

10. "Do it again," we shouted; "it is great fun."

Freddy did so, and then said, "We have been making electricity. It is the most wonderful force known to man. It can do no end of things—light our houses and streets, drive our machines and trams and trains, and send messages right across the world."

### 36. FREDDY'S TELEGRAPH.

1. You remember, I am sure, how our cousin Freddy made lightning for us. He is a very clever boy, and he is always showing us something strange and new.

2. One night Dad received a telegram telling us that our big brother Bob had been wounded, but that he was not badly hurt, and would soon be better. The telegram came from London.

3. I asked Freddy how it was that the message could be sent from London so quickly. The train takes six hours to make the journey, and the telegram came all the way in less than an hour. I was much puzzled.

4. Freddy said, "I'll show you. Just give me a few minutes to get the things ready." After a time he came back with a reel of copper wire, a little compass, and what he called a battery.

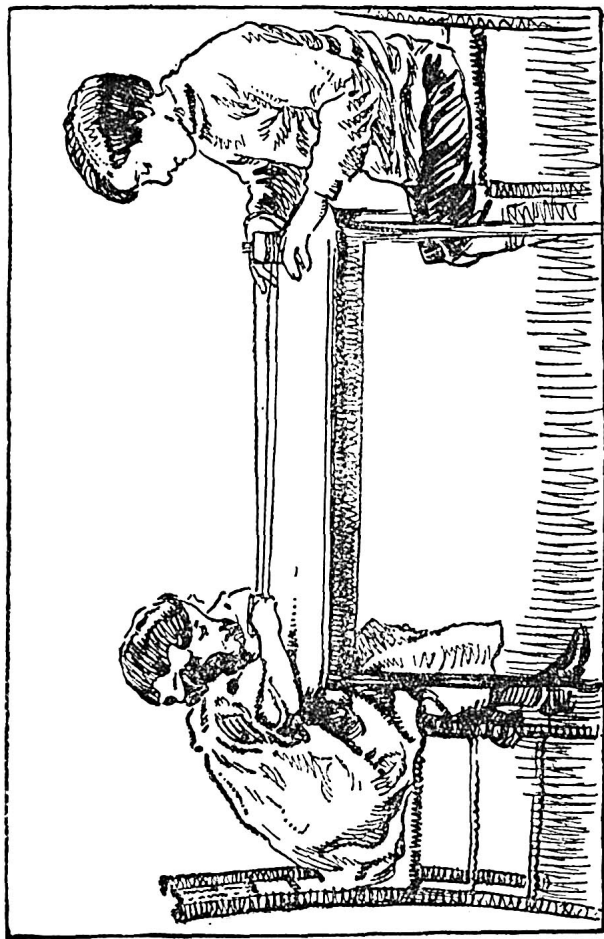
5. "This is a compass," he said. "Look at the needle."

"I know all about that," I said. "We learn to use the compass in our geography lessons. The blue end points to the north. If you have a compass you can find your way to any place both by land and by sea."

6. "That is so," replied Freddy. "But this needle is going to be my telegraph." He wound copper wire round and round the compass three or four times. Then he fastened a long piece of copper wire to each end of the wire which he had wrapped round the compass.

7. He fixed the compass at one end of the table, and stretched out the long pieces of wire until they reached to the other end. Then he showed us his battery.

"This makes electricity," he said. "When I fasten the ends of the wire to the battery,



FREDDY'S TELEGRAPH.

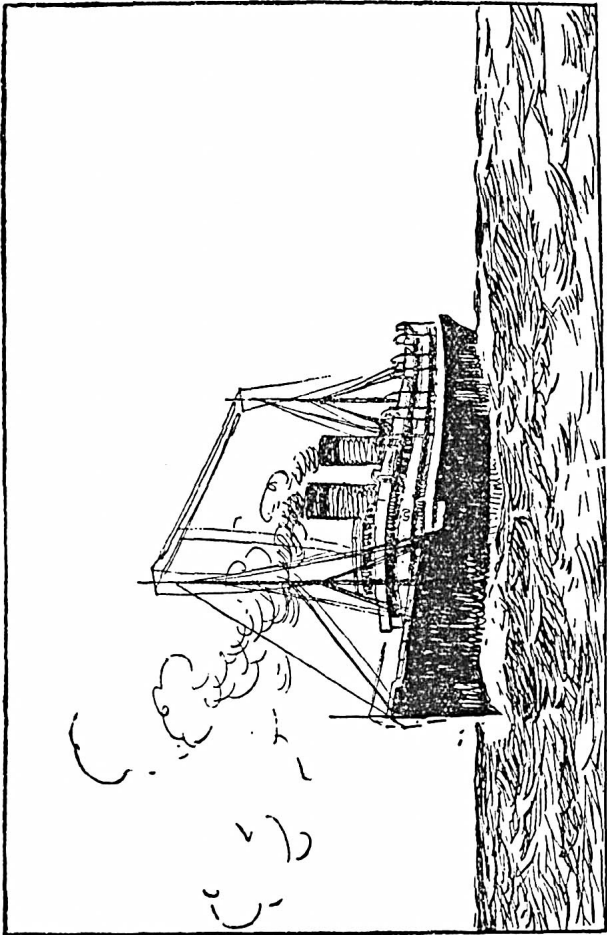
electricity will flow through the wire and round the compass. Watch the compass, and notice what happens."

8. I looked hard at the compass. "Are you ready?" he asked. I nodded, and then suddenly the needle of the compass swung on one side. Then it swung back again, and when it came to rest Freddy made it move once more.

9. He did this many times. "Now watch," he said. "I will make it swing the other way. He took the ends of the wires off the pins of the battery and changed them over. When he had fastened them in the new position I saw the needle of the compass swing the other way.

10. "Now," said Freddy, "you know how the telegraph works. There are wires all the way from London to this village. A man at the London end of the wires moves the needle in your post office left or right, and in this way makes signals which your postmistress can read.

11. "If he makes the needle point first to the left, then to the right, and then come to rest for a moment, that means the letter A.



SHIP WITH WIRELESS TELEGRAPH.

If he makes the needle go right—left—left—left, quickly, that means B. Right—left—right—left means C, and so on. It is quite easy, isn't it ?

12. "The people in the post office learn to send and to read these signals so quickly that they can send or read a long message in a very short time. I don't suppose it took more than a minute or two to send and receive the message about Cousin Bob. All the rest of the time was taken in sending the telegram up to the house."

13. "It is very wonderful," I said.

"I'll tell you something more wonderful," replied Freddy. "We can now send telegrams without wires to almost all parts of the world. If a man has the right kind of machine on a ship at sea, he can send a message for hundreds of miles. If his ship is in danger, he can call up other ships to come to his rescue. What do you think of that ?"

### 37. A WIRELESS HERO.

1. In Lesson 36 you learned that telegrams can now be sent for very long distances without wires. Most of our ships are fitted with apparatus for sending and receiving messages in this way. I am going to tell you the story of a very gallant young man who was in charge of the wireless apparatus on board a British ship during the Great War.

2. His name was William Gardiner, and his home was in Edinburgh. During his school days he was a Boy Scout, and he won many badges. After leaving school he learned how to use the wireless telegraph, and at eighteen years of age he went to sea on board a liner.

3. Early one morning a German submarine attacked his vessel. A torpedo was discharged at it; but, happily, it missed its mark. Then the submarine got its guns to work, and began to shell the liner.

4. At this time young Gardiner was in the wireless cabin sending off signals of dis-

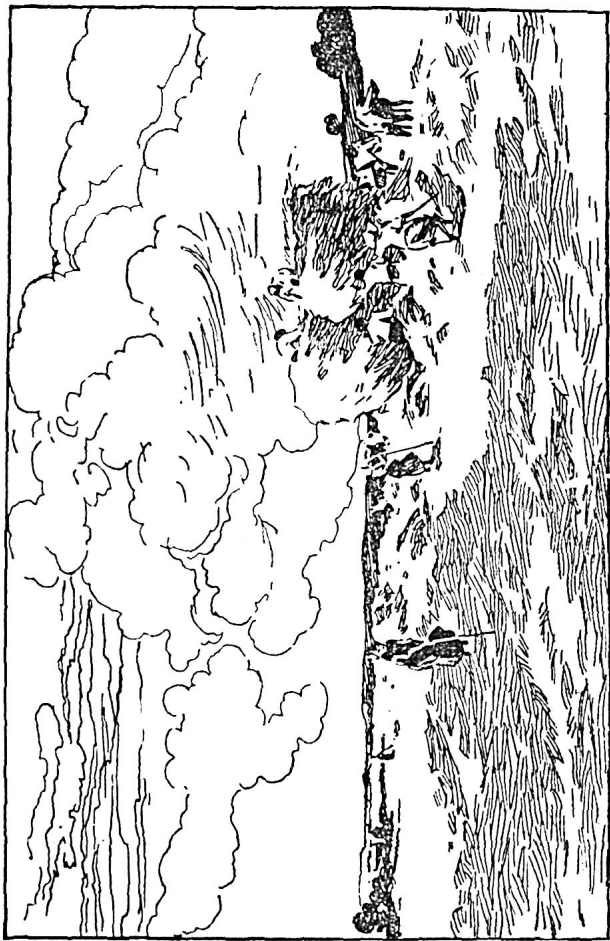
tress. He knew that, if a British or an American warship picked up his signal, it would at once dash off at full speed to the rescue.

5. For a full hour he was busy in his cabin, sending off messages. Shells fell fast and thick all around him, and several members of the crew were killed or wounded. Our hero was in great peril all the time, but he showed no sign of fear.

6. At last he got into touch with a British destroyer. When the captain learned this, he told the lad to leave his cabin and go below, where he would be safer. Gardiner was unwilling to take cover, because he had just called up an American vessel, which was nearer to him than the British destroyer. He wished to remain at his post until he was quite sure that the American vessel was steaming in the right direction.

7. Two minutes later a shell from the submarine struck the wireless cabin and killed him. He was found sitting in his chair with his writing pad before him. On it he had written nearly all the message which had been sent to him by the American ship.





*"Oh, oh, how the wild winds blow!"*

8. Young Gardiner was dead, but he had not died in vain. Soon the American vessel was sighted. When the Germans saw her they made their submarine sink, and in this way escaped.

9. When the danger was over the crew mourned for the gallant young fellow, who had saved them from death or from a German prison. "He died a hero's death," said the captain. "He gave his life that his comrades might live."

10. Thousands of our men proved themselves heroes during the Great War, but I think the noblest of them all were those who sacrificed themselves to save others. The Good Book says, "Greater love hath no man than this, that a man lay down his life for his friends."

### 38. WILD WINDS.

1. Oh, oh, how the wild winds blow !  
Blow high,  
Blow low,  
And whirlwinds go  
To chase the little leaves that fly—  
Fly low and high,

## The Gold Thread.

To hollow and to steep hillside ;  
 They shiver in the dreary weather,  
 And creep in little heaps together,  
 And nestle close and try to hide.

2. Oh, oh, how the cold winds blow !  
     Blow low,  
     Blow high,  
     And whirlwinds try  
 To find a crevice—to find a crack,  
 They whirl to the front ; they whirl to the  
     back.

But Tommy and Will and the baby together  
 Are snug and safe from the wintry weather.

All the winds that blow  
 Cannot touch a toe—  
 Cannot twist or twirl  
 One silken curl.

They may rattle the doors in a noisy pack,  
 But the blazing fires will drive them back.

MARY F. BUTTS.

### 39. THE GOLD THREAD.—I.

1. This is the story of Eric, the son of good King Magnus. He was a noble boy, with large blue eyes and a winning smile. When the story begins he was in a dreadful plight: his hands and feet were scratched, and his clothes were torn to tatters.

2. He had disobeyed his father's command, and was now lost in a vast forest that stretched for miles and miles. It was full of thorns and briars, dark valleys, and broad streams.

3. The poor boy was very sad at heart. He began to think that no one would find him, and that he would perish in the forest. At last, towards sunset, he sat down on the root of a great oak, and wondered whether he could climb it, so as to be safe from the wild beasts that prowled about at night.

4. Just then he heard a sound of singing, and soon a strange, wild boy appeared. He was older than Eric, and was dressed in skins. His long matted hair escaped over his cheeks from under a black bearskin cap. He was driving a herd of swine through the forest.

5. "Hallo!" cried the wild-looking lad. "Who? Where from? Where to?"

"I've lost my way in the wood," said Eric, "and I want you to guide me."

"To Ralph?" asked the swineherd.

"Ralph? Pray who is he?"

6. "Master, chief, captain—everything,

everybody," replied the young savage. "Give me this gold belt of yours," he went on, "and I will guide you."

"I cannot give you this belt," said Eric, "because it is a present from my father. By the way, did you see a gold thread among the trees as you came along?"

7. "A gold thread? What do you mean? I saw nothing but pigs," said the swineherd, "and I shall treat you like a pig, if you do not give me the belt."

So saying he began to flourish his stick. Just as he was about to strike, Eric sprang aside and tripped him up. As he fell, Eric seized his stick and stood over him.

8. "Let me up," cried the swineherd, "and I will guide you."

So Eric stood aside, and the lad, picking up his cap, said, "Follow me." As they walked along he told Eric that he was called Wolf, because he had once killed a wolf.

9. He also told him that he had no father or mother, and no brothers or sisters. He had never heard of God; and no one cared for him but his pigs.

Eric was sorry for the boy, and felt that he might trust him.

10. "See that tall tower," said Wolf, pointing to what looked like a rock rising above the trees. "That is Ralph's castle. When we come to it, pretend to be a beggar. Put your gold belt in your pocket, and tell him that you will remain with him; but run off as soon as you can."

11. "That is not my way," said Eric.

" 'Better to die  
Than ever to lie.' "

### 40. THE GOLD THREAD.—II.

1. It was now dark night. The lightning flashed and the thunder roared. Eric was alone, for Wolf had left him to go in search of his swine.

2. Suddenly Eric saw a light shining from the tower, and after groping about he found a narrow path that led to the castle. He knocked at the heavy iron-covered door, and heard the angry barking of a dog inside. Then he heard a voice say, "Who is there? Who disturbs me at this time of night?"

3. Eric explained that he was the son of King Magnus, and that he had lost his way in the forest.

“The son of a king!” said the voice in a mocking tone. “That is a fine joke. Come in, son of a king!”

4. Eric entered, and saw a fierce-looking man with a long beard. An old woman gave the boy some supper, and when he had eaten it the man took the boy into a back room. It was full of gold and silver, and beautiful dresses sparkling with jewels.

5. “Stay with me, my boy,” said the man, “and you shall share all this. I, too, am a king. I am a robber king, and you shall be my son and heir.”

Eric refused. Then the man took the golden belt from him and thrust him into a small, dirty cell, where he lay in great misery.

6. Though the night was far spent Eric could not sleep. Hour after hour he lay awake. After a time he heard a voice calling softly to him. “Who is there?” he asked.

“Be quiet. It is Wolf. Get out of this window, and run for your life.”

7. Eric scrambled up to the window and



*"That is Ralph's castle."*



forced his way through it. He dropped into the arms of Wolf, who was waiting on the other side.

8. "Here," said Wolf—"here is your gold belt. I have stolen it from the robber king. Now off you go, along that road until you come to a hill. Cross the hill, and you will see a stream. Follow the stream, and it will lead you out of the forest."

9. Eric did as he was bidden. He followed the road, crossed the hill, and came to the stream. By this time he was quite worn out. He sank to the ground, and fell fast asleep.

#### 41. THE GOLD THREAD.—III.

1. Eric was awakened in the morning by the sound of a sweet voice singing a happy song. He looked up, and saw a beautiful lady, who told him not to fear.

2. "Your father," she said, "sent you into this forest for a wise and good reason, and he gave you a gold thread to guide you. He told you to take it in your hand, and not to let it go.