : but he had not gone far when he turned about, came back a few steps, and when he thought he was within hearing, hallooed out, —

“ Oh, Mark ! I forgot to thank you ; but I cannot go back now.”

As soon as he reached the horse-chestnut tree he set to work, and swept all the leaves from the bench, and away from under his Mamma’s feet. He

afterwards fetched his rake, and raked a great many together in a heap.

“Look, Mamma,” said he, “is not it like a haycock?”

“Yes,” replied she; “but I do not think the horses would like it so well to eat.”

“But how can I carry it away, and where shall I take it?”

“Try to think for yourself, Willy, and do not interrupt the pretty story I am reading.”

“Is it very pretty, Mamma? do pray read it to me.”

“It is pretty to me, but you would not understand it.”

“O yes, if it is pretty, I dare say I should.”

His Mother smiled, and read aloud:—

“It gave Mr. Wallace great pleasure to go round the works, and see how the employment of this capital afforded subsistence to nearly three hundred people, and to remember, that the productions of their labour would promote the comfort and convenience of many hundreds or thousands more, in the distant places to which the iron of this district was carried.”

Willy listened attentively, and his face lengthened as he listened; at last he exclaimed, —

“Well, Mamma, that’s enough, thank you; it is some-

thing about a hundred men, but I am sure I cannot tell what."

Willy was then obliged to think for himself what he should do with his heap of dry leaves — and he thought of his wheelbarrow. He soon filled it, and wheeled it away to a little wood close by, where he emptied the barrow, and then returned for more leaves. All at once he called out, —

"Well, what can that be! something has fallen from the tree that I am sure is not a leaf, for it hit my head as hard as if it was a stone!"

"There are no stones in trees," said his Mother; "it is much more likely that it was

some of the seeds of the horse-chestnut."

"Oh, Mamma! seeds are not so hard and heavy as that."

"Seeds are of very different sizes in different plants; but look among the dead leaves for what it was that hurt you; if it was so large and so hard, it will not be very difficult to find."

Willy sought, and found a couple of horse-chestnuts, in their prickly shell, which was half open, and he soon picked them out.

"Are these large shining brown things seeds, Mamma?"

"Yes, they are; the seeds of the horse-chestnut tree. You remember the flower, do not

you? We saw one first in the bud which we cut open in the spring.”

“Oh yes! that was the beginning of the flower before it grew large, and looked so beautiful as it did afterwards.”

“Yes,” replied his Mother, “when the leaves of the tree were all come out, and grown to their full size, the flowers came into blossom. That was a long time ago.”

“Yes, and it is a long time since they have been all dead and gone!” replied Willy.

“You did not observe,” said his Mother, “that they left something behind, on the branch where the flower grew.”

“ I know,” said Willy, “ that the fruit comes after the flower ; but these are only seeds, Mamma.”

“ This prickly shell or husk,” said his Mother, “ is the only fruit the horse-chestnut bears.”

“ But how can we eat it, Mamma ? it has pricked my fingers already, in getting out the seeds, and I am sure it would prick my tongue.”

“ It is not good to eat, nor the seeds either.”

“ But they will make nice little balls to play with.”

While he was speaking, another fell at his feet ; and as the wind was rising, it soon blew off a great number, which fell fast

around him. This delighted Willy.

“There’s another, and another, Mamma!” cried he, springing first on one side, then on the other, trying to catch them as they fell. He scratched his hands a little in getting some of them out of their prickly husk, but most of them were dashed out of it in falling. Willy worked no more at the dry leaves, the remainder of the heap was left where it had been raked up, for he could think of nothing but his horse-chestnuts; and before they returned to the house he had half filled his little wheel-barrow with them.

“ Why are these seeds called horse-chestnuts, Mamma ? ”

“ To distinguish them from another sort of chestnut, which is called sweet chestnut, because it is good to eat.”

“ Then it has not a prickly husk, like these.”

“ Yes it has, but it is not the husk you eat, but the seed. They are not ripe yet ; when they are, you shall taste them.”

When his Mamma went into the house, Willy asked whether he might carry his horse-chestnuts into the nursery to play with.

“ I am sure,” said he, “ Mark will not want all these seeds to sow.”

“ You may take as many as you please; Mark does not want to sow any this year.”

“ Then how will he do to get new horse-chestnut trees ? ”

“ When he wants any,” replied she, “ he transplants young trees, which have grown from seeds he sowed some years ago; and are already tall, though the stems are not very thick. There is Mark yonder; go and ask him to show you the place where the young trees grow.”

Willy ran to Mark, who said, “ Come along with me, Sir, and I will show you my nursery.”

And he took him to the place where a number of young trees,

of different sorts, were growing in rows, close by one another. Willy thought that Mark was joking when he called this a nursery. But he told him it was really called a nursery for young plants.

“Why should not baby trees have a nursery, as well as baby children?” said he.

“But,” replied Willy, “there are no walls, and no ceiling; and a nursery is a room.”

“For children it is,” said he, “but trees would not grow in a room.”

“And have they any nurse to take care of them?” asked Willy.

“I am head nurse,” said Mark, “and Johnny sometimes helps me.

Look, I tie the young trees to stakes of wood stuck into the ground to prevent their falling ; for, poor little dears ! they are not yet strong enough to stand upright by themselves.”

“ Just like sister Sophy,” said Willy ; “ she cannot stand alone, and would fall down directly, if nurse did not hold her up when she tries to walk.”

“ Nurse is the stake that supports her,” said Mark.

“ Ha, ha, ha, ha ! ” said Willy, laughing at nurse being called a stake.

“ But does it not hurt the young trees to tie them so tight ? ”

“ I take care to do it care-

fully," said Mark; and he began tying up one that had got loose.

"Look, I put a whisp of straw round the tree, to prevent the bark from being hurt by the string, — then I do not tie them quite tight, that the wind may blow them about a little; for it is good for young trees to have a little exercise as well as for young children."

"Like Sophy," said Willy; "when nurse dances her; because she cannot run about like me."

"Yes," replied Mark; "so you see, Master Willy, that the wind helps me to nurse my young trees; but I do not trust them entirely to its care, for fear

it should blow them down, for it is sometimes very boisterous ; so I keep them tied to the stake long after they are strong enough to stand alone, and then the wind can do them no harm."

Willy was very much pleased with Mark's nursery. " May I sow one of my horse-chestnuts in it?" said he ; " and then when it comes up and grows into a little tree like these, I shall call it my child ; and put a stake into the ground, and tie the baby tree to it, and water it, and take care of it all by myself, except when the wind helps me to nurse it."

He then made a hole in the ground, put one of the horse-

chestnuts into it, and covered it over. Mark took a small stick, which had a little paper stuck in a slit at the top. He wrote something on it, and then stuck it in the ground, close by the spot in which the seed was sown.

“This is to mark the place,” said he, “that you may know where to look for it when it comes up.”

“How long will that be?”

“Oh, you will see nothing of it before next spring; winter will soon be here, and the weather is already too cold for it to sprout now.”

“I was going to sow one of these seeds in my own garden,”

said Willy, "but I thought it would make such a great tree, that I should not have room for any thing else next summer."

"Oh! there's no fear for next summer," said Mark, laughing: "it will not be so tall as you are next summer."

"Indeed," cried Willy; "why I thought it would grow as big as the great tree that shades the bench."

"So it would in time; but it will take many years to get to that size. I dare say that tree is nearly a hundred years old."

"A hundred years!" exclaimed Willy, "why, that is older than Papa or Mamma."

“Yes, by a great deal,” said Mark; “if you will come with me, I will show you a horse-chestnut tree that is just as old as you are.”

THE THREE LITTLE TREES.

MARK took Willy to another part of the grounds, and showed him three very small trees.

“Do you call these trees?” said Willy; “they are not so big as a rose bush.”

“They were all sown on the same day,” said Mark; “and that was the day you were born; your Papa came and put the seeds into the ground himself.”

“How funny,” cried Willy; “then that is why you said that they were just as old as I am. But why are they not all the

same size, if they were sown all the same day?"

"Because they are trees of different sorts. Look, the largest is a horse-chestnut, it grows quicker than the two others, and so it is taller. You may know it by its great leaves, branching out from the stalk; something like your fingers, when you stretch them out from your hand."

Willy stretched out his fingers, but did not think they looked much like the leaf.

"Do not you see," said Mark, "there are five small leaves joined together at the stalk, to make one large one; that is like the five fingers of your hand."

“Oh, no,” said Willy; “I have only four fingers and a thumb.”

“Well, that makes five in all; and don’t you see that these leaves are some of them shorter than others, as your fingers and thumb are.”

“Yes,” said Willy, laying hold of one of the shortest of the leaflets, “this is the thumb. But, Mark, this little tiny horse-chestnut-tree has as large leaves as the great tree Mamma is sitting under. To be sure, a young tree has not smaller leaves than an old one; only it has fewer. But the branches of the young tree are much smaller than the branches of the old tree,” said Willy; “only look at

the old tree, Mark, I am sure it has some branches that are as thick as your body, and thicker too ; and as long, Oh ! I cannot tell how long, they stretch out so far ; but the branches of this little tree are not so thick as my finger hardly.”

“ Yes,” replied Mark ; “ because the branches grow larger and larger every year, like the stem, and the leaves grow only one year.”

“ Why do they not grow every year, as well as the branches and the stem ? ” asked Willy.

“ Why, now, Master Willy,” said Mark, “ that is what I call a silly question ; if you will but give yourself the trouble to

think a little, I am sure you can tell.”

Willy found it more easy to ask questions, than to think for himself, and find out what he wanted to know,—however, he was ashamed of Mark’s rebuke, and began to think, and then fell a laughing. —“Ha, ha, ha, ha, to be sure,” said he; “the leaves cannot grow larger every year, because they die in the Autumn, and they cannot grow when they are dead. Poor little tree,” said Willy, in a tone of pity; “your leaves are all dropping off, just like the leaves of the great tree, they are not green any more; all yellow, and brown, and in holes, and good

for nothing ; but never mind, you will have pretty new green leaves in the spring. I want to see whether its horse-chestnuts are as large as those on the great tree,—but it has no horse-chestnuts, Mark ?”

“It does not bear fruit yet,” said Mark ; “it is too young, but when it is old enough to bear fruit, the fruit will be just as large as that of the old tree, only it will not have so much.”

“Like the leaves,” said Willy ; “and not like the branches.”

“Yes, for the fruit and the leaves die every year ; and new fruit and new leaves grow in their place : but the branches and the stem do not die, they

go on growing larger and larger every year.”

“ Oh, but I have often seen a dead branch on the great trees,” said Willy; “and no leaves grow on it all the summer; and if you break it off, it goes snap, just like a piece of dry stick.”

“ Yes,” said Mark; “now and then a branch dies by accident; but it is only one here and there; while the leaves and the fruit die, all of them, regularly, every autumn.”

“And what is this little tree?” asked Willy, pointing to the next, which had been planted the day he was born.

“That is an elm; it grows slower than the horse-chestnut,

and though it is of the same age, you see it is smaller.”

“And what tiny leaves it has, Mark !”

“Yes, but the leaves of the great elms in the avenue are not larger, and its seed is much smaller than its leaves. The third tree,” said he, “is an oak, which grows the slowest of any of them.”

“It has no nice little cups and balls yet, Mark.”

“No, it is too young to bear fruit, and those little balls in the cups are the fruit of the oak, and are called acorns.”

“Oh !” cried Willy ; “but oaks have apples besides acorns ; not good apples, like apple trees,

but nasty bitter apples. Ann let me taste a bit one day, but I could not eat it, it was so bad."

"Those are not the fruit of the oak," said Mark; "they are round, and look something like an apple, but they are not real apples. They are bumps and swellings, that grow upon the oak when it is ill, or any thing has hurt it."

"What, like the bumps I get upon my forehead, sometimes, when I fall down?"

"A little like it," replied Mark, "but not much."

"How can trees be ill, Mark, for you know they do not feel?"

"No, but they are ill, that is, they have diseases without feel-

ing ; you know they die without feeling it.”

“ Yes,” said Willy ; “ but it does not signify being ill, if you cannot feel it. I should not mind being ill so.”

“ It does not signify to them, perhaps,” said Mark ; “ but it signifies a great deal to us, for not only trees, but all sorts of vegetables are sometimes diseased. Last summer all the potatoes were so bad, that they were not fit to eat ; and it made the people who ate them ill too. Then some of the cherry-trees were blighted, that is a disease which made the fruit good for nothing.”

“ That does signify a great

deal," said Willy ; " cherries are so nice."

" Ah, but what would have been worst of all, the wheat had nearly been spoilt by the rot ; that is another disease ; luckily it was cured, or what should we have done without bread ? "

" Oh, I had rather go without bread, than without cherries, a great deal," cried Willy.

" You may think so for a little while, Master Willy ; but if you had to eat your dinner every day, without bread, I dare say you would soon be longing for it."

" Oh, no, I should not, Mark ; I like meat and potatoes much better than bread ; Ann is

always telling me to eat my bread at dinner, and if there were no bread, you know, she could not teaze me about it."

"But what would the poor people do?" said Mark; "many of them have no meat, and nothing but bread and cheese for their dinner."

"What would they have done for bread, Mark, if the wheat had been all spoiled?"

"Why, they would have been almost starved."

"Oh, the poor people!" cried Willy; "and Susan and her mother would have had no bread; I am very glad the wheat was cured: and how can you cure potatoes, and cherries, and

wheat," said Willy, "when they are ill? you cannot give them medicine, for they have no mouths to drink it."

"No," said Mark; "we can do but little good, but we doctor them as well as we can."

"Oh, I remember," said Willy, "when my flower-pots in London were ill, because I had given them too much water, Ann said you were the doctor for curing plants."

"Well, you see, Master Willy, the plants sucked up the water you gave them, though they have no mouths; so they can suck up any thing I give them to cure them as well; what did

you give your plants to cure them?"

"Nothing," said Willy; "Ann said 'they had had too much water,' so she put them out at window for the sun and air to dry up the water that made them ill."

"Well, that was just what they wanted. But plants are often ill for want of water; what must be done then?"

"Why give them some, to be sure!" cried Willy.

The evening was now coming on; it felt cold and damp, and Willy was called into the house: as he drew near, he was surprised to see light shining from the drawing-room windows, though

it was not yet dark ; when he came in, he found his Mamma sitting beside a fine blazing fire. “ Oh, Mamma ! ” cried he, “ what a long time it is, since I have seen a fire ; how nice and warm it looks.”

“ Come here, my dear, and then you will find that it feels warm.”

“ I am a bigger boy now, than I was last winter,” said he ; “ and you will let me go nearer the fire than the border of the rug, will not you ? ”

“ You are taller, Willy, and older ; but are you more wise, and fit to be trusted ; do you understand better than you did last winter, how dangerous it is

to play with fire; how easily clothes catch fire, and how dreadful it is to be burnt?"

"Oh yes," said Willy; "I know all that."

"Then can I depend on your never touching any thing within the fender? if I find I can do that, I shall allow you to come upon the rug."

Willy stepped upon the rug, and rested himself, leaning against his Mamma's knees. He asked whether it was a log of wood that was burning.

"Yes," said she; "it is part of one of the trees that was cut down."

"But I thought that when trees were cut down, the dead

wood was made into boxes, and tables, and chairs, and all sorts of things?"

"So it is, when the wood is fit for such things, but very often it is not large enough, or good enough, for that purpose, and then it does for burning."

DANCING SHADOWS.

JOHN, soon after, brought in the lamp, which he placed on the table, and Willy said, "I do think that Ann has forgotten to call me to go to bed; I never staid up till candle-light before."

"It is not yet eight o'clock," replied his Mother; "you forget that the days have been growing shorter and shorter for a long time past, ever since the middle of summer; and they will go on doing so till the middle of winter."

"O!" cried Willy, "I remember now that I used to sit

up after candle-light every night last winter; and I will tell you why I remember it, because I danced with Emily and Maria against the door."

His Mother did not at first understand what he meant. At length she recollected that he had been very fond of dancing with his own shadow, and calling it Emily or Maria, in fun.

"I will go and see if they are there now," said he; so he ran up to the door. The lamp could not shine on that part of the door against which Willy stood. He was like a skreen, for the light could not pass through him; so, where the light could not reach the door, there was a shadow; it was the shadow that

Willy made by standing between the lamp and the door; but he laughed, and made believe that it was his cousin Emily.

“ Oh! there you are, Emily,” cried he; “ I am very glad you are come; will you dance with me?”

He stretched out his arms, and the shadow stretched out its arms also; then he began to dance, and the shadow danced about opposite to him.

“ Now let us hop on one foot.”

Willy began to hop, and the shadow did just the same; in short, whatever Willy did the shadow copied him.

“ How good-natured make-believe Emily is;” said Willy;

“ she always does just exactly like me ; and when real Emily is here, she tells me what to do, and I do like her. Look, Mamma, how she obeys me. Now, Emily,” said he, in a commanding tone of voice, “ lift up your hand as I do ;” and the shadow lifted up its hand.

“ Try if she will obey when you do not lift up your hand,” said his Mother.

Willy again gave the word of command, but without raising his hand, and the shadow no longer obeyed.

“ Oh, Emily, you are naughty now,” said Willy ; “ come, do as you are bid directly !”

It was all in vain ; so long as

Willy stood still the shadow did not move.

“ Make-believe Emily is very stupid,” said Willy ; “ she does not know how to lift up her hand, unless I show her.”

“ Do you not think that it is, perhaps, Willy who is stupid ? ” said his Mamma, smiling archly.

“ Why, Mamma ? ” asked he, surprised.

“ Do you not see, Willy, that it is your own shadow you are dancing with ? When you lift up your hand the light from the lamp cannot get through it to the door, and that makes the shadow of your hand on the door ; and the whole shadow which you call Emily, is nothing but your own shadow.”

“ I only call it Emily in fun, Mamma.”

“ Yes, but then you must recollect that Emily in fun can do nothing but what you do first.”

Willy turned about to look at the lamp ; he could not well understand it. His Mother then gave him a hand skreen, and bade him hold it up against the door, but not near enough to touch it.

“ There,” said she, “ do you not see the shadow of the skreen upon the door, just the shape of the skreen ? What makes that shadow ? ”

“ The skreen,” replied Willy.

“ And how does it make it ? ”

Willy thought a little, and

then answered,—“ Because it skreens the door, I mean a bit of the door, from the lamp, and so the light cannot shine there — and that makes a shadow.”

“ Very well,” replied his Mother; “ then do you not see that you are the skreen that makes the shadow on the door, which you call make-believe Emily?”

“ Oh yes, Mamma, I know it is my shadow; but I like best to call it Emily, though it is but make-believe. I understand it now,” continued Willy; “ but where is Maria? there used to be two shadows last winter.”

“ Because there were two lamps; there are always as many shadows as there are lights.”

Papa soon after came in with another lamp.

“ Oh! here is Maria, come with the other lamp,” cried Willy; and he was so delighted to have two shadows to dance with, that he never thought of asking his Mamma why two lights made two shadows. His Mamma was very glad he did not, for she found that it was difficult to explain how one shadow was produced, and to explain two would have been still more so.

Willy would make his Papa and Mamma stand before the door to see their shadows; then he drew his cart and horses before the door, to see what sort of a shadow they made.

“ Every thing makes a shadow, I think, Mamma,” said he.

“ No, not every thing, Willy.”

“ Why, what can there be that makes no shadow? Look,” said he, holding up a book, “ there is the shadow of the book; and this basket makes the shadow of a basket, and——”

“ Oh, Willy,” said his Mother, interrupting him, “ there are plenty of things that cast shadows; the difficulty is to find some that do not.”

“ What can they be, Mamma? I cannot think.”

There was a very pretty fire-screen in the drawing-room, made of a large piece of glass, set in a frame of rose wood.

Willy was very fond of looking through this skreen at the fire; he could see its blaze without danger of burning himself. His Mother placed this skreen between the lamp and the door.

“ Now,” said she, “ what shadow does that make ? ”

“ Why, Mamma, there is the shadow of the frame all round the skreen, and the shadow of the feet.”

“ But there is no shadow of the glass skreen,” said she.

“ No, Mamma, because the light comes through the glass, just as if there was no glass at all.”

“ Well, then, Willy, is not glass something that gives no shadow ? ”

Willy thought, and looked, and wondered.

“Every thing,” continued his Mother, “that the light can pass through gives no shadow. Look at this pretty bright stone in the middle of my brooch ; it is a diamond, and you can see the light through it.”

“Oh yes,” said Willy, “it looks just like a little bit of glass.”

“Every thing that the light can pass through, like that skreen and this diamond, are called transparent.”

“And is there any thing else that light can pass through besides the glass skreen and your brooch ?”

“Oh yes, a great many.”

John now brought in the tea

things; but Papa said that he was so thirsty that he should like to have some wine and water before tea. So John went and fetched a waiter, with some bottles and glasses. Papa then took up a glass tumbler.

“ Oh, that is transparent ! ” cried Willy.

“ And what is this ? ” said his Father, taking hold of a decanter of water, and pouring some into the glass.

“ Why, water must be transparent, as well as the glass, for there looks as if there was nothing in the glass.”

Papa then poured some red wine into the glass, which coloured all the water.

“ Oh ! now, Papa, you have spoilt it ; the water is not transparent any more.”

“ Not so transparent as it was before,” said his Father ; “ but the wine does not destroy all the transparency ; you can see the light through it still,” said he, holding the tumbler up to the lamp.

Whilst they were talking, Mamma had made tea, and as she was pouring it into the tea-cups, Willy observed that tea was as transparent as wine and water, only it was yellow, and not red ; “ but as for the cream,” said he, “ you can see nothing through that ; it is not transparent at all.”

His Mamma then held an empty china cup up to the lamp, and told Willy to look at it.—
“ You can see the light through it a little,” said she.

“ A little, but very little, indeed,” replied Willy ; “ that is the least transparent of all.”

“ Of all the things that are transparent you mean, Willy ; for it is much more transparent than wood or iron, or any thing which the light cannot pass through at all.”

Ann now came to call Willy to bed ; he kissed his Papa and Mamma, and then went away, eating a piece of bread and butter which he had not had time to finish.

THE CABINET OF MINERALS.

ONE rainy morning, that Willy could not go out, he amused himself with seeing his Mamma arrange some minerals in a pretty cabinet full of little drawers.

“ Look, Willy,” said she ; “ all these things are minerals, they are dug out of the earth, and are not so ugly and dirty as you thought.”

“ Oh no,” replied Willy.—
“ What is this, Mamma, that shines so prettily ?”

“ That is a piece of silver ; such as spoons, and forks, and

waiters are made of. There are, besides, some little round things made of silver, that you are very fond of."

Willy could not guess what, till she showed him some shillings, and sixpences, and half-crowns:—"These are all made of silver," said she.

"Oh do, Mamma, give me a half-crown to spin;" and for some time Willy was so busy spinning the half-crown, that he thought no more of the cabinet of minerals: however, he spun the half-crown so often, and it jumped so often from the table to the floor, that at last he was tired of picking it up, and went to see what his Mamma was

doing. — “What a great number of shillings this piece of silver would make,” said he; “how many do you think?”

“Indeed I cannot tell; perhaps a hundred.”

“And what is this yellow piece?” said Willy, pointing to another mineral.

“It is gold,” said she; “and money is made of that too.”

“What, the yellow money at one end of your purse, that you say will buy so many more things than shillings?”

“Yes; they are called sovereigns, and are made of gold: gold is also used for other things; the frames of those pic-

tures, and of the looking-glasses, are covered with gold.”

“ That must take a great deal more gold than to make the sovereigns in your purse, Mamma.”

“ Yes ; but, Willy, other people have sovereigns in their purses as well as me. Besides,” said she, “ the frames of pictures and glasses are made of wood, and only covered over with very thin gold, to make them look pretty.” She then showed him the back of one of the picture frames, and he saw that it was made of wood. “ But the sovereigns,” said she, “ are all gold, inside as well as outside : feel how heavy this is, for such a little thing.” She then put a

sovereign into one of his hands, and a shilling in the other, and asked him which was heaviest.

“The sovereign,” said he.

“That is, because gold is much heavier than silver, and it is worth a great deal more. Suppose you went to the toy shop, to buy a horse that was worth a shilling, they would give you one horse for your shilling, would they not?”

“Yes,” replied Willy.

“And how many such horses do you think they would give you for a sovereign?”

“I do not know; perhaps two horses.”

“No,” replied his Mother; “they would give you twenty.”

“What a great many!” exclaimed Willy; “I should not know what to do with them all.”

“Then you might buy other things, instead of horses; some of one sort, and some of another; I only meant to say, that you may buy twenty times as much for a sovereign, as you can for a shilling.”

“Oh, Mamma, I wish you would give me a sovereign, and let me go to the shop.”

“No, no,” said she, laughing, “shillings are quite enough for buying toys. Then you must wait till we go to London, we have no toy-shops here. Now look at this, Willy; it is a piece of copper: halfpence are made

of it : halfpence will not buy so much as shillings.”

“ I know, Mamma ; you can only get a penny whip, or a penny whistle, for two halfpence ; but not a horse, or a cart, or any thing large or pretty.”

“ Copper serves for a great many other purposes, besides money,” said his Mamma ; “ the coal-scuttle is made of copper, and Ann’s tea-kettle, and cook’s saucepans.”

“ Then, Mamma,” said Willy, “ if I could cut the coal-scuttle into little round bits, it would make halfpence.”

“ No, that would not quite do,” replied she ; “ halfpence must have a stamp upon them,

like a seal, which makes this figure;" showing him a new halfpenny.

" Oh ! but, Mamma, look ; these other halfpence have nothing marked on them."

" They had when they were first made," said she ; " but they have been used a long time, and the figure is worn away by the halfpence knocking against each other in people's pockets. Besides, every halfpenny must be exactly of the same size and of the same weight, so that it is not so easy to make halfpence as you imagine."

" But cook has got some nice little saucepans, that are all

white, Mamma; those cannot be copper?"

"No, they are made of tin: let me see if we can find any tin;" and she opened another little drawer, and showed him a piece of tin, which looked like a dark shining brown piece of stone.

"Oh, Mamma," said Willy, "that is not at all like the cook's saucepans; they are quite white, like silver."

"And so will this be," replied she; "if it is put into the fire, and made very hot, it will change into bright white tin; but now you see it just as it is when it is dug out of the earth."

"And is money made of tin too, Mamma?"

“No; money is made only of gold, and silver, and copper.”

“I think tin would make shillings and sixpences as well as silver, Mamma, when it has been made white.”

“Oh no, it is not worth near so much as silver; so you would not be able to buy so many things with it.”

“What a number of pretty things come out of the dirty ground,” said Willy; “are there any more, Mamma?”

“Oh yes, but I shall show you only one more to-day, it is a piece of iron.”

“It is not so pretty as the others,” said Willy.

“But it is extremely useful,”

replied his Mother. “Garden tools,—such as spades, and hoes, and garden rakes,—are made of iron.”

“Not the handles, Mamma?”

“No, they are made of wood; but that part of the tool which works in the ground is of iron; it is much harder and stronger than wood.”

“Oh yes, I know, my little wooden spade is always breaking; if it hits against a stone when I am digging, it breaks directly.”

“The stone breaks it,” said his Mother, “because it is tougher than the wood; but iron is harder than common stones, therefore stones cannot break iron.”

“ Well, Mamma, I wish you would let me have a rake for my garden, like Johnny’s, with the teeth made of iron ; for those tiresome wooden teeth all break, and then I cannot rake any more.”

“ You are much younger than Johnny ; he is already an expert gardener, and knows how to use his spade and his rake properly ; but you do not yet well understand it ; besides, you are careless, and if you were to hit yourself with the teeth of your rake, or the edge of your spade, they would be much harder than you are, and would hurt you very much.”

“ Yes,” said Willy, feeling his arm ; “ I am not so hard as iron.”

“ But, Mamma, next summer I shall be a great deal older ; may I not have an iron rake then ?”

“ Perhaps : we shall see how careful you are grown by that time.”

“ And is the scythe Mark cuts the grass with made of iron ?”

“ Yes, the blade, which is the part that cuts.”

“ He sharpens it with a long stone, Mamma ; why does it not cut the stone ?”

“ Because that is a particular

sort of stone that is harder than iron ; he rubs the stone against the blade of the scythe, and that rubs away the iron at the edge of the blade, till it becomes quite thin and sharp. If the stone were not harder than the iron, the iron would rub away the stone, instead of the stone rubbing away the iron. The hatchet the men cut wood with is made of iron.”

“ What a sharp thing iron must be,” cried Willy, “ to cut so well !”

“ Yes, when it has a thin edge to cut with. Knives are made of iron.”

“ What, the knife I use to cut my meat at dinner ?”

“ Yes, and Mark’s garden knife, and my penknife ; in short, knives of all sorts.”

“ And are scissors made of iron, Mamma ? ”

“ Yes ; but, in knives, and scissors, and all very sharp instruments, the iron is mixed up with something else, which makes it harder and its edge sharper than iron by itself ; and when it has been mixed up so, it is called steel.”

“ Oh, Mamma, the grates, and the fenders, and the tongs, and the poker, are all made of steel, Ann says, and that is why they shine so bright ; but they are not very sharp.”

“ No, but they are very hard ;

and if they had a thin edge, like a knife, they would be as sharp. I have known little boys cut their foreheads, by falling against the fender, though it has not a very thin edge.”

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“ Now, shall I tell you the name for all the things I have shown you this morning ? ”

“ Why, are they not called minerals ? ”

“ Yes, they are ; every thing that is dug out of the ground is called a mineral. Do not you remember my telling you that all sorts of earth, and stones, and rocks, were minerals ? But they are very different from the minerals I have just shown you.”

“Yes,” replied Willy; “earth, and mould, and ground, are all dirty ugly things, and crumble to pieces, and make such a litter, and stones are not quite so bad, but they are not pretty.”

“Oh, Willy, I could show you some stones which are the most beautiful things you ever saw.”

“Indeed!” said Willy; “are they in those drawers, Mamma? do pray show them me.”

“No, not now; some other day, when I am at leisure.”

“Well but, then, if some stones are pretty, I am sure there are a great many ugly ones: and gold, and silver, and copper, and iron, are all pretty.”

“Well, they are called metals,

to distinguish them from the other minerals.”

“ Indeed, Mamma, I like metals much better than the dirty minerals. And are there any other metals in those drawers ? ”

“ Yes, there are a great many besides those I have shown you ; but you have seen enough to-day. There are also a great many different sorts of earths, and of stones ; but I can talk no more about them now. Look, the rain is over, and the sun is coming out ; so, if you wish for a run in the garden, this is your time.”

“ Oh, I will go and see Johnny work with his iron tools, Mam-

ma ;” and off he went to the kitchen garden, but Johnny could not be found ; he hallooed out, “ Johnny, Johnny, where are you ? ” but no Johnny answered. He went to look for him in the green-house, and all over the melon ground. What can have become of him, thought Willy. At last he found him in the tool-house : but, wonderful to say, Johnny was crying ! Willy was so much surprised, that at first he could not speak a word. At length, he said, “ What is the matter, Johnny ; has Mark been scolding you ? ”

“ No,” replied he ; “ but I have had a letter from my

Mother, and she says that Father is very ill with the rheumatism, and she thinks he will be ill all the winter, because he has not blankets enough to keep him warm in bed at night, and she has not money enough to buy any more."

"Why do you not ask Papa to buy him one?" said Willy.

"I do not dare," replied he; "master has given me a new suit of clothes lately, that must have cost him a deal of money, and I should be ashamed to ask him for any thing more."

"Well," cried Willy, suddenly recollecting himself, "how much does a blanket cost? is it more than a hundred shillings?"

“ Oh dear no,” answered Johnny, “ you might buy twenty blankets for a hundred shillings.”

“ I am glad of that,” said Willy. He then asked Johnny to lend him his spade, and said, “ Don’t cry any more, Johnny ; only wait a little, and I will get you something that will buy a blanket.” He then hastened to his own garden, and began digging as hard as ever he could, in hopes of finding under ground a piece of silver, which, if it would not make so many as one hundred shillings, would at least make money enough to buy a blanket. He dug and dug, till he had made a deep hole in the ground. Every now and then,

the spade struck against something hard; he looked earnestly for it, in hopes of its being a piece of silver, like that which his Mamma had shown him, but it was only a stone: no silver was to be found; or gold, or any other metal. "There are nothing but the dirty minerals in my garden," said he, in a sorrowful tone.

His Mamma, who was walking, came up, and asked him what he was digging so hard for.

"Oh, Mamma!" cried he, "I want a piece of silver sadly: I am digging to see if I can find one under the ground."

"What for," said she, smiling; "I believe you will

more easily find it in my purse, than under ground.”

“ Why, Mamma, you told me there was a great deal of silver deep down in the earth ; but I cannot get low enough, I suppose, for I can find none.”

“ There is, my dear, but not in your garden, nor in any part of this country. Silver comes from countries a great way off.”

“ Then cannot I find a piece of gold, Mamma, if I go on digging? that would do better still, it can buy so many things.”

“ No,” said she ; “ there is no gold to be found in England, either.”

“ Well, Mamma, is there any copper ? ”

“ Yes,” replied she; “in some parts of the country.”

“ But then,” continued he, “copper makes only halfpence, and halfpence will not buy a blanket; will they, Mamma?”

“ If you had a great number of halfpence they would; but you will find no copper in your garden, Willy; so you had better tell me why you want to buy a blanket, and if it is for a right purpose, perhaps I may give you some silver, that is already dug up, and cut into money, and stamped, and quite fit to buy a blanket.”

“ Oh do, dear Mamma; I am sure it is quite right; only Johnny did not dare to ask you for one.”

‘What, does Johnny want another blanket for his bed, now the cold weather is coming on?’”

“Oh no, Johnny does not care about blankets for himself; but he is crying so, you cannot think, Mamma, because his father has got the rheumatism, and his Mother has no money to buy a blanket to keep him warm.”

Mamma went with Willy to hear all about the poor man’s illness from Johnny. Then she said, — “You have been a good and hard working boy, Johnny, and you shall go to London, to see your Father and Mother. The waggon sets out to-morrow,

with a load of hay, and you may go with it.”

“ Oh, how nice that will be, Johnny! you will ride on the top of the hay. — But the blanket, Mamma, don't forget the blanket.”

Mamma took out her purse, and gave Johnny a sovereign.

“ Mind, Johnny,” said Willy, “ that is made of gold, and it will buy a great many things, twenty times more than a shilling.”

“ It will buy blankets for your Father,” said Mamma, “ and there will be a good deal left, which you may spend as you please.”

Willy was overjoyed, and going home, he said to his

Mamma, "I wonder what Johnny will buy with the rest of the money; do you think it will be apples and cakes, Mamma, or toys?"

"Neither," replied she; "I should not have given him so much money, if I thought he would spend it on such things as those. When he has bought the blankets, I dare say that he will give the money that is left to his Mother, to buy what his Father may want besides."

"But you gave him but one piece of money, Mamma; so if he pays that at the shop for a blanket, there will be none left."

"You know, Willy, a sovereign is worth as much as twenty shillings; now the blankets will

not cost more than ten shillings, and that is just as much as half a sovereign."

"Then will they cut the sovereign in half, Mamma, and give him back one half?"

"No, they will give him back as much as half a sovereign is worth, but they will give it him in shillings. How many shillings are there to make half a sovereign?"

"Why I do not know," said Willy; "I only know that a whole sovereign is worth twenty shillings."

"Well, what is half twenty?"

Willy thought a little, and said "Ten; because two tens make twenty, so one ten must be half twenty."

“ You are right,” said his Mother. — “ Now run on, Willy, for it is beginning to rain, and we cannot take shelter under the trees; they have no more leaves to prevent the rain from falling on us. Besides, it is very cold, and a good run will warm you. Winter is coming now, Willy; there are no more flowers, no more fruit, no more leaves.”

“ Oh, but when winter is come, we shall have nice snow to make snowballs, and ice to slide upon; do not you remember all that, Mamma? I long for winter to come.”

THE END.

