# POLLY EVANS' STORY PAGE FOR BOYS AND GIRLS

# Shorty's Aeroplane Wins a Battle for the "Robbers"

THE "PIRATES" STARE IN WONDERMENT AS SHORTY'S AEROPLANE PASSES OVERHEAD

"GOIN' to be there, Shorty?" asked Captain Billy.

"'Fraid not," replied Shorty, shaking his head, doubtfully. "Told Captain Hall I'd be with him this afternoon. He's visiting up at our house yet, an' dad has to be away, so I s'pose I'll have to be on deck."

Billy looked at his chum somewhat resentfully. "You've been spending a heap of time with that captain, when it's your bounden duty to be with the 'Robbers.' We need you in our fight today. Them 'Pirates' 'uv got a new island down below the dam an' they've dared us to take it. So we're goin' to make a try at it today."

Shorty muttered that he was sorry to miss the fight, and turned away with a shame-faced look.

"I'll bet Shorty's up to some funny business," said Skinny, with conviction, as he argued with himself about Shorty's recent desertion of the "Bloody Robbers."

About 4 o'clock that afternoon, while Shorty stood at the door of Captain Grove's boathouse, he saw speeding toward him, along the bank of the creek, Lieutenant Skinny, of the "Robbers." Perspiration was rolling from the doughty brigand's face, but still he kept up a mad pace.

"What's the matter?" yelled Shorty.

"Matter enough!" snapped Skinny from between resolutely clinched teeth. "That tale about the 'Pirates' havin' an island below the dam was a confounded lie. They got that around to put us off the track. An' when we toted ourselves down there they got ready an' are now movin' up to the Cove, where they've found out about our cave. They won't do a thing to our duds there, either! We caught little Bill Jones a-spyin' on us an' made 'im own up. Now we're tryin' to beat them to the Cove, though it's mos' too late. I got ahead of the other fellers, but I guess they'll be along soon."

"Come with me," said Shorty, with quick decision. He ran toward the boathouse and climbed quickly to a little cupola at the top.

"The 'Pirates'" boat isn't so far up the creek," jerked out Shorty, taking a look through Captain Grove's glass. "We've got time. Here's my secret."

Dashing into the loft of the boathouse he showed the dumfounded Skinny a complete aeroplane.

"We're goin' out, Cap!" cried Shorty to Captain Hall, who stood nearby.

The captain nodded, flung open the swinging doors of the loft, and, as soon as the two lads were in position, started the air craft toward the open doors.

Skinny held on for dear life as his companion skilfully maneuvered the aeroplane, which now soared like a bird through the air.

"No danger!" yelled Shorty; "Cap taught me to handle her!"

Not another word was said as the aeroplane sped above the creek. On they flew until the rowboat of the "Pirates" was below them. Skinny and Shorty could not withhold a shout of defiance at their enemies, who wasted many precious minutes staring in wonderment.

Soon the aeroplane was hovering directly above the island called the "Cove" by the "Bloody Robbers," whose headquarters it was.

A moment later and the boys were safely landed. They quickly repaired to the pile of rocks which served them for ammunition, and confidently awaited the oncoming of the "Pirates'" boat.

The "Pirates" didn't land. That was impossible under the deadly rock fire of Shorty and Skinny. And before the "Pirates" could form another plan of campaign, the rest of the "Robbers" appeared. The Cove was saved. Shorty's aeroplane had prevented the "Robbers'" camp from being despoiled.

Shorty was proclaimed a hero. His late absence from the "Robbers," of course, was explained. Captain Hall was a member of some aero club, Shorty said, and the aeroplane had been built under his direction and with Captain Grove's assistance.

"Tell us how she's made," insisted Captain Billy.

So this is Shorty's explanation, given briefly:

### DIRECTIONS FOR MAKING AEROPLANE

Any boy can make this aeroplane, fashioned after the kind manufactured by Messrs. Voisin and used by Moore Barbazon and M. Henri Farman.

Let the lengths of the planes be 3 feet, the width 6 inches, the distance or height between the planes 6 inches also. The tail-box is to be 6 inches square, open at both ends, and 24 inches from the planes.

Begin by making the framework for the two planes, using maple or similar wood, free from imperfections.

Four pieces, each 36 inches long, 3-16 inch thick, ⅜ inch wide, form the outside edges.

Twelve upright supports (six each side) 6 inches long, 3-16 inch by 3-16 inch, are fixed, one at each end, one 6 inches in, another 12 inches further in, leaving a space of a foot without a support in the center. Four crossties, one at the top and bottom at each end, are required.

The uprights may, with great advantage, be let in slightly to the upper and lower long pieces to prevent them from twisting.

The long pieces must be screwed or nailed flat—that is, their ⅜-inch side should be horizontal and the 3-16-inch vertical.

This gives a frame like a box, 36 inches long, 6 inches from back to front, and 6 inches high, having twelve vertical supports on the two longest sides. Between these supports sandpaper the four long pieces so as to give them an oval appearance.

This is for two reasons which might well be borne in mind throughout: First, to lighten the structure as much as possible; and, secondly, to give every piece of wood a cutting edge fore and aft, instead of a square face to offer resistance to the wind.

The tail and front steering planes are the next things to make. Take four pieces of maple, free from knots, 3-16 inch square, 36 inches long, and use the ends of these to form the four corner pieces of the box, 6 inches square, using eight pieces 6 inches long to make the square frame.

Thus you have the frame of a box 6 inches square, with the four corner pieces protruding 30 inches away from it.

This is illustrated (Fig. 2). One inch from the two ends of the lower pieces drill a hole to take a strong steel wire 20 inches long, and proceed to make two frames for the elevating planes, 6 inches by 3 inches, making the shorter sides slightly stronger than the longer ones, as the former have also to be pierced to slide on the wire. (See Fig. 3.)

These two small planes can now be covered with linen—the finer and the more washed the better. The most satisfactory way of covering aeroplane models is to cut a piece of linen about an inch larger than the part to be covered, and hem the edges to give them strength, reducing the piece to a shade smaller size than the place it is to occupy, and to lace it to the framework with a needle and silk thread.

Cover these two small elevators, the box at the tail (the top, bottom and sides only), and the upper and lower planes of the main body. In covering these planes stitch some very thin slips of wood to the cover to support it, or, better still, use whalebone, cutting them longer than the actual width so as to give the covering of the planes a curve upward.

Fix the tail part to the body with small screws as in Fig. 4. The lower pieces, AA, Fig. 2, should protrude to the front sufficiently to enable the forward planes to revolve without catching on the bottom plane.

These elevating planes should work stiffly, because they are required to remain in the position that they are placed in by hand previous to starting the machine.

In a full-sized plane they are actuated by a lever from the seat, but as this is obviously impossible in a model, they must be altered again and again until the best position is found out. An angle of about 15 degrees upward is a safe start.

Before anything further is done the planes have to be strengthened with straining wires. (See the dotted lines on Fig. 1.)

The method of wiring is left to the individual inclination. The idea is thoroughly to strengthen the structure so that there is no twist any way.

The wire for the purpose can be bought at any florist's on a reel—not the very fine wire, but some that will stand pulling. There are several ways of wiring. One is to bore a small hole each side of the uprights in the wood edges of the planes, top and bottom, and thread the wire from one corner to another, from one end of the plane to another, and back again, afterward tightening the wire with a button-hook.

Another way, although more elaborate is more correct; it is to have about 2½ dozen pieces of very thin brass or copper, made as per illustration, about ⅝ inch long, and insert these at each end of the uprights, between them and the edge of the plane. This is the neatest and most satisfactory method.

Sandpaper away until only the minimum amount of wood is left that is consistent with the strength required, and endeavor to make a tapering edge to everything that faces the back and front, to reduce the wind resistance. Let there be nothing superfluous; every tiny portion of an ounce counts.

When satisfied with the work coat the woodwork with pale varnish and lay it aside while making the chassis.

The first part to build is the frame to carry the clockwork motor, and also the wheels.

The wheels are particularly useful in a model, as they enable a person to make endless experiments while the machine is stationary.

The propeller can be tried and adjusted until perfect, and if the machine is placed on a smooth surface the propeller, when satisfactorily set, will drive the aeroplane along at a good rate, thereby giving a chance of making sound improvements before wasting time by making flights in the air.

The wheels should be about six inches below and in the center of the lower plane. They should be neat, light little wheels, and run very smoothly, and they can be purchased at most mechanical toy shops better than they can be made at home, and much cheaper.

There are various methods of making a frame, but the foundation is a flat frame, 6 inches square, the wood being ¼ inch thick.

This frame has to be fixed eventually to the lower plane, so when making it take the measurements from the plane. It is immaterial whether the plane rests on the frame or fits nicely inside it, the latter for preference.

Bend two pieces of brass wire (strong) to the shape shown in Fig. 6, flatten the ends out, and bore a hole in each to take a tiny screw to fix to the frame, finally wrapping the ends to the frame with waxed silk thread.

Fix the wheels in position, but do not attach to the plane until a firm and satisfactory job is made of it.

The next thing is to look about for a clockwork motor—it must be very light and work at a high rate of speed. They are far from being expensive, and are made expressly for mechanical models.

The case is taken off, also the face and hands, leaving only the mainspring and the necessary gear-wheels to increase the speed.

If the ready-made article is decided upon, see that the spindle is strong and stands out two or three inches. If the home-made one is to be used, take out the wheel that drives the hands and have a strong spindle set in by a working jeweler, and do not be sparing about the length of it—it is easier to cut a piece off than to join one on.

Fix this motor to the framework (but do not fix it before reducing the weight to a minimum), so that the spindle comes exactly in the center of the plane, protruding an inch beyond it at the back.

The motor should be in the exact center of gravity, which can be found by tying a piece of thread round the middle of the top plane and suspending it; the planes should hang perfectly level.

The best propeller for experimental purposes is made thus, but it is advisable to use one's own ingenuity in finding the most satisfactory method of making the propeller blades eventually.

Procure a piece of brass ½ inch long, round, ⅛ inch in diameter; drill a hole, A, through the center, as shown, the same size as the spindle; a smaller one, B, to take a set screw to fix with.

Bore four holes, C, equidistant from one another, 3-16 inch from the end; tap these holes with a fairly coarse thread, then reduce the weight by filing away the dotted portion. (Fig. 7.)

Slide this on the spindle and fix very lightly with the set screw, B.

For the propeller blades, cut four pieces of wood—ash is best—three inches long, 1¼ inches wide, ⅛ inch thick at one end, tapering to nothing at the other, and with a penknife or fretsaw cut into the shape shown. (Fig. 8.)

Screw these into the holes, C, leaving them at an angle to the spindle, of course all the blades being set at the same pitch. Turn them round with the finger to see they run clear; try them by a turn or two of the clockwork, mark the position which they are in, then take the blades out to twist.

For this purpose a boiling kettle is required; hold each blade for some minutes close to the spout, so as to receive the full force of the steam; gently twist with the finger and thumb of both hands until a permanent twist is apparent.

Be careful that all four blades have exactly the same twist. Instructions have been given for four propeller blades, but whether two or four are finally decided upon is a matter which must be left to the experimenter.

The blades require to be set at just the correct angle, and should revolve at such a rate as to drive the machine forward on a smooth surface on the wheels. When perfected to the extent that a fast run is obtained they is the open air, running the machine along a smooth board to start it off.

Persevere, and the aeroplane will be a source of delight; do not be afraid to make alterations as they occur to the mind; a change here and there will make all the difference, no matter how slight.

The golden rule is lightness. Cut everything down in weight as much as possible, and do not lose heart if a flight is not obtained the first time. Study the model and make the brain suggest improvements.

# Geordie Heriot and his Costly Fire

GEORDIE THROWS THE BOND INTO THE FIRE

THREE hundred years ago Geordie Heriot kept shop in Edinburgh, Scotland. Since that time thousands of boys have been grateful that Geordie lived.

One of the finest buildings in Edinburgh is Heriot Hospital, with its square towers and stretches of trimly laid garden grounds. Founded, through the fortune Geordie left, as an institution where the fatherless sons of Edinburgh freemen might be trained in business habits and for a commercial life, it has been the pride of the Scotch city for many years.

Although Geordie left a great deal of money at his death, it must not be supposed that he was a miser. No, indeed; always hospitably open to visitors was his goldsmith's shop—a tiny closet seven feet square—which stood among the Luckenbooths of booksellers, glovemakers and goldsmiths. And as Geordie made a good living by selling wedding rings, silver spoons and the like, he could well afford to entertain lavishly. Indeed, King James himself would frequently call at Geordie's shop, and the two would chat across the little three-cornered table.

So close a friend of the king was Geordie that when his majesty departed for London, after the queen of England's death, he carried with him a goodly sum of silver kindly lent by the worthy burgher.

One evening in 1617 King James and Geordie again sat together, this time in Holyrood Castle. The king had just returned to his native kingdom.

"I cannot pay ye the silver, man," said King James. "Ye can't imagine the expense o' living down yonder."

Geordie was enjoying an agreeable pipe, which gave out a fragrant scent. To change the subject he remarked, "'Tis a fine blaze."

"It is that," agreed the king; "but it costs a terrible handful of money. It is cedar wood from over seas. Fragrant and flaming, ye see; but ruinous in point of cost." James shook his head sadly.

When Geordie rose to go he said, cheerily: "Come and see me at the Luckenbooths, and I'll promise your grace a fire even mair costly than yer ain cedar."

So, not long afterward, King James betook himself to the booths clustered about the Mercat Cross, the Parliament yard and St. Giles' Church. He entered the goldsmith's shop and seated himself in his accustomed place by the three-cornered table.

The fire in the narrow hearth did not seem extraordinary. James looked about to see if costly fuel were yet to be put on; but there was nothing save the narrow counter, the forge, the bellows and samples of Geordie's handicraft in the shop.

"Is this the fire ye promised?" asked the king.

"Wait a bit," said the goldsmith. "Sit ye down and let me drink to your grace's health."

Presently he arose with the remark: "Ye shall see the fine fire now. I'll get the fuel."

Thus saying, he took a parchment from the counter drawer, and as he tossed it into the fire his guest recognized it as his own bond for £2000!

"Warm your hands at the flame, King James!" cried Heriot; "and tell me, mon, what is yer cedar wood now?"

And the same generosity that prompted Geordie to cancel the king's debt caused him to make provision for poor Edinburgh boys throughout the centuries.

# The Dignified Mr. Toad

AS Mr. Toad hopped gravely upon the toadstool he found a large audience facing him. Most of the insects and birds and small animals were there. For it was known throughout the woods that Mr. Toad had much good counsel to give on this day.

Greater and greater had been growing the self-esteem of the toad; and, feeling his self-importance, he likewise became more pompous and dignified. His way of living, his manner of behavior he considered the only proper ways. So a lecture to his fellow-creatures, he decided, was a duty.

Now, under the big oak tree, the audience waited expectantly, while Mr. Toad cleared his throat with a deep "B-r-r-ump!"

"Dear friends," he began, "I come before you to warn you that your present mode of living is extremely unbecoming. I plead with you to select me as your example. Be wise; be dignified.

"Do not flutter about like the harum-scarum bees and butterflies and birds. Do not madly hop as does the foolish grasshopper, nor flit about in crazy fashion like the stag-beetle. Of what use is it to pattern after the light-headed squirrels, who scamper and leap from bough to bough?

"Rather, observe my dignity. See how calmly I sit; how quietly I feed upon the unwary flies who come near. I beg of you, dear friends, profit by my example, and be as dignified as I."

MR. TOAD HAS A FALL

Interruption came at this point in Mr. Toad's speech. The squirrels were angry because the lecturer had called them light-headed, so they began to drop acorns down upon the toad from a limb overhead, while they shouted: "It's all nonsense, old Solemn Face!"

An immense acorn dropped like a shot, and, squish!—it struck the edge of the toadstool, breaking off a fragment of the "platform."

"Ump!" grunted the startled toad, at the same time leaping into the air. Now, the toadstool was not a very strong one for such a fat old frog. "Snap!" went the stem. And down went Mr. Toad, right upon the stag-beetle and the butterfly, who stood in the front row of hearers.

A mighty shout of glee arose from the audience. Where was the dignity of this wonderful toad, who lay sprawling at full length? Truly, toad and pride and dignity had a great fall. And the lesson this vain, ridiculous fellow tried to teach proved worthless.

# "Raining Pitchforks"

It's raining pitchforks people say;
I'm going out this very day—
Perhaps I'll find some in our yard,
If I hunt very long and hard

I'm looking through the window pane
And all that I can see is rain!
But folks don't say what isn't true;
I hope there's no mistake—don't you?

Cause I have got the finest plan
To sell some to a farmer man;
And if they're very strong and nice
I guess I'll charge a good big price!

# Queen for a Day

AFTER EIGHT YEARS OBERTA PRESENTS THE TINSEL CROWN

"OBERTA, I have planned a joyous celebration for thee," said the lord. "A great cake has been baked and the pieces will be distributed among the lads and lasses in our castle. Somewhere in the cake is a favor which will entitle the holder to rule for one day and to choose a consort. But if a queen be made, I must not be chosen for king. 'Tis well for young folk to be merry; but I am old and unhappy."

The lord turned and strode away. Oberta knew that her grandfather was still grieving over the deaths of his three sons, who were killed in war. She herself was the only daughter of Hugo, the eldest.

And, thinking of the old, grief-stricken man, Oberta could not be merry, even in the gay company which gathered in the imposing castle upon the bank of the Rhine. A wave of excitement passed over the young guests as the great, handsome cake was borne in upon the shoulders of two pages. As fortune would have it, Oberta received the slice that contained the ring.

"Our queen! Our queen! Whom dost thou choose for king!" cried the youths and maidens.

At this moment a commotion was heard at the castle gates. Oberta was slowly gazing over the company in her endeavor to select a consort, when the new arrival—a beggar—made his appearance.

"I choose this poor man," slowly said Oberta.

"What! That beggar!" was the response of the surprised young nobility, who gazed with scorn upon the long, tattered coat and the unkempt beard of the stranger.

Whereupon the beggar drew himself up to his full height and swept his eyes haughtily over the assemblage. Calmly he turned his back upon the party. Addressing himself to Oberta he said: "I thank thee, gentle queen." And he bowed low.

"Command thy subjects, king," replied Oberta.

The beggar-king made known this desire:

"I ask a place at the right of thy majesty and also that my companion, who awaits without, be permitted to attend me."

The lord of the castle, having been informed that a beggar had been made king, now came out to chide Oberta for thus insulting her guests. But the maiden insisted that hers was the right to choose whom she please; and as the grandfather always was glad to gratify her every wish, he was finally persuaded to retire.

King in deep, rich tones and with a gesture fitting one long accustomed to be obeyed. Followed by the companion, who was garbed in beggar's tatters like himself, the newly selected monarch led Queen Oberta to the table. To the disgust of the noble folk, the beggar attendant was placed on the right of the king.

All marveled at the rapidity with which the beggars devoured pasties and meats spread before them.

"Isn't it delicious, Hugo?" observed the king to his companion, as both ate venison with gusto.

"Hugo," murmured the old lord to himself. "'Tis a strange name for a beggar."

So the day went merrily on, obedient to the will of Oberta and the king, until at last nightfall came.

"The time is here," said the lord, "when the king must again be beggar."

Then the tall stranger laughed. "The king will not be beggar," corrected he, "but emperor."

Throwing aside his disguise, the emperor and master of the host stood revealed. Before they could recover from their surprise, their ruler continued:

"I come to bring back a lost son, named Hugo, who, having been captured in war by the enemy, has been held prisoner these ten years in spite of my efforts to ransom him. But now I have bought his liberty, and return him myself to his father."

Here the beggar named Hugo also plucked away the great beard that hid his features, and showed himself to be truly the long-lost son. Great rejoicing was there of a surety. The emperor was thanked again and again by the lord, who begged to be forgiven for having received him so rudely.

"You did not know me," laughed the emperor; "only Hugo's daughter recognized the royal blood.

"Oberta," added he, "I shall beat thee in mind. In thy care I shall leave the tinsel crown, presented me this day as king. Bring it to me at court, eight years hence, and I will give thee something in exchange."

Emperor Otho the Great held to his promise. When Oberta, grown into a beautiful young woman, laid the tinsel crown at his feet, he made her a gift of much gold, and gave her for husband one of the greatest lords of the kingdom. Always was she the favorite of the emperor, who delighted to say:

"Those who made me emperor chose me in my glory, but she who made me king chose me in my poverty—and this last choice do I prefer."