# OUT BOYS AND GIFLS --- CONDUCTED BY POLLY EVANS AUGUST BRINGS THE SHEAVES OF CORN THEN THE HARVEST HOME IS BORNE

THE city of the bees is built and governed in a manner as wonderful as that of the ants. Like the ants, the head of the bees is a queen. She is protected, fed, served and even caressed by her subjects. All the work she has to do is to lay the eggs which are to hatch out baby bees.

These baby bees are called "larvae," like the baby ants, and they look like small white worms. They are kept in little cells of wax and are fed on a kind of infants' food made of the pollen of flowers, mixed with honey and partly digested in the stomach of an old bee. digested in the stomach of an old bee.

When the larva is several days old it spins a cocoon and goes to sleep, as all well-regulated babies do. Its nap lasts a week, and then it wakes up, tears apart its cocoon and climbs out of its tiny waxen bedroom into the world of the hive. The old bees gather round and lick the young one with their tongues as a cat does its kittens. They also give it plenty to eat. Then they also give it plenty to eat. Then they go to work to clean out the cell that has been left, so that the queen can lay another egg in it.

#### Earning a Living.

The young bee while in the cocoon has changed its looks very much. It is no longer a little white worm, but a real, full-sized bee, and must begin at once to earn its own living. There are a great many things to be done, both inside the hive and out. Combs of wax must be built for honey and others for eggs, the hive must be kept clean, the eggs looked after, and babies as well as the queen must be

Some of the little brown workers must act as ventilators to keep the air in the hive fresh and pure. How do they do it? Well, they plant themselves close to the outside door, and then they set their wings to whirring like little electric fans. This starts a strong current and makes the fresh air from outside rush

into the hive.

There is soldier work to be done, too, and some of us know by sad experience that the bee has a sharper weapon than the ant. Rats, mice, lizards, some birds, wasps and hornets are all enemies of the bee, and have to be guarded against. There must always be guards around the little waxen cells where baby queen bees are confined. This is to prevent the old mother queen, who is a jealous rul-er, from attacking the poor little prin-cesses and stinging them to death in their cradles. Even if the young queens are full grown they are kept in their cells as long as the old queen holds her sway. They seem to want to get out very much, for they keep making a plaintive, piping cry, but the guards know too well what would be their fate But by and by the old queen dies, or

PUZZLES

What Animal?

Put fivese six pieces together and see if you can tell Polly Evans what animal they make.

Jumbled Birds' Names.

The initials of each, read downward, will form the name of a well-known bird;

Charade. My first is a part of the body; My second is a part of an ox; My whole is an Italian town.

H ERE is a nice puzzle,

rectangle.

Baldbrick. 6. Hiatnngleig. 6. Nilten.

Puzzle-What Nursery Rhyme?

You see 32 candles inside the

And you notice 16 of them contain no

letters? Well, the missing letters are

sors and paste them on the 16 blank

in the 16 circles outside the rectangle. Cut these 16 circles out with your scis-

8. Rrttasde. 9. Grekshinfl.



jects to "swarm" and start a new hive. In this case the guards let out one of the young queens and she rules in her turn. Pretty soon, if it is warm weather, she, too, may start off with a swarm, and then another queen will be let out, and so it goes. New swarms will be

Eight Questions on France.

space?

4. What city in France, if it had two more words added to it, would have the same name as a town in Maryland?

5. What river in France has the same name as something used by fishermen?

6. What bordering country's capital means to wead?

to wander?
7. What guif south of France has the same name as an animal?
8. What northern city is a part of the

Editor Puzzle.

Enigma.

"Man is unjust, but God is just; and nally justice triumphs."—Evangeline, Part

finally justice triumphs."—Evangeline, Part 1, III, line 34. Keywords—Finish, mumps, understudy, Sousa, Atlantic, snug, jilt, jib, put.

Diamond.

Girl's Name Puzzle.

MarJorie

Diagonal.

HeL

SMALL DUTIFUL LOGICALLY

. What city in France means to destroy? . What city in France is a girl's name? . What mount in France means an open

sent off as long as the increase in popuation permits, so we will hope that most of the little captive princesses get their freedom at last.

But besides defending the hive and nursing the babies, the hard working bees have to work early and late to gather and store up the food which is to supply them in winter, to say nothing of giving us human eaters a sweet treat now and then.
This food is chiefly
of two kinds—honey,
which is drawn from the tubes of the flower, and pollen, the yellow dust which is found on the stamens. It is the same yellow powder which brushes off on your face when you smell a dandelion or a lily too hard. The pollen is

The pollen is carried home in little baskets formed by the hairs that grow on the bee's hind legs. The honey is stored in a kind of extra stomach, made to carry but not to digest if digest it.

How the wax is made and moulded into the beautiful sixsided cells; how the honey is stored away and sealed up, and

how the bees live through the cold win-ter, are fascinating stories, but too long to tell here.

Before we say goodbye to the hive, however, we ought to give one glance to the poor, lazy, stingless drones. These are drones. These are the fine gentlemen of the city of bees, city of they and not work, but eat

as much as if they did, the sturdy little workers fail upon them and kill them and throw them out of the hive. This seems a little heartless, but I suspect the "busy bees" think it only fair that he who eats should work, and that he who will not work should die.

M. W. W.

Inserted Letters.

Insert a double letter and change.

A prophet into a kind of dog.

4. A carriage for the dead into larger
5. A month into to wed.
6. A package of goods into a combat.
7. Endeavored into quavered.
8. Wan into to propel.
9. A bean into to banter.
10. One who flies into part of a fish.
11. A selling into a riding seat.
12. A time into to cut with a knife,
13. A wharf into a mine of stone.

What Word? word "that." tration: A boy wrote on the black-

board:
"The man that lies down does wrong."
The teacher objected to the word "that," so the word who was substituted. And yet it must be evident to the reader, for all that, that that "that." that that teacher objected to was right, after all.

Numerical Enigma.

Answer to Star Puzzle.

Change Fish to Hens.

FISH, in 8 changes, becomes HENS,

"Companions."
Key-words: Poison, comic, nap.

To remain into full of stars, A carriage for the dead into larger.

AND PROBLEMS

Answers to Last Week's Puzzles and Problems

## The Fireflies The Silver Hair Cat

THEIR PRETTY LIGHTS HE children had been driving in the country, and as they came

Royal Gardens.

home at twilight they noticed and admired the myriads of fireflies over the golden wheat and grain fields-ready for the harvest. What a beautiful sight it was! Mil-

lions of tiny lights glowing everywhere over the fragrant country! How still it

over the fragrant country! How still it was, and what a delicious odor came from the fields!

Aunt Betsy, who was with the children, and to whom they always went for stories and information, said she would tell them something about the fireflies when they reached home. So after supper, when they had all gathered around her on the porch, as was their custom before going to bed, Davie said, "Aunt Betsy, you promised to tell us about the fireflies."

"Yes, do, please," said Marie. "How do they make that little light?"

"Well, children," began Aunt Betsy, "the firefly is a beetle, which has the faculty, as you see, of emitting a phosphorogers."

"the firefly is a beetle, which has the faculty, as you see, of emitting a phosphorescent light from organs in some part of the body."

"What does phosphorescent mean?" interrupted Dan.

"The word," said Aunt Betsy, "is derived from phosphorus, which comes from the Greek, meaning 'light bringing,' and is a name given to a variety of phenomena due to different causes, but all consisting in the emission of a or phenomena due to different causes, but all consisting in the emission of a pale, more or less ill-defined light, not obviously due to combustion. This phosphorescent light is not confined to the animal world," continued Aunt Betsy, "but many minerals exhibit this property, and the vegetable kingdom has furnished a few instances of it."

"Oh, tell us all about it!" exclaimed Marie, who was older than the boys and intensely interested in everything in paintensely interested in everything in na-

"Well, you will be surprised to hear "Well, you will be surprised to hear that some flowers also give out this light, which was first discovered by a daughter of Linnaeus in 1762; and there is a fungi in Brazil and Italy which is luminous. There are also a number of marine phosphorescent organisms, which it is impossible to say whether they should be referred to as belonging to the vegetable or animal kingdoms. But the most brilliant, as well as the most varied and interesting cases of phosphorescence belong to the animal world."

"Is it phosphorescence that causes the ignis fatuus, or will-o'-the-wisp?" asked Davie. "One night when we boys were coming home from fishing, we saw a will-o'-the-wisp flitting over the mead-ows along the creek; and it looked so weird, it made us all feel afraid, and we

#### MANY COLORED LIGHTS

"Yes," said Aunt Betsy, smiling; "some say the ignis fatuus is due to luminous insects; but it is more reasonable to suppose that it is caused by the slow combustion of marsh gas. However, to go back to the fireflies and other insects and animals which have phosphorescent light-the light emitted from them varies in color; green has been noticed in the glowworm, fireflies, centipedes and annelids; blue is seen in the Italian firefly, and this and light green are the predominant colors exhibited by marine animals, although some show a red and others a lilac light, while the curious lantern-fly has a pur-

"Oh, no," answered Aunt Betsy. "In the lowest forms of life, and in many the lowest forms of life, and in many jelly-fish there seem to be no organs set apart for the production of light, this being emitted from the whole surface of the body. In the sea-pens every polyp has eight luminous bands on the outer surface of the stomach, and the rock-boring mollusc has three distinct luminous organs. We find the light-giving properties of the glowworm are contained in the segments preceding the last in the abdomen, while in the Mexican firefly there is a light in the thorax and one in the abdomen, and the lantern-flies carry their light at the extremity of a long curved proboscis. Many deep-sea fish possess round shining bodies imbedded in the skin in the sides of their bodies or in the vicinity of the eye." of the eye."
"For what purpose is this light given

asked Dan.

"That is a difficult question to answer," answered Aunt Betsy. "The service rendered by this peculiar property to its possessors is, in many cases, not obvious. It may be that it aids them in search of food; in some cases it attracts the opposite sex, as is generally supposed in the case of the glowworm. The fact that so many deep-sea animals are phosphorescent, and that many of the fish in those regions have very large eyes, has led to the belief that this source of light becomes very important in the depths of the ocean, where the sunlight never penetrates."

"Can they light their lamps and candles at will?" asked Dan, "and without matches, too? How convenient!" to these insects and various animals?"

#### THEY COME IN JUNE

"Well, it seems so," said Aunt Betsy. "The nervous system being so often closely connected with the luminous organs, indicates that the exhibition of the light is dependent upon the will of the animal, or else is the result of the stimulation of the nerves."
"I have noticed." observed Marie,
"that we never see the fireflies till

"They have their season just as everything else in the insect world," answered Aunt Betsy. "The larva lies answered Aunt Betsy. "The larva lies in the ground feeding on earthworms and soft-bodied insects, and transforms to the pupa in an oval earthen cell in June, issuing as a beetle ten days later. One of the most brilliant among the larger tropical fireflies emits so much light that small print may be read by the aid of its light. These insects are sometimes used for domestic purposes, several of them confined together makseveral of them confined together mak-ing sufficient light for a person to sew

or write."

"Oh, what a novel idea!" exclaimed Marie. "Suppose, boys, we catch a few fireflies, and let us see if we can read or write by their little lamps."

"There are some sailing away up among the treetops. We'll not try to catch them, I guess," said Davie.

So they all scampered away over the lawn, on a chase after the flitting lights, and Dan got a bottle in which to put the beetles; but after catching some and partly filling the bottle, they found they were not as brilliant as the fireflies of the tropics, besides they had a very unpleasant odor, so they were glad to let them all fly away again to flash their little lights over the lawn.

JESSIE BOWLES FISHER.

#### An Accident »

ON THE whole, Johnny Ralston was a very good boy; but he had one fault which it seemed impossible for his fault which it seemed impossible for his mother to overcome—he would fight with other boys. Times out of number he has been reproved for this, and the last time he promised faithfully that he would battle no more.

But that evening he returned from school with a cut cheek and a nose like a swollen beetroot.

"Johnny," said his mother, sadly, "didn't you promise me you wouldn't fight any more?"

"But I haven't been fighting, ma. This is the result of an accident."

"An accident?"—doubtfully.

"First catch the poor little mouse," replied a gruff voice close behind him. Lionel nearly jumped out of his shoes. A queer-looking old gentleman met his astonished eyes—dressed in curious old clothes, with a tall, peaked hat and enormous spectacles on his huge nose.

"First catch the poor little mouse," repeated Professor Grimway, for that was his name. "Here, I have a box that you may put the mouse in."

After quite a chase Lionel succeeded in capturing the little creature and then est of the pages at court, as leaned far over the mossy fringe of the little brook that ran through the "They are just the kind for a nose-gay to offer the little Princess—ah! they are fragrant—I never saw this kind be-

Beautiful, indeed, were the delicate flowers. But if Lionel could have seen the cruel, gloating eyes that watched him from the bushes across the brook he would have let the flowers alone and fled from the place in terror. ... eyes belonged to Black Cat Bugaboo, the terrible wizard, of whom Lionel had heard awful tales, but whom he had never seen. Folks said that the wizard had an undying grudge against the family seen. Folks said that the wizard had an undying grudge against the family of the little Princess, and that he had boasted that he possessed a charm that would some day bring sorrow to the royal family. Now, poor Lionel, gaily plucking the blue flowers, little dreamed that in them was hidden the wizard's ervel charm. ard's cruel charm. Having made up a charming bouquet, Lionel hastened up the garden toward the palace, and just at the foot of the grand terrace came face to face with the fair little Princess and her mother, the Queen. Down on one knee dropped Lionel, and lowly bowed his head in the same knightly fashion that he had learned from the great nobles of the court.

#### CHANGED TO A MOUSE

"Will Her Royal Highness the Princess accept these flowers that I found at the brook's edge?" he asked. The little Princess, who was a very dutiful little daughter, instantly glanced up into her mother's face to learn whether she had her permission. The Queen smiled graciously, but first anx-iously inquired: "Have these flowers

"No, Your Majesty," replied Lionel.
"Very well, then," said she, and the
little Princess extended her hand for the flowers. Alas for Lionel! and alas for the royal family! No sooner did the little Princess' fingers touch the pretty flowers than, presto! the beautiful child, in her dainty white frock, was gone like



"Prof. Grimway"

a flash of light, and, in her stead, down at the feet of the Queen, crept a little white mouse.

The Queen uttered one heartbroken scream, then fell in a dead faint; while poor Lionel stood with staring eyes, quite dumfounded at the terrible consequences of his well-meant gift. Then he was startled by a sncrling "Me-ow!" and, turning quickly, beheld a fierce-eyed cat, black as the blackest night, just in the act of springing on the little white mouse. There was no time for thought. Without a moment's hesitation Lionel aimed a terrific kick at the beast and sent it flying over the hedge, where, with angry spitting, it picked itself up and then skulked off to its hiding place.

"What shall I do?" What shall I do?" cried Lionel, with unhappy tears in his white mouse. cried Lionel, with unhappy tears in his

in capturing the little creature and then

ace. "Tell the Shah who I am and that I must see him at once to save the little Princess from a terrible fate," cried Lionel to the guards. So they hastened to deliver the youth's message, and the Shah commanded that Lionel be brought into his royal presence at once. "Now, tell me all about it," he said, when Lionel had kissed his hand and sunk wearily down on the velvet cushion at the feet of the monarch. at the feet of the monarch.

The story was quickly told, and great was the Shah's wrath against Black Cat We have a snow-white mother cat with four snow-white kittens in our zoo, and you shall have her. Now go and rest. To-morrow my lord chamberlain and a guard of soldiers shall return with



### "Will the Princess Accept These Flowers?"

he carefully and safely shut it up in the he carefully and safely shut it up in the professor's box.

"Be sure you take good care of it," growled the professor, "while I revive the Queen."

A little water from the brook and a little rubbing soon brought the Queen back to life. With a deep sigh, she opened her eyes, then she shuddered fearfully and moaned aloud for her poor, bewitched little daughter.

"Hush, hush, your Majesty," commanded the old man. "We must lose no time in vain weeping. This is a time to be doing something to save the little Princess."

Then he explained the mysterious charm of the flowers. "When I was young," said he, "Bugaboo and I were classmates in the Royal University, much interlittle Princess.' and we both became very much interested in charms. One day, when I was ested in charms. One day, when I was turning over dusty old books in the library, I discovered a very ancient book entitled "The Black Cat Charm." Taking it home with me, I sat down to read it, but had read only a little when I was called off for a few moments. On my return I found my book was gone. And I never saw it again.

#### THE BLACK CAT CHARM

"Perhaps I should not have suspected any one of the theft nor have remembered what I had read in the book if I had not run across Bugaboo one day long afterward down on his hands and knees by the edge of a brook, examining a little blue flower. amining a little blue flower.

"'Aha!' thought I,'so Mr.Bugaboo was the one who stole by book, and he is now trying the black cat charm.' Then I remembered what I had read in the book—that far away in the forest grew a little blue flower which, if touched by a little daughter of any family, would both instantly change her into a little white mouse and at the same time change the charmer into a black cat, that could then pounce upon the mouse and devour it. But I remembered, too, that there was a counter-charm, which was this: From the far-away court of that there was a counter-charm, which was this: From the far-away court of Persia, where, in the royal zoo, a family of snow-white cats is always kept, a mother cat, with four kittens just as white as herself, must be borrowed. If this mother cat should then be permitted to grasp the little mouse in her paw the charm would at once be broken, and the little Princess would again appear in her usual form."

in her usual form."

"Then some one must go on the swiftest horses to the Persian court after this snow-white cat," cried the Queen.

"No one would go more swiftly than I, may it please your Majesty," said Lionel. "Oh, let me go, I beg!"

"Yes, let the lad go," said the old professor; "he unconsciously brought the evil charm on the little Princess, so it is only fair to give him the chance to bring the counter-charm that will restore her to us, if we can keep her safe from the Black Cat."

So off posted Lionel—off for the faraway Persian court. Twenty miles an hour he rode, from early dawn to sunset, for many days, mounting a fresh Arabian steed each hour, and, at last, half dead with fatigue, he reached the

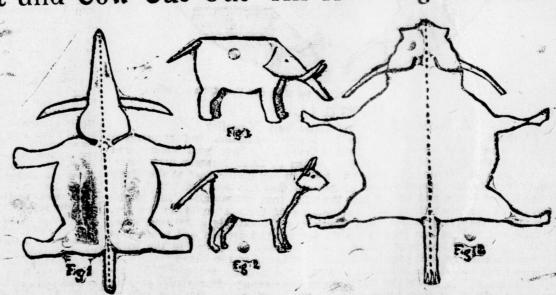
Lionel's heart bounded with joy. With joy? Yes, but with fear also, for what if the Black Cat had returned and snatched the poor little mouse from the professor's box? When they reached the garden Lionel slipped down off his horse, took the little downy basket in which the four snow-white kittens were coxily sleeping, and walked onickly up. cozily sleeping, and walked quickly up the garden path, followed by the beau-tiful snow-white mother cat. There, in the very spot where the little Princess had met with the evil charm, Lionel beheld the Queen and the old professor. He shouted to them, and then gladness lighted up their faces. Out from his pocket the professor drew the precious box. He stooped down and let the little mouse out on the ground. The snow-white mother cat caught sight of her at once, and instantly drew herself together for a spring. Then a strange thing happened. From the neighboring hedge came a frightful snarl, and straight and swift as an arrow from a mighty bow the black cat leaped down on the little frightened mouse—but just too late, for swiftly, like a flash of sunlight, the Persian cat like a flash of sunlight, the Persian cat caught the mouse in her snow-white paws, and then, oh, joy! the little Princess sprang up in her old precious form. And to crown the happiness of the Queen one of the Persian soldiers, with his keen-edged sword, chopped off the head of the black cat, and so then and there ended the history of Bugahoo and his evil charm.



Lionel Brings the Cat

## · Elephant and Cow Cut Out--An Amusing Pastime

Cut out the two patterns, pin or paste each of them on their cardboard, then cut out a cardboard figure about a third larger than the pattern. As a result-you will have a good-sized cow and elephant like those you see in the picture. A little twist to the head and tail will put them in their proper place.



### What It Costs to Run a Real Zoo

THE housekeeping expenses of a zoo vary, of course, with the size and variety of the family; but those of the Zoological Society, London, whose collection of mammals, birds and reptiles collection of mammals, birds and reptiles is reputed to be the finest in the world, should afford a very good example.

In the London Zoo there are about 640 mammals, 1448 birds, 343 reptiles and 121 fish—a total of 2552—and to keep an average of about the same a large amount of money has to be spent every year. In spite of receiving every comfort and delicacy, the death-rate is high, a fact for which the climate is in no small manner responsible. a fact for which the climate is in no small manner responsible.

The huge collection requires a staff of close upon 100 men, many of whom are experts and, consequently, have to be paid as such. Of the housekeeping money, salaries swallow up nearly £12,000 at least has to be set aside. Add

insurance, £145 for uniforms and £2000 for new works and repairs; £500 is necessary to keep the animals and birds warm; over £300 per annum has to be spent in straw for bedding, and water and pumping calls for £265.

But now we come to the all-important item of feeding, and, as there are over 2500 mouths craving for a variety of foods, we have a very pretty problem to solve.

Three years ago the authorities at the London Zoo managed to cater on an expenditure of £4858. Every item on the huge menu was accounted for, and we find that no less a sum than £1034 was spent in clover and hay, £234 was paid for oats and £317 for corn and seeds.

This is a triumph in housekeeping, especially when one peeps into the larder and finds, among a host of things in huge quantities, 207 horses (representing

pounds of flounders, 9470 pounds of rlaice, 22,703 pounds of whiting, 546 pounds of herrings,1488 pints of shrimps, 18,720 fowi heads, 6496 pounds of oranges, 1988 dozens of bananas, 25 hundredweight of monkey nuts and 1497 pounds of grapes. grapes.
In this long list of edibles clover hay is the dearest item; meadow hay, at £507, being a good second. Fish alone ran away with nearly £500, no less than £130 being paid for live fish. The most modest item was nuts, the total cost for twelve months only amounting to £28.

#### An 0 Rhyme

For some bargains a woman once s0,
And among the things that she b0
Was a three-legged chair,
Which made poor hubby stare,

