

Why and When Lamps Explode.

All explosions of coal-oil lamps are caused by the vapor or gas that collects in the space above the oil. When full of oil, of course a lamp contains no gas, but immediately on lighting the lamp, consumption of oil begins, soon leaving a space for gas, which commences to form as the lamp warms up, and, after burning a short time, sufficient gas will accumulate to form an explosion. The gas in a lamp will explode only when ignited. In this respect it is like gunpowder. Cheap or inferior oil is always the most dangerous.

The flame is communicated to the gas in the following manner:—The wick tube in all lamp burners is made larger than the wick which is to pass through it. It would not do to have the wick work tightly in the burner; on the contrary, it is essential that it move up and down with perfect ease. In this way it is unavoidable that space in the tube is left along the sides of the wick sufficient for the flame from the burner to pass down into the lamp and explode the gas.

Many things may occur to cause the flame to pass down the wick and explode the lamp.

1. A lamp may be standing on a table or mantel, and a slight puff of air from the open window, or the sudden opening of a door, cause an explosion.
2. A lamp may be taken up quickly from a table or mantel and instantly explode.
3. A lamp is taken into an entry where there is a draft, or out of doors, and an explosion ensues.
4. A lighted lamp is taken up a flight of stairs, or is raised quickly to place it on the mantel, resulting in an explosion. In all these cases the mischief is done by the air movement—either by suddenly checking the draft, or forcing air down the chimney against the flame.
5. Blowing down the chimney to extinguish the light is a frequent cause of explosion.
6. Lamp explosions have been caused by using a chimney broken off at the top, or one that had a piece broken out, whereby the draft is variable and the flame unsteady.
7. Sometimes a thoughtless person puts a small-sized wick in a larger burner, thus leaving considerable space along the edges of the wick.
8. An old burner, with its air-drafts clogged up, which rightfully should be thrown away, is sometimes continued in use, and the final result is an explosion.—*Sci. American.*

Family Matters.

The best friends are those who stimulate each other to do good.

If you give love to others, they will return it with interest, and, if you hate you will be paid in the same coin.

No true artist ever yet worked for ambition. He does the thing that is in him to do by a force far stronger than himself. The first fruits of a man's genius are always free from greed.

It is a secret known but to few, yet of no small use in the conduct of life, that, when you fall into a man's conversation, the first thing you should consider is whether he has a greater inclination to hear you, or that you should hear him.—*STEELE.*

The woman who has no sense of beauty, and who lives only for herself—the woman who has no sense of love, and who cannot compass its divine sacrifice, its exquisite self abnegation; and she who has no sense of modesty—not one of these is woman pure womanly—the woman by whom men are ennobled and the world kept pure.

There is no soil for the roots of a true man which is better than the soil that trouble makes—when it is trouble; for that which other folk think to be trouble is not necessarily trouble to you; and that which in you is trouble may not be necessarily be trouble to other people. Each man, in his own nature and circumstances, finds what trouble is to him; and it is the thing which you cannot bear that you must bear to make yourself a man.

MEN WITHOUT OCCUPATION.—The man who has nothing to do is the most miserable of beings. No matter how much wealth a man possesses, he can neither be contented nor happy without occupation. We can find a field for usefulness almost anywhere. In occupations we forget our cares, worldly trials, and our sorrows. It keeps us from constantly worrying and brooding over what is inevitable. If we have enough for ourselves, we can labor for the good of others; and such a task is one of the most delightful duties a worthy and good man can possibly engage in.

Uncle Tom's Department.

MY DEAR NEPHEWS AND NIECES,—Here it is April again. What if it is April? Sure enough what. Well, we all know that a quarter of another year has passed and gone, and our beautiful spring is again with us. When we look out and see the sun shining so brilliant and warm, it reminds us that we can soon prepare our gardens, for the season of flowers and sweet perfumes is close at hand, though we must expect to have cold winds yet. How are your house plants after our cold winter? I have been very unfortunate with mine, having forgotten to remove them from the window, consequently, had them frozen, and was obliged to cut them down. Fresh shoots have sprung up again, and are now looking fresh and beautiful. I let them get all the sunshine that is possible and wash them frequently with water, for if in a room where you are constantly in, a great deal of dust adheres to them, which must prevent them from breathing freely. I also find it is a good plan to put a few drops of ammonia in the water used for watering. Some of my nephews and nieces are, no doubt, thinking of their Easter holidays, or, probably, ere this reaches you, will be at home enjoying them, no doubt, devising all manner of plans for making an "April fool" of some of your companions. One of my little nephews says his father has given him an acre of land to cultivate, and plant and sow as he pleases. He says he intends to plant some corns and beans, also some potatoes, cabbage and cauliflower. He thinks he will also try a few melons, cucumbers, and a bed or two of onions. He is going to see how much he can make from his acre, and buy a calf and sheep, which his father says he will furnish food for. I think this a good plan, and would suggest that many fathers encourage their boys in some similar manner. It not only furnishes them with a little private money, but teaches them to calculate and take the responsibility of their miniature farm upon themselves. I hope to hear from many of my little nephews, and of their different modes of cultivating the little corner that their father may allow them to have.

UNCLE TOM.

Puzzles.

52—NUMERICAL ENIGMA.

I consist of 20 letters.
My 17, 14, 9, is a month;
My 2, 19, 4, is a house for travellers;
My 1, 5, 3, 16, is a place for stamping coin;
My 7, 8, 15, 20, is a kind of sale;
My 12, 11, 11, 9, is a whirlpool;
My 13, 18, 8, 10, 6, is a kind of grain collectively.
My whole may be seen in the FARMERS' ADVOCATE every morning.

ARCHY G. TAYLOR.

53—DIAMOND PUZZLE.

A consonant; the whole; a color; fragile; broken; name of a race of Kings of England; a species of antelope; currents; a coin; a number; a consonant.

EDNA CLIFFORD.

54—SQUARE WORD.

Not soft; extent of territory; true; a valley.

55—SQUARE WORD.

To increase; hoar frost; a sign; part of the vest; to go.

KITTY LOVE.

56—NUMERICAL PUZZLE.

I am composed of 15 letters.
My 4, 13, 5, 13, 11, is good feed for animals;
My 8, 1, 14, 15, is a troublesome insect;
My 9, 7, 2, 3, is a kind of grain;
My 9, 1, 6, 10, is a place of proverbial industry.
My whole is what every farmer should do.

HENRY PROLEMY.

57—THREE CONCORDS.

1. Why is a man who has had his eye put out like the majority of schoolmasters?
2. When is iron most ironical?
3. What chemical instrument is like a written reply?

MARY LEE.

58—ENIGMA.

If you would my nature know,
Seek for me in frost and snow;
On the slope of the lofty mountain,
In the cool and flowing fountain.
On Norway's coast I have been found,
But in Sweden ne'er have been;
In populous towns you hear my sound,
But ne'er in peaceful village green.
In Russia you might seek in vain,
It would only give you needless pain;
But where the mighty ocean rolls,
You'll find me, and at both the poles.

LUCY MILLS.

59—CHARADE.

My first I must confess to you,
Is contrary to being true;
My third a number is, I ween,
And you I think will do between;
My fourth an insect may be reckoned.
In rank my whole is termed the second.

If ever you my final see,
You'll say five hundred it must be;
And second reference has to me.
My third a portion of our dress;
And if my whole you wish to guess,
It means to trip or dispossess.

My first is great without a doubt;
A ring you'll find my second;
You must do third to make me out,
If I have rightly reckoned.
Now in my total when combined,
Blind zeal or superstition find.

60—ANAGRAMS—EUROPEAN TOWNS.

1. Ten marches.
2. Mad retort. A noble car. Sell a miser. Said to men. Ah, I can't stir.

61—FLOWERS.

Waste them Willie. Eat coal Charley. Catherine's hat. The King's a victor. Cannot hear it. Ha, love till I fly.

Make names of flowers from the above letters.

62—LOGOGRIPH.

Complete, a noble river
In England I will name;
Curtail me and transpose me,
I am of Irish fame;
Cut off the final letter,
Behold I'm used for food;
Transpose, I draw the wagon,
A heavy load of wood;
Again if you transpose me,
You'll own I am not wild;
Another transposition
Discloses man or child;
But whether man or child it be,
It always goes in company.

- 63— I am a pretty flower's name;
If you in two divide the same,
And take the latter half away,
A color I then display.

Names of Those Who Have Sent Correct Answers to March Puzzles.

Edna Clifford, Henry Ptolemy*, Archy J. Taylor, Harry W. Huband, John Bunyan, Kitty Love, J. Drummond Dickson, Janet Hartley, Jane Dixon, Ada Gibbons, Laura Gemley, William Ford, James Garthurs, Harriet Cox, Fred Baird, Helen Anderson, Mary Jane Flock, Minnie Morris, Dora McPherson, Susan Jones, Lucy Priddis, John Jones, Nanie Henderson, Eleanor North, Frank Luce, Mary Lee, John Wright, Samuel Gunn, A. J. Smith, Nora Hooper, Jane Shore, Maggie Johnson, Sarah Lemon, Rosie McNorton, William Dyson, Oliver Godfrey, Arnold McNeil, Maude Lynn, Jennie Godson, J. Simpson, Louie Fairbrother, Jacob Leach, Tabitha Doust, Kittie Lowe, B. Stewart, Ida May.

We place a star as a mark of honor at the name of the one who answers the greatest number of puzzles.

Answers to March Puzzles.

36.— K
O N E
M O O N S
A N S W E R S
K N O W L E D G E
S T R E E T S
L A D L E
A G E

37.—A pair of spurs. 38.—A blush. 39.—Thames, Tyne, Severn, Dee, Wye, Ouse. 40.—The moon. 41.—Captain Marryat. 42.—The sleeping fox catches no poultry. 43.—Sir John Franklin. 44.—Dairymen's Convention.