

**THE GREAT POOL PUZZLE**  
-BY-  
**SAM LOYD**

**PROPOSITION**—Tell which one of the players should pay for the game.

**T**HERE ARE PUZZLES or problems connected with almost all kinds of games, either in the play itself or in the manner of scoring a victory. Now, it is safe to assume that every one knows more or less about fifteen-ball pool. Nevertheless, here is a little problem which does not call for a practical demonstration with the cue, so our puzzlists will have just as good a chance for the prizes offered for the answers as the most skillful experts.

There are fifteen balls to be pocketed, and according to custom, the one who pockets the least number of balls must pay for the game.

Well, three players were starting a game the other day, and No. 1 who was an expert, agreed to pocket as many balls as players No. 2 and No. 3 both together. Just as they were going to start a fourth man came in and joined them, but, as he was a stranger, he did not receive any handicap odds and played on even terms with each of the other three players.

The rack shows the number of balls which each man made during the play, and a discussion then ensued as to who was the loser.

The puzzle is to tell which one of the players should pay for the game according to the terms of the agreement. That the problem is not so simple as it looks may be inferred from the fact of its having been referred to the competitors in a recent championship pool tournament where it was found that no two of the players agreed upon the same answer. Tell which one should pay for the game, and why.

**Notes and Queries.**

Among the curious questions which find their way into the puzzler's sanctum is the following, which, although not intended as a puzzle, is worth a passing notice as illustrating some of the queer things we are expected to know: "Suppose that three generations of fathers and sons, with the names of all three alike, were residing together, and you wished to send a

letter to the third generation, how would you address it?"

Answer: This problem should not cause sleepless nights or needless worry, as a letter addressed to "John Smith the Youngest" would meet the requirements of society and reach its proper destination.

But supposing the communication related to the following business transaction, then the problem would require more careful consideration. The writer had seen that invaluable article known as the "tailor's goose," and knowing that Mr. John Smith manufactured the same, desired to purchase two of them. How should he write his order—"Send me two Tailor's Geese," or "Send me two 'Tailor's Geeses.'"

Or would it be considered a "give away" to dodge the issue by saying, "I want a Tailor's Goose, but you may as well send me two of them."

Why are bells the most obedient of inanimate things? Because they make a noise whenever they are told.



**FREE ACRES** A squatter problem  
BY  
**SAM LOYD**

**PROPOSITION**—How can you enclose as many acres of land as there are twelve-foot rails to a fence?

**T**HERE IS A PRETTY puzzle from the Lone Star State, introducing a famous old problem and a bit of American history with which many of our readers are doubtless familiar. Texas was practically settled, or rather overrun, by the Americans as far back as 1830, but it was not until the end of fifteen years of fighting with the Mexicans and Indians that it was admitted into the Union, and it was shortly after that date that the famous squatter law was introduced which gave a settler free all the land he would inclose or cultivate within a year from the time of taking possession. Some of the early settlers had pretty hard times with the Indians, greasers and bears, but the descendants of such as managed to "stick it out," as they termed it, now rank among the great cattle kings of the world, and, according to an official report just issued during the past month, it will soon develop that some of the most wealthy landed proprietors of the world will be found to be Indians. Among the great ranches of the West, whose owners would not be appalled by the size of the flocks of the "white bulls and the dappled bulls which grazed on the plains of Sicily" as grandiloquently described by Archi-

medes, may be mentioned the comfortable ranch of Texas Pete, a half-breed Indian, who was among the first to take up land under the squatter act which gave him the ownership of all the land he could inclose or cultivate within one year.

According to his own story, and he is still a hale and hearty man, although well beyond the three score years and ten allotment, he says his wife was the better man of the two in staking out their claim. The understanding, as he explains it, was that they were to get free all the land they could inclose with a three-rail fence within twelve months, so for one whole year he and his wife were putting up this fence, which inclosed an immense tract of land, which they afterward cultivated or turned into great pasture fields which eventually became filled with flocks of sheep and cattle.

From this story we deduct the following curious problem: Let us suppose that the tract of land is exactly square and is inclosed by a three-rail fence, as shown in the sketch, and that each rail is exactly twelve feet long. Now, then supposing that there are just as many acres inclosed as there are rails in the entire fence. How many acres of land has Texas Pete got in his great cattle ranch?

Who may marry many a wife and still be single all his life? A clergyman.

Why is a plum-pudding like the ocean? Because it contains many currants.

Of what trade is a minister at a wedding? A joiner.

What three misses are those whose days are always unlucky? Mis-chance, mis-fortune and mis-hap.

What miss is always making blunders? Mistake.

What misses are of a very jealous tempers? Mis-give and mis-trust.

Why is an umbrella a paradox? Because it is best when used up.

When does the shoemaker display wonderful powers of endurance? When he holds on to the last.

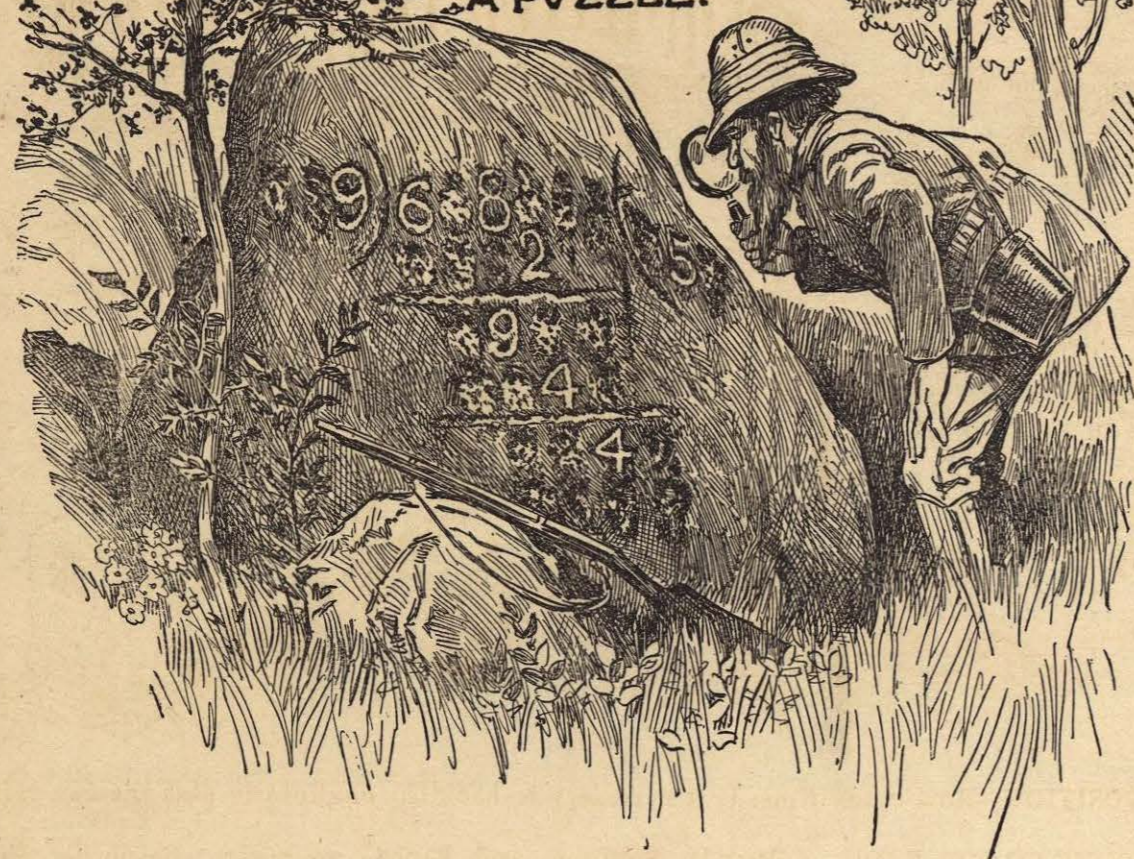
What part of the face resembles a schoolmaster? The eyelid, because it always has a pupil under the lash.

At what time of life may a man be said to belong so the vegetable kingdom? When long experience has made him sage.

Which is the gayest letter in the alphabet? U, because it is always in fun.

When is a very angry man like a clock fifty-nine minutes past twelve? When he is just going to strike one.

# MISSING NUMBERS A PIZZLE.



**PROPOSITION**—Can you restore the missing numbers?

**ONCE AGAIN** DISCUSSION has been revived concerning the meaning of the hieroglyphic numbers engraven on Mormon Rock. Mormonism originated only so far back as 1830, so if these wheather beaten figures have anything to do with the Latter Day Saints there should be thousands of persons qualified to tell all about them, unless, as some claim, they pertain to the forbidden mysteries.

The Mormons migrated in 1838 from Kirtland, O., to Nauvoo, the "City of Beauty," in Illinois, and to Salt Lake in 1848. When they left Nauvoo they boasted that their line of march would be twenty-four miles long, and was to be headed by a printing press to issue the daily orders of the prophet. It was stated that they were divided up into numerous companies, each one headed by one of the prophet's wives, and the mysterious figures on Mormon Rock were supposed to give the number of pilgrims to each division.

The figures look like a sum in division engraved upon a sandstone

rock. Most of the numbers are illegible, but as some few are sharp and clear it is to be assumed that the others were erased maliciously or for a purpose. It is now claimed that either through accident or design the eight legible numbers furnish a key to the mystery, and that the whole is a sum in long division which tells just how many pilgrims marched with each division, and incidentally gives a clue to the number of the prophet's matrimonial ventures.

It is a remarkable coincidence that the remaining numbers furnish a clue which easily solves a most interesting historical puzzle, for if you will write down the sum in long division, mixing stars with the legible figures as shown, you should speedily be able to guess the numbers which have been erased so that the sum will prove. It really looks as if there should be scores of correct answers, and yet so far as I am aware, but one satisfactory restoration of the missing numbers has been suggested.

Why are men like facts? Because they are stubborn things.

Why does a cat look on first one side and then another when she enters a room? Because she can't look on both sides at the sametime.

Why is a widower like a young baby? Because it cries a great deal the first six months, looks around the second six months, and has hard work to get through his second summer.

Why is Philadelphia more subject to earthquakes than any other city? Because she is a Quaker city.

Why is a policeman on his beat like an Irishman rolling down a hill? Because he's patrolling (Pat rolling).

If the alphabet were all invited out to supper, in what order would they come? They would all get there down to S, and the rest would come after T.

What would contain all the snuff in the world? No one nose (knows).

Why is a hound like a man with a bald head? Because he makes a little hare (hair) go a long ways.

Why does a sculptor die a most horrible death? Because he makes faces and busts.

# PRIMITIVE RAILROADING

PROBLEM  
BY  
SAM LOYD



**PROPOSITION**—How many times is it necessary to back the engines to pass the two trains?



**WING TO THE WIDE-** spread interest taken in a simple little Rail Road Switch Problem which I sprung upon my friends

some time ago, as well as in response to the request from many for another practical lesson in railroading, I present one which is an offshoot from the first, and illustrates the difference between side-tracking a train or passing it through a Y branch, which reverses the direction of the trains. In this specimen of primitive railroading we have an engine and four cars meeting an engine with three cars, and the problem, as in the previous one, is to ascertain the most expeditious way of passing the two trains by means of the switch or side-track, which is only large enough to hold one engine or one car at a time. No ropes, poles or flying switches are to be used, and it is understood that a car cannot be connected to the front of an engine. It shows the primitive way of passing trains before the advent of modern methods, and the puzzle is to tell just how many times it is necessary to back or reverse the directions of the engines to accomplish the feat, each reversal of an engine being counted as a move in the solution.

**Pounds, Shillings and Pence Mixed With Dollars and Sense.**



An advocate of our decimal system of currency refers to the well-understood feature that the removal of the decimal point does not change the value of the sum-total of a given sum of money. For example, take \$90.16.2, which represents ninety dollars, sixteen cents and two mills, and remove all the decimal points, and we have 90,162 mills, which does not change the value. When the writer, however, says that this cannot be done with English money he errs, and we invite him, as well as our army of puzzlists, to solve the following:

Find a certain sum of English money, in pounds, shillings and pence, the value of which will not be changed by the removal of the separating dots.

**Dollars and Sense Puzzle.** Here is another problem on what

we might term similar dissimilar lines, which goes to prove that the Yankee dollars are just as smart as the English pounds. A puzzling financier discovered that any number of £, s., d., reversed and subtracted will always produce 19s. 11d., or a multiple thereof. For example, take any amount below ten pounds, say:

|          |   |    |    |
|----------|---|----|----|
|          | £ | s. | d. |
|          | 9 | 6  | 8  |
| Reversed | 8 | 6  | 9  |
|          |   | 19 | 11 |
| Or again | 8 | 6  | 2  |
|          | 2 | 6  | 8  |
|          |   | 5  | 19 |
|          |   |    | 6  |

which is six times 19s. 11d.

The interesting feature of the puzzle is the statement that "no one has been able to explain this curious relationship of pounds, shillings and pence!"

Cannot some of our clever puzzlists give the why and wherefore of this curious action of the English money, by showing by means of an example that the same phenomenon applies to our own. United States currency as well?

When does a dentist do the most work? When he extracts several acres (achers).



COUNTING  
THE  
COINS  
PUZZLE  
BY  
SAM JOYD.

PROPOSITION—Tell how much money each of the men had when they commenced to play.



HAVE ALWAYS found the young folks to be particularly clever at all manner of tricks with coins, so here is one which will please them, and at the same time make them more familiar with our United States money.

Three Milwaukee Dutchmen played pinochle for two days without stopping, and when they adjourned it was found that Claus had won just 8 cents and his brother Karl 22 cents. The problem which I want the young folks to find out is to prove just how much money the other fellow, Heindrichs, had when the play ended, for, as you see in the picture, each has just two coins, and those six coins, which are worth a total of just \$3, represent all the money belonging to the party. It is to be assumed that the money that they now have is all that they had when they started the play, so that the score for beer and pipe, which must be settled for, does not pertain to the problem.

How They Made Love in Puzzle-  
dom.

Here is a little story told in verse which should greatly interest our sweet young women puzzlists:

He dwelt in Massachusetts,  
An she in Muscatine;  
And they liked the "Puzzle Corner"  
Of the Hogwash Magazine.

She could reverse, eviscerate,  
And syncopate a word,  
Add two-fifths of a famous man  
And find a common bird,

And the thing whose 8, 4, 1  
Was a flower, and 6, 7, 2,  
11, 9, 6, 3, 14, 4  
An antique city knew.

She used to send solutions in  
And signed them "Dimple Dew,"  
While he successful answers gave  
As "Montfort Montague."

Cupid o'er Massachusetts flew,  
And over Muscatine,  
And fed the flame that gradual grew  
With the Hogwash Magazine.

Until one day the editor  
Offered a handsome pize  
For those who 'tween his 2d and 1st.  
His third could recognize.

"Dimple Dew" and "Montague"  
The sole replies sent in;  
She got an oroide penhandle,  
He an Alaska pin.

Their names upon the "Roll of  
Fame"

Were printed side by side;  
He from the editor got her name  
And he claimed her for his bride.

"Oh, be my first," he wrote, "and I  
'My second' and my third,  
And my sixteenth, and finally  
Henceforth shall deem absurd."

And she wrote by return of post:  
"Décapitate a glove,  
Prefix an orb and add a sheep  
And let that tell my love."

He packed his carpet 2, 1, 7,  
And went to Muscatine,  
They wedded there and took a file  
Of the Hogwash Magazine.

And spent a rapturous honeymoon  
As blythe as joyous birds,  
And found their second was their  
first  
And 8, 6, 3 and 4 was thirst  
And syncopating words.

Why is a buckwheat-cake like a  
caterpillar? Because it is a kind  
of grub that it makes the butter-fly.  
What is that which has neither  
flesh nor bone, yet has four fingers  
and a thumb? A glove.

Barnum drove a ten-in-hand  
through New York city, and his  
horses had only twenty-four feet  
among them; how was that? They  
had twenty fore feet.

When is the sun a mechanic?  
When it is a Mason (May sun).

Of what trade are all the Presi-  
dents of the United States? Cabi-  
net-makers.

THE PUZZLE OF  
THE DUTCHMEN AND THEIR WIVES



PROPOSITION—Guess the names of the men and their wives.



OME OF THE OLD Dutch customs are yet preserved of trading cattle, poultry and farm products in odd numbers and quantities pertaining to each variety, such as to buy eggs by the score, some things by the dozen, others by bushel, peck or small measure, sugar by the three and half pounds, etc., etc.

This custom explains a curious old problem, published a couple of centuries ago in a unique collection of anecdotes of old Manhattan, with which many are familiar, but which for apparent lack of perspicuity has caused its meaning to be questioned.

In the language of this quaint old volume, it says: "There came three Dutchmen of my acquaintance to see me, who, being recently married, brought their wives with them. The men's names were Hendrick, Claas and Cornelius, the women's Geertring, Catrun and Anna, but I forgot the name of each man's wife. Well, they told me that they had been to market buying hogs, each person buying as many hogs as they gave shillings for one hog. Hendrick bought 23 hogs more than Catrun, and Claas bought 11 more than Geertring. Likewise they said that each man laid out three guineas more than his wife. Now, what I want to know

is whether it is possible from this description of their purchases to tell the names of each man's wife?"

The inference was that the merry party got so befuddled over their beer and schnapps that they could not tell just who was who, so the worthy landlord finds himself compelled to sort out the different couples properly, by a process of extracting the square roots of the hogs; the squares of the money and the squares of the men and their wives!

It is a curious problem which yields readily to experimental puzzle methods, so everyone is expected to solve it.



Guessing-Match

A guessing-match about cats is entertaining. Write out the following list for each competitor without giving the answers, which are here printed in parentheses, and the ones guessing the largest number wins:

- An aspiring cat (catamount).
- A cat that can swim (catfish).
- A cat that can fly (cat-bird).
- A cat that will be a butterfly (caterpillar).

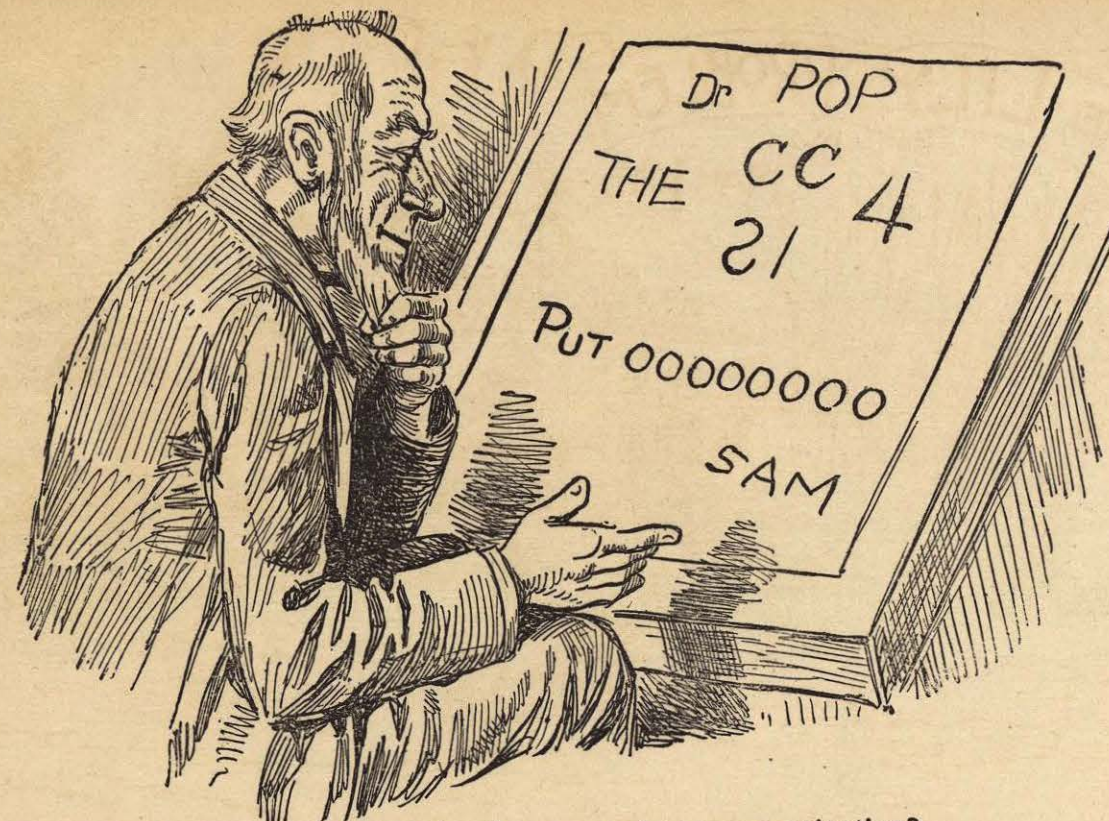
- A cat's near relations (catkin).
- A horned cat (cattle).
- A cat that throws stones (cata-pult).
- A tree cat (catalpa).
- A water cat (cataract).
- A cat that flavors the grapes (Catawba).
- A cat that covers acres of grounds (cataclysm).
- A subterranean cat (catacomb).
- A cat that, living, appears dead (catalepsy).
- A cat prized as a gem (cat's-eye).
- A cat with a cold (catarrh).
- A cat that is good to eat (catch-up).
- A cat that asks questions (catechism).
- A library cat (catalogue).
- A dangerous cat (catastrophe).

Why would it be impossible to starve in the desert of Sahara? Because of the sand which is (sandwiches) there.

How did the sandwiches get there? When Ham was sent there with his followers, who were bred (bread) and mustered there.

Why can you never expect a fisherman so be generous? Because his business makes him sell fish.

Why was a defeated candidate after the late election, like the earth? Because he was flattened at the poles.



**PROPOSITION**—Can you decipher the above mysterious communication?

**H**AVE JUST RECEIVED a puzzling communication from that boy of mine, who is studying at an agricultural college in New Jersey, and the reading of the same has bothered me and Mandy considerably. He is making great progress he tells us, nevertheless, some of his reports are so mysterious and baffling that I am compelled to ask the assistance of our clever puzzlists to decipher this one. It strikes me as being what in the old days we used to term a rebus puzzle, which conceals some sort of a cryptogramic message or other, which can be guessed or read, if you are smart enough to master it.

He has such funny ways of writing everything that he keeps his freinds guessing all the time. He wrote Utica, UTK and Tennessee XEC, and Ohio he described as oO, although by transposing them to Oo he says it means owe nothing, all of which is mentioned to assist you in deciphering his cryptogramic letter, so, if you have XAIOOT you will find his XAIOOT meaning. All of which is suggested by Dr. Whewell's letter to a young lady. "You O a O, but I O thee, O, O no O, but O, O me, & O, let my O no O go, But give OO I O you so!"

**The Great Diamond Robbery.**

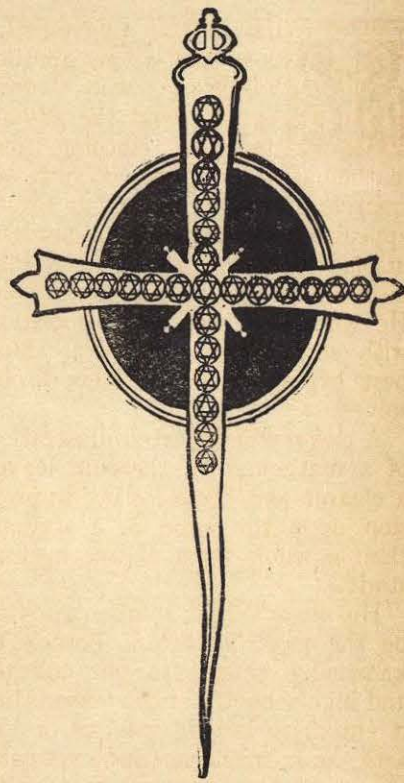
In one of Dumas' narratives of noted criminals mention is made of a certain jeweler of the Rue Faubourg St. Honore, who during a long career of crime had robbed many ladies of distinction of their finest gems, either by substituting imitations or by changing the positions of the stones so that their abstractions would not be detected.

To illustrate the clever rascal's mode of procedure let us look at the accompanying antique pin containing twenty-five diamonds. The lady who owned it had been accustomed to count down from the top and branch out from the centre, right, left or down so as to always count thirteen.

She had this particular piece of jewelry repaired by the noted criminal referred to, and remembered showing her method of counting the diamonds, which the polite jeweler again called her attention to when returning the same. For many years afterwards she continued to count them in the same way, always finding the thirteen to be correct as before, and yet two of the finest gems had been purloined! How did the ingenious thief conceal the crime?

Here is a sketch of the antique pin with the twenty-five diamonds

as it was when the jeweler received it:



Why is a man who never bets as bad as a gambler? Because he is no bettor (better).

Why is the root of the tongue like a dejected man? Because it's down in the mouth.

What is that which we often return, but never borrow? Thanks.



**PROPOSITION**—If the water lily is ten inches above the water, and disappears under the surface at a point distant twenty-one inches, what is the depth of the lake?

**T**HE POET LONGFELLOW was a fine mathematician who often spoke about the advantage of clothing our mathematical problems in such attractive or congenial garb as would appeal to the fancy of the student in place of following the dry, technical language of the textbooks. He would connect the proposition with some familiar subject which best explains the problems to be solved.

A clever kindergarten illustration of a mathematical theorem leaves a clearer and more lasting impression upon the mind of a student than a whole term of uncongenial study.

He always held mathematics to be the most important branch of knowledge taught in our colleges and high schools, for the reason that it enters so largely into all of the arts and sciences, and yet the average student graduates with such an undying aversion to figures that he speedily dismisses all recollections of them from his mind.

The water lily problem is one of several introduced in Longfellow's "Kavanah," written while occupying the Chair of Modern Languages in Harvard University, 1849. It is so simple that anyone, even

without a knowledge of mathematics or geometry, could solve it with a pair of compasses or rule, and yet it illustrates an important geometrical truth in a never-to-be-forgotten way, which many graduates have never grasped at all.

I forget the exact language of the problem, as he described it to me personally during a discussion of the subject, but he told of a water lily growing in a lake; the flower was one span above the surface of the water, and when swayed by the breeze would touch the surface at a distance of two cubits, from which data it was desired to compute the depth of the lake.

Now, let us suppose, as shown in the sketch, that the water lily is ten inches above the surface of the water, and that if it were pulled over to one side it would disappear under the surface at a point distant twenty-one inches from where it now stands, say just where the young lady is supposed to have drawn it, which shows that the two flowers are anchored to the same root at the bottom of the lake, what is the depth of the water?

**To Tell a Person's Age.**

This method is the easiest and best one known. Let the person whose age is to be discovered do

the figuring. Suppose, for example, a girl is 13 and was born in November, put down the number of the month. (November is the eleventh month.)

|                     |      |
|---------------------|------|
|                     | 11   |
| Multiply by 2.....  | 2    |
|                     | 22   |
| Add 5.....          | 5    |
|                     | 27   |
| Multiply by 50..... | 50   |
|                     | 1350 |
| Add age (13).....   | 13   |
|                     | 1363 |
| Subtract 365 .....  | 365  |
|                     | 998  |
| Add 115 .....       | 115  |
|                     | 1113 |

As she answers 1113, tell her her age is 13 and November is her birth month. This test never fails up to 100. In computing ages under 10, a cipher will appear prefixed in the result, but no notice is taken of it.

Why would an owl be offended at your calling him a pheasant? Because you would be making game of him.