

The Deadwood Express

PROBLEM
BY
SAM LOYD

PROPOSITION—Tell the size of the two square boxes that came by express.

THERE IS A COMPANION piece to the plumber's tank problem which illustrates a very puzzling point in practical mechanics.

The sketch represents a scene in the wild and woolly West as the Deadwood Express arrives at the gold diggings with a consignment of two boxes for the young lady, and her admirers are having a lively dispute with the expressman as to the proper charges for the same.

There are two boxes, one of which is in view and the other concealed in the wagon.

The point is that the expressman wished to charge for the boxes at the rate of \$5 per cubical foot, as per his instructions on the freight bill. The miners, however, strenuously objected on the grounds that their custom was invariably to pay so much per running foot—according to mining laws and they could not see what right an express company had to meddle with the "cubical contents" of a young lady's box, any way!

The expressman was compelled to accept the proposed terms, so he measured the length of the boxes and charged \$5 per running foot.

The boxes are perfectly square

and one is exactly half the height of the other.

The strange part of the problem is that when the expressman placed the two boxes together and measured their combined length it was found that there was not the thousandth part of a cent difference in the ways of charging—at \$5 per cubical foot or at \$5 per running foot.

What were the sizes of the two boxes?

It is a simple, yet very interesting puzzle, which will cause the gray matter in the brains of our mathematicians to circulate somewhat before hitting upon the proper way to handle these express boxes.

An Odd Trick.

Here is a pretty way of telling in which hand a person holds an odd or even number of coins, which, if well understood by the performer, so that he can vary the same, may be shown very effectively.

Tell a person to hold an even number of coins in one hand, an odd number in the other, and you will find out which hand holds the odd number.

You tell him to multiply the number in his right hand by any odd

number, and to multiply the number in his left hand by any even number and tell you how much it amounts to. You may now go into some hokus-pocus calculation or explanation regarding the figures mentioned, which will mystify him, but all you need to note is whether the sum mentioned is odd or even as it tells whether the sum in his right hand is odd or even. If he said 792 you know that he holds an even number of coins in his right hand. If he should say 551, his right hand holds an odd number, and as a matter of course the left hand holds the reverse.

By changing the order, and sometimes telling him to multiply the number in his left hand by an odd number, which would reverse your reply, you can conceal the trick. Another way is to say, "Take an odd number of coins in one hand, an even number in the other. Now treble the number in the right hand and double the quantity in the left, and tell me how many there would then be."

Why are hogs like trees? Because they root for a living.

Why is a four-quart jar like a lady's side-saddle? Because it holds a gal-on (gallon).

The Reaper's Problem

BY SAM LOYD.



PROPOSITION—Tell the width of a strip around a field which will take half of the field.



SHOWING HOW mechanics and laborers having no knowledge of mathematics will often solve, in a practical way, some very difficult problems, I will call the attention of our puzzlists to the clever way in which a couple of farmers adjusted their affairs.

A Texas ranchman, who owned more land than he could conveniently farm, leased certain fields to a neighbor, who agreed to work them on shares. One particular field was two thousand yards long by one thousand deep, but as there were certain bad streaks running through the land it was decided that a fairer average would be given to each man by cutting a band completely around the field than by dividing it into halves.

I presume our puzzlists will find no great difficulty in guessing the width of the strip which must be cut all around that field to get just half the crop of wheat, and to discover a simple rule which will always apply to any rectangular field of any dimensions which that farmer in the checked shirt looks as if he could apply to the other fields.

What is the most difficult lock to pick? One from a bald head.

Why is snow like a maple tree? Because it leaves in the early spring.

Who is the first nobleman mentioned in the Bible? Baron (barren) figtree.

If a man bumped his head against the top of the room, what article of stationery would he get? Ceiling whacks. (sealing wax).

What is a good thing to part with? A comb.

If your uncle's sister is not your aunt what relation is she to you? Your mother.

Why has a chambermaid more lives than a cat? Because each morning she returns to dust.

Why ought the coachman become wealthy? Because he does a driving business.

Why do carpenters have great faith in sooth-sayers? They cannot work without an augur (augur).

What does a yawning policeman resemble? An open-faced watch.

Why is a crow like a lawyer? He likes to have his caws (cause) heard.

Why are umbrellas like good churchmen? They keep Lent so well.

Why is a nice, but uncultured girl like brown sugar? Because she is sweet but unrefined.

Why are eccentric women like tea-kettles? Because they sing away pleasantly and then all at once boil over.

How would you keep fish from smelling? Cut off their noses.

Why should you never confide a secret to your relatives? Because blood will tell.

Which nation produces the most marriages? Fascination.

Why is a bridegroom often more expensive than a bride? Because the bride is given away, but the groom is often sold.

Why is divinity the easiest of all professions? Because it is easier to preach than to practice.

When is love deformed? When it is all on one side.

When was B the first letter in the alphabet? In the days of No-a (Noah).

Why is it right for B to come before C? Because we must B before we can C.

Why is a windy orator like a whale? Because he often rises to spout.

Sam Loyd's Endless
Chain Puzzle.

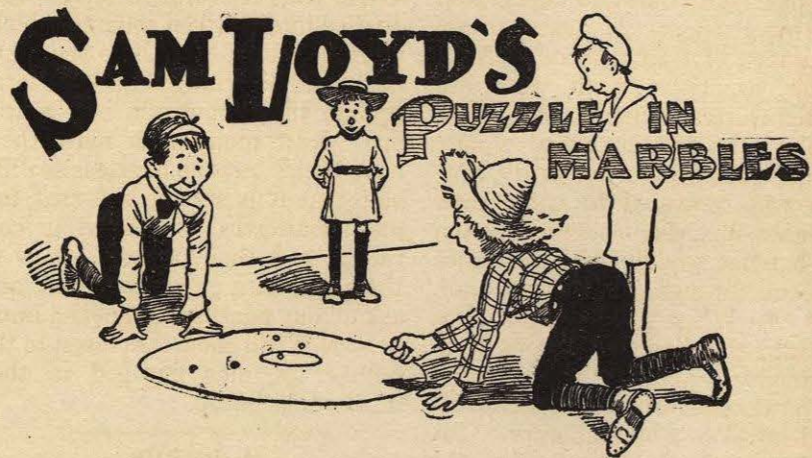


Here is a puzzle which taxed the ingenuity of the pretty little French blacksmith. She received a box containing thirteen pieces of chain which she was to mend and return in the same box. You are not asked to do the joining and welding, but merely to show how the chain appeared when packed in the box. You can see that some of the pieces do not fit together as now placed. So take thirteen pieces similar to those shown and find how they can be packed so as to appear mended.

Here are some simple studies in concealed geography for the juvenile class:

172. We shall have nice cake for tea.
173. Do you like your poetry in Iambic or in the Trochaic metre?
174. Agatha's tooth aches; dismal Agatha.
175. We have borne war; kings can do no more.
176. After this refusal, a man called Tinder popped the question.
177. She called it a cabal, because she is a ninny.
178. I have lost my opal, my rather uncommon opal.

179. Arise! ring a-pat a merry peal.
180. Queen Elizabeth said awful things.
181. Adoniram is so long hindering Jacob.
182. March in a line. (Country.)
183. I said to her, O mercy! what's the matter?
184. Eliza then said to me, I have sprained my ankle.



Harry and Jim, two rival marble shooters, started in to play for keeps when each had the same number of marbles. Harry won twenty in the

185. I would rather ride under an elephant than over a rat.
186. I gave my apple to John, he gave his to William.
187. I have often seen a woman ride on a bicycle, but never on an icicle.
188. George Bergen evaded the enemy.
189. Which name do you prefer, Loring or Hamilton?
190. Shall you be at Holyoke this summer?
191. Neither woman nor man dyed their hair in the middle ages. (Province.)
192. He smote himself upon his chest, erring and weak King Charles.
193. Such a color! a downright brick-color. (River.)
194. She brought a bottle of myrrh in each hand. Myrrh! Oh, never touch that. (Rivers.)

A Rebus

My first is a substance both pleasant and good,
And its use by the ladies is well understood;
My next, ever moving, so light and so trim,
Of delicate structure in both body and limb;
My whole, shall I tell you how brilliant and gay,
How vainly it flutters, how short is its day,
How just is the emblem, frail man has his prime,
How soon metamorphosed, and changed by time.

Cypher Answer.—2, 21, 20, 20, 5, 18, 6, 12, 25.

THE BATTLE OF HASTINGS
A PUZZLE OF SQUARES



PROPOSITION—How many men had Harold?



ALL STUDENTS OF history know of the mystery and uncertainty concerning the details of the ever-memorable battle which occurred on the fateful October 14, 1066. This week's puzzle deals with a curious passage from ancient history which has not received the attention it deserves. The passage in question, as pointed out by Professor Dudeney, says: "The men of Harold stood well together, as their wont was, and formed thirteen squares, with a like number of men in every square thereof, and woe to the hardy Norman who ventured to enter their redoubts, for a single blow of a Saxon war-hatchet would break his lance and cut through his coat of mail. * * * When Harold threw himself into the fray the Saxons were one mighty square of men, shouting the battle cries of 'Ut!' 'Olicrosse!' 'Godemite!' Contemporary authorities agree that the Saxons did actually fight in that solid order. In the "Carmen de Bello Hastingensi," a poem attributed to Guy Bishop of Amiens, it tells how "the Saxons stood fixed in a dense mass."

And Henry of Huntington speaks of "the square like unto a castle, impenetrable to the Normans." Robert Wace, a century later, confirms the arrangement of the forces in a way that suggests a possible solution to the mystery concerning the actual number of men engaged in the battle. So let us look for a literal and exact answer to the proposition, that if Harold's forces were divided into thirteen squares, which, when he added himself to the number, could be arranged into one large square, the proposition is a simple one. How many men must there have been? but the puzzle is so difficult that it is safe to say that few mathematicians will solve it correctly, so I shall present it now in the shape of a guessing match, and ask all our puzzlists to guess a number which will come the closest to the number of men engaged in that memorable battle.

A REBUS.

An emblem of stupidity,
My first in forest found;
Up in air oft rises high,
Though fastened in the ground.
But by sharp means it is removed,

And managed various ways;
By art or skill it is improved,
Or, perhaps it makes a blaze.
My second is of every kind,
Is good, or bad, or gay;
Is dull or bright, to suit all minds,
By night as well as day.
The patient seaman keeps with care my whole,
And well it knows its secrets night and day;
And though it has no tongue, nor heart, nor soul,
It tells the story of the ship's long way.
Cypher Ans. 12, 15, 7, 2, 15, 15, 11.

CHARADE.

My first is a creature of wonderful form;
My second gives shelter in sunshine and storm;
The empire of Flora embraces my whole;
Entire you may find me where sea-billows roll.

Which is the most cheerful part of an arsenal? The ball-room.
Why is a magnificent house like a book of anecdotes? Because it is made up of good stories.



Little Tommy Riddles calls King Puzzlepate's attention away from the agreeable task of "sitting in the counting room counting up his money" to mention the catastrophe of the maid losing her nose while hanging up the family laundry. He then propounds Mother Goose's great riddle of:

"Twice four and twenty blackbirds are sitting in the rain,
One shot killed a seventh! How many did remain?"

Tommy says the Queen gave him a piece of bread and honey for his clever answer to that puzzle.

The head cook demands an audience to explain how the famous baked pie containing four and twenty blackbirds can be cut in two halves of the same shape and size, each containing a dozen birds, so that when the pie is opened the birds, not being hurt by the cutting, will all begin to sing.

A Charade.

Behold my first in sable hue,
View it again, an azure blue;
Sometimes carnation's not more bright,

Again it seems a milky white.
My second, I must make confession,
Is a most choice and rich possession.
Which all enjoy; for rich and poor
Possess alike this valued store.
My whole is sometimes formed by lead,
And vertic rises o'er our head.

A Charade.

My first is what you're doing now,
My second is procured from stone;
Before my whole you often stand,
But mostly when you are alone.

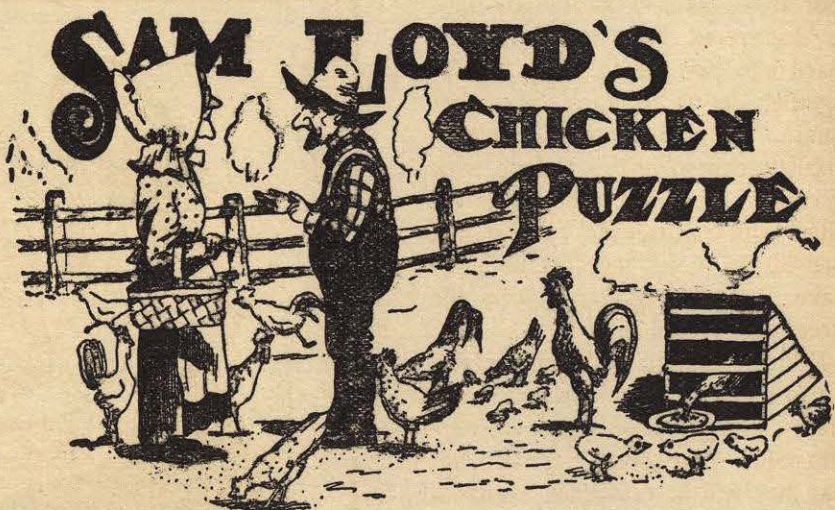
A Crow Conundrum.

Not only have birds a language of their own, but according to Professor Du Point, who has made the language of birds a life study, they sometimes say very clever things

and are especially partial to conundrums. He recently overheard the following little bird gossip between two croakers on Long Island:

"Said one old crow unto his mate,
I notice lovers stay out late;
In childhood's hours 'twas ever thus,
Now tell me why are they like us?"

The Professor is very desirous of obtaining the correct solution to this conundrum. Who will send in the best answer and so please the heart of the puzzled Professor?



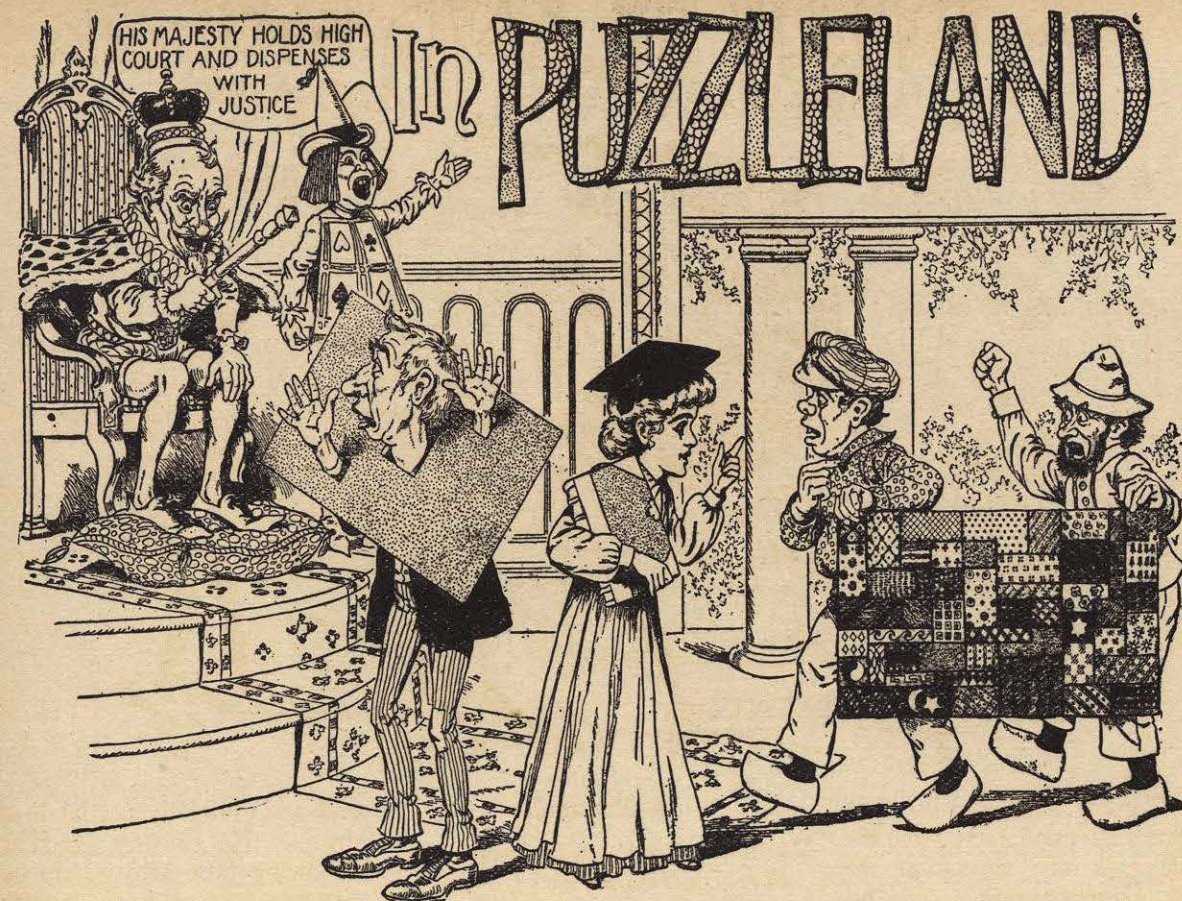
While discussing practical ways and means with his good wife, Farmer Jones said:

"Now, Mariah, if we should sell off seventy-five chickens, as I propose, our stock of feed would last just twenty days longer, while if we

should buy a hundred extra fowl, as you suggest, we would run out of chicken feed fifteen days sooner."

"Well, now, Josiah, how many chickens have we, anyhow?"

That's the problem—how many chickens had they, anyhow?



As announced by Tommy Riddles, the court page, King Puzzlepate is holding high court and shows how justice is administered in Puzzleland so as to make the punishment fit the crime. A stupid boor, who could not see the point of the old conundrum: "When is a door not a door?" was condemned to be pilloried with the door about his neck and wrists until he discovered how to divide the board into two pieces which will fit together so as to form a perfect square. How many of our clever puzzlists can solve this unique trick of cutting the board into two halves which will release the culprit, and then fit the pieces together so as to make a perfect square, with the three holes closed up?

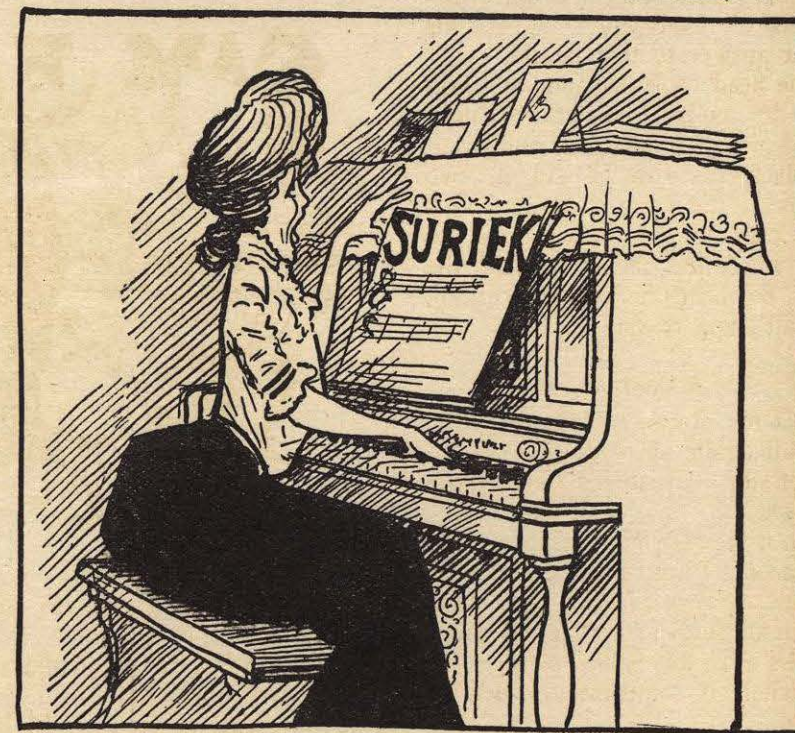
Princess Enigma is shown explaining to a couple of quarrelsome merchants, who are disputing the ownership of a marvelous Persian rug, that they will be consigned to prison until they discover how, by cutting on the lines, so as to divide the rug into two pieces of the same shape and size, without destroying any of the patterns. This puzzle was given to demonstrate that any symmetrical form can only be divided into similar halves by a line from one side to the other, passing through the

exact center. If the line from the starting point to center is irregular, then its shape must be duplicated (in reverse) from the center to the ending. This rule furnishes the groundwork for some excellent puzzles.

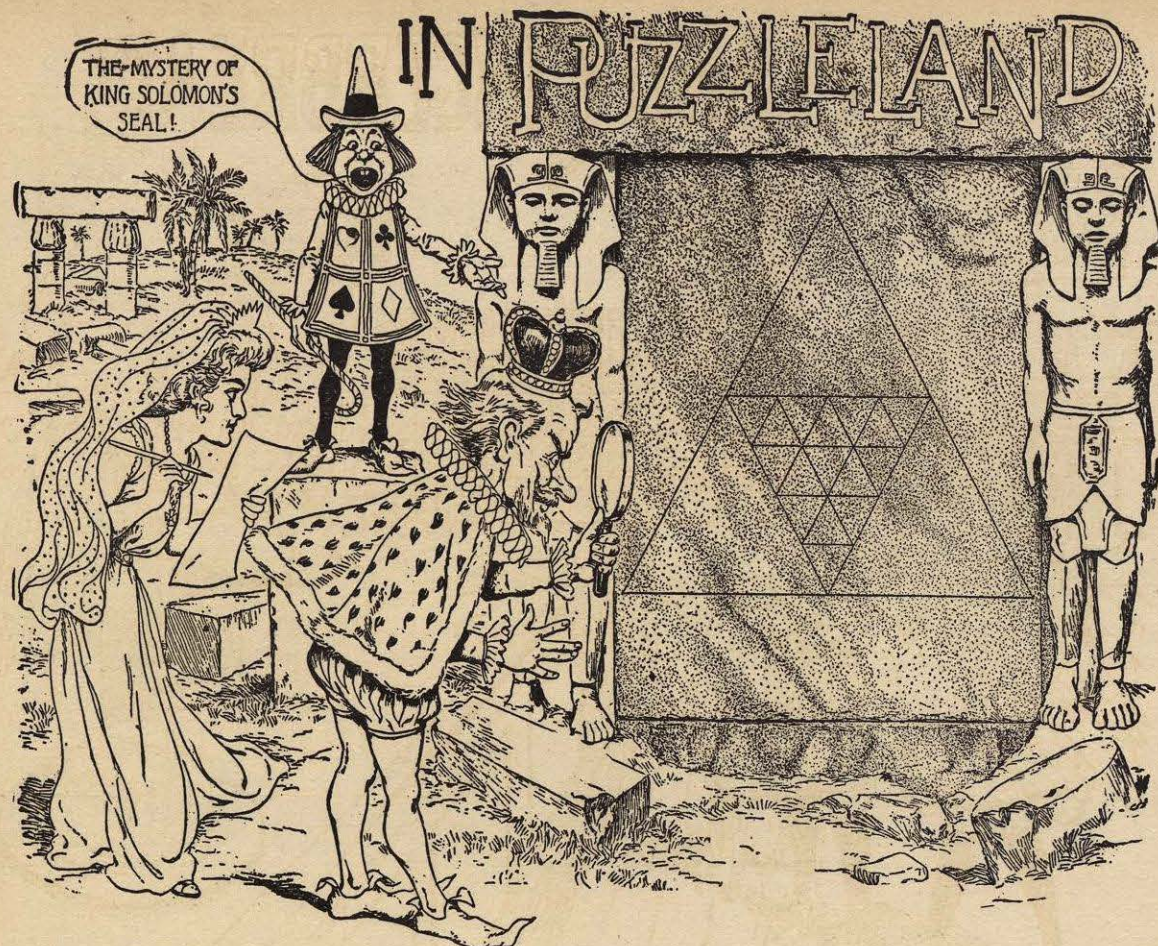
A Charade.

My first's a portion of a book,
One of the insect tribe my second;
Whene'er upon my whole you look,
A splendid show it must be reckon'd.

SUBSTITUTION PUZZLE



By changing one letter in this Greek ballad you will know the name by which it is termed by all of the tenants in an uptown apartment house.



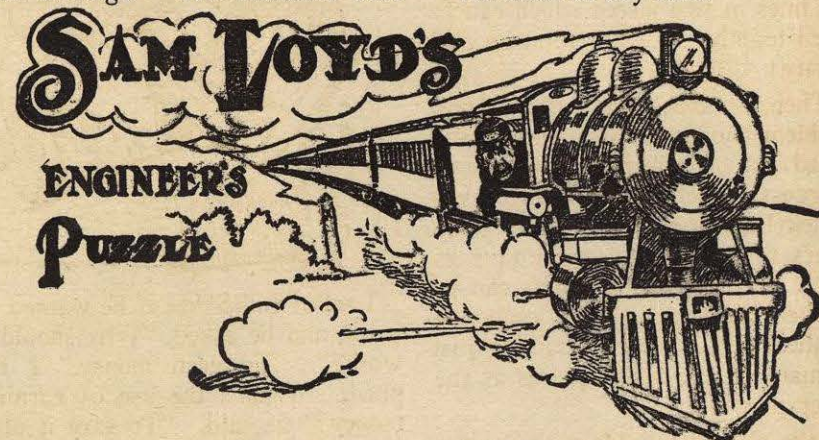
Little Tommy Riddles announces that King Puzzlepate and the Princess Enigma are investigating the secrets of the famous seal of King Solomon, which is engraved upon the royal tomb. The Puzzle King is engaged upon the first puzzle, which consists in figuring out just how many equilateral triangles are to be found in the design of the pyramid. The Princess is engaged upon another puzzle, endeavoring to master the best method of drawing the design of the seal in the fewest possible number of straight lines without removing her pencil from the paper. In other words, the design is to be made with one continuous line, consisting of straight strokes, although it is not prohibited to go over a stroke twice. The point is, to complete the sketch in the fewest number of turns.

According to "Notes and Queries," the old phrase, "as difficult as to give the first cost of a lobster," originated in the House of Representatives during the bitter war over protective tariff between John Quincy Adams and Andrew Jackson, in 1829, when the latter was elected in opposition to what was known as the "American system."

During a debate regarding the placing of a tax upon the first cost

of raw material a Representative of one of the Eastern States wished to know how they would calculate the first cost of the lobster, which was doubtless an important branch of Eastern commerce, and the phrase became one of ridicule against the protectionists.

The member when pressed to tell what he knew about the price of lobsters could only say that "prices varied, but the original lobster catchers receive as much for six dozen lobsters as they get lobsters for thirty-two shillings." The members were



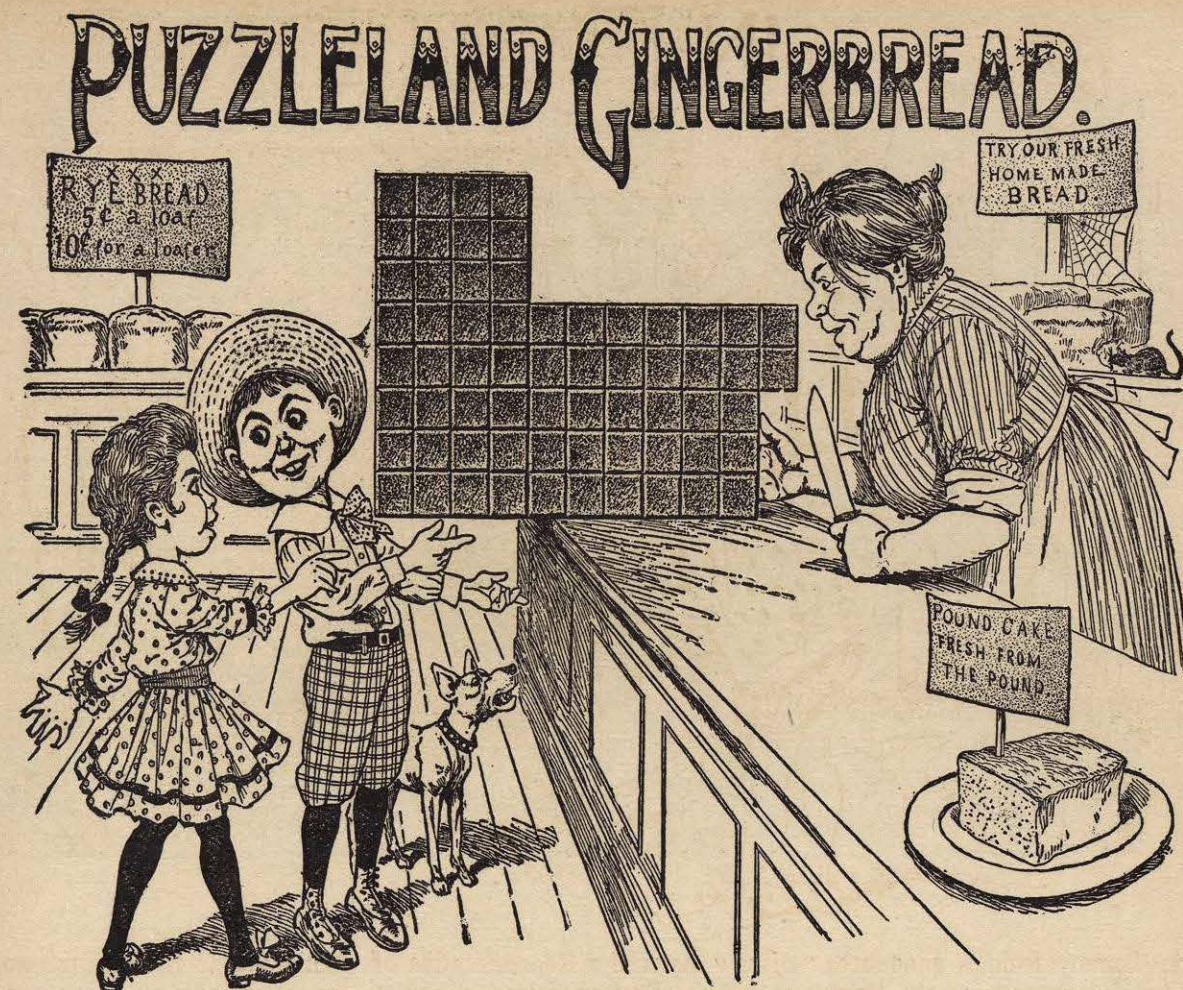
Big Jim, engineer of the Owl Express, says: "We blew off a cylinder head an hour after leaving the station and had to continue the trip at three-fifths of the former speed,

not given to mathematics so few if any were able to figure out "What is the first cost of a lobster?" Can you give the answer to the clever puzzle?

A Charade.

Brave conquerors in my first—of old,
Where drawn from battle home;
Out of my second, silver, gold,
And copper too do come.
The lady who looks wan thro' years,
Whose face no redness shows;
By using of my whole appears
As fresh as any rose.

which brought us in two hours late. If the accident had occurred fifty miles farther on, the train would have arrived forty minutes sooner." How long was the run between stations?



To show how the clever people of Puzzleland, like everybody else all over the world, try to get the better of a bargain, it may be mentioned that ginger-bread is always made in odd shapes, marked off in so many little squares for a penny. But there is always a puzzle connected with ginger-bread in Puzzleland which gives purchasers a chance to win the whole cake for nothing. This puzzle is to find how to cut the cake on the lines in two pieces which can be fitted together so as to form an 8x8 square!

Then, as usual, there is a second problem connected with the ginger-bread exhibit which you are asked to guess. Each of the children has a nickel and the funny old saleslady offers to let each of them take as big a piece for the nickel as can be marked off provided that each one of them gets a piece containing just as many of the little squares as the other purchaser.

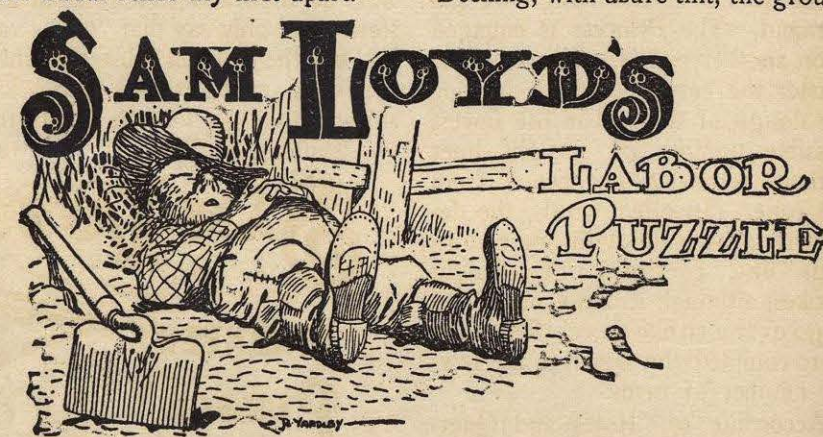
Like all good children they were very clever at puzzles and got good big pieces, but you will find it quite a puzzling problem to tell just how many of the small squares each got for a nickel.

A Charade.

Productions first of various good,
For man and beast supplying food;
My next th' effect of cold or fear,
Or from the feather'd tribe we hear;
My whole strikes terror to the heart,
And awful rends my first apart.

A Charade.

My first, ye fair, adorns your head,
You wear not any thing instead;
Within the convent's gloomy walls,
My second to devotion calls;
In July's eve, my whole is sound,
Decking, with azure tint, the ground



I asked Bill Sykes if he wanted to work, and he asked, "Why should I work?" "To earn money," I replied. "What's the use of earning money?" he said. "To save it up," I replied. "But what do I want to save money for?" he asked. "So that when you grow old you can rest," says I. "But I am growing old as fast as I wish now," says he, "and what's the use of working to rest

when I can begin to rest right now?" I failed to convince him, but I got him to contract to just try for 30 days at 16 shillings a day, but stipulated that he would forfeit 20 shillings for every day he idled. At the end of the month, neither owed the other anything, which convinced Bill of the folly of labor. Can you tell just how much work Bill accomplished?