

DRUG STORE MAGIC

By ELI B. JOHNSON, Pharmacist



A Book That Everyone in a Drug Store or
Those Interested in Magic Should Have

INSTRUCTIVE — ENTERTAINING
PROFITABLE — EDUCATIONAL

The Only Book of Its Kind Published

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FOREWORD

The purpose of this book is to acquaint its readers with the mysteries of different chemicals found in drug stores. Whether you read it for pleasure or profit, you will gain both by studying the different reactions.

This book enables one to understand why the magician can take a simple drug and astonish an audience of well posted druggists. Please use caution in some of the fire experiments and handle those with care.

THE AUTHOR.

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- (3) Wine to water.
- (4) Wine to water.
- (5) Wine to water.
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MAGIC WITH LIQUIDS

WINE TO WATER

(1) Fill a small pitcher full of water and dissolve a small amount of ferric ammonium sulphate in the water. Then make up a small amount of sodium salicylate solution. Get two wine glasses, and in the first wine glass do not put anything; in the second wine glass put a few drops of sodium salicylate solution. Then you pour some water from the pitcher into the first wine glass. It will remain clear, but when you pour from the pitcher into the second wine glass it will take on the color of wine.

WINE TO WATER

(2) Fill a pitcher with a quart of clear water and in this dissolve one-fourth teaspoonful of permanganate of potash and two teaspoonsful of sulphuric acid. Then the liquid in the pitcher turns to a wine color. Get two empty glasses, and in the first do not put anything but in the second put a few drops of concentrated solution of sodium hyposulphite. When you pour the wine color from the pitcher into the first glass it remains the same color, but when you pour it into the second glass it changes back to water color.

WINE TO WATER

(3) Dissolve a small amount of sodium carbonate in a pitcher of clear water. Place four empty glasses on the table beside the pitcher of

water. In the first glass put a few drops of phenolphthalein solution, in the second glass do not put anything, in the third glass put a few drops of phenolphthalein solution, and in the fourth glass put a few drops of tartaric acid solution. Now pour the liquid from the pitcher into the four glasses. The first and third glasses will have a color produced in them like wine, while the second and fourth will resemble water. Continue the trick by pouring back into the empty pitcher the contents of the first, second and third glasses. In order to make this trick more effective, you drink a part of the liquid as it is non-poisonous, only having a bitter taste.

WINE TO WATER

(4) Mix a teaspoonful of phenolphthalein in a pitcher of clear water. Use two glasses. In the first glass pour a small amount of sodium carbonate solution, and in the second glass put a few drops of strong solution of tartaric acid. Pour the water from the pitcher into the first glass and it will appear like wine. Pour the water from the pitcher into the second glass and it will appear like water.

WINE TO WATER

(5) Get a pitcher and five empty wine glasses. Fill the pitcher full of clear water. In the first glass put a small amount of solution of iron chloride, in the second glass two drops of a strong solution of ammonium sulphocyanide, in the third glass twelve drops of ammonium sulphocyanide,

in the fourth glass twelve drops of tannic acid solution, and fill the fifth glass about half full of oxalic acid solution. Now begin the trick by pouring from the pitcher into the first glass. No change will be produced—it will look like clear water. Now pour the contents of the first glass back into the pitcher. Then pour from the pitcher into the second glass, which will produce a color like wine. Pour the contents of the second glass back into the pitcher, and from which fill up the third glass, which will also produce a color similar to wine. Pour the contents of the third glass back into the pitcher and then fill up the fourth glass from the pitcher. Now the liquid in the fourth glass turns to the color of ink. Pour the liquid from the fourth glass back into the pitcher, and again pour from the pitcher into the fifth glass, which this time looks like water. Last of all, pour the fifth glass back into the pitcher, and then fill all five glasses with the liquid from the pitcher, and all of them will have the appearance of water in them.

WINE TO WATER

(6) Get a pitcher and nine glasses. Fill the pitcher with nine glasses of water and ten drops of phenolphthalein solution. Line the nine empty glasses in a row on the table. Leave the first glass empty. In the second glass put three drops of caustic soda solution; leave the third glass empty; in the fourth glass put three drops of caustic acid solution; leave the fifth glass empty; in the sixth glass put three drops of caustic soda solution;

in the seventh glass two drops of sulphuric acid; in the eighth glass, six drops of caustic soda solution; and in the ninth glass eight drops of sulphuric acid. Now fill the first six glasses, and each will appear as full of wine. Empty these six glasses back into the pitcher and then fill the first seven glasses from the pitcher—they will appear as full of water. Now fill the eighth glass and it will appear as wine. Now empty all eight glasses back into the pitcher and from the pitcher again fill the same eight glasses. The first seven will appear as wine and the eighth will appear as water. Then pour all eight glasses back into the pitcher. Fill all nine glasses with the solution from the pitcher and all of them will have the appearance of water.

WINE TO WATER

(7) Get two wine glasses, and in the bottom of one put a few drops of tincture of iodine. In the second wine glass put a few drops of solution of sodium sulphite. Now pour water from a pitcher into the first glass and it will look like wine. When the wine liquid is poured into the second glass, it will change back to water.

WINE TO WATER

(8) Get three glass pitchers and two wine glasses. In the first pitcher put a small amount of solution of potassium sulphocyanide. In the second pitcher put a mixture of mercury sulphocyanide and bichloride of mercury. In the third pitcher put nothing. Now empty pitcher one and two into the third pitcher. Pour a part of the mix-

ture from the third pitcher into the first wine glass, into which a few drops of bichloride of mercury have been put, and you will get a color resembling sherry wine. Pour some of the mixture from the third pitcher into the second wine glass, in the bottom of which has previously been put a little red aniline dye, and you will get a liquid that resembles port wine.

WATER TO MILK

(9) Place two wine glasses half full of water on a table. Into one dissolve a few grains of sodium carbonate, and in the other dissolve a few grains of manganese sulphate. Now pour the contents of one glass into the other and you will get a color resembling milk.

WATER TO MILK

(10) Fill a pitcher with a quart of clear water. Dissolve two-thirds teaspoonful of potassium ferrocyanide in the pitcher. Use two glasses, leaving the first empty. In the other put a few drops of zinc sulphate solution. When you pour the liquid from the pitcher into the first glass it will remain the color of water, and when you pour the liquid into the second glass it will look like milk.

WATER TO MILK

(11) Get three empty glasses. Fill the first glass about one-third full of a strong solution of calcium carbonate. Fill the second glass about a third full of a strong solution of sodium carbon-

ate. In the third glass put a few drops of hydrochloric acid. Now empty the first two glasses together and you will get a milk colored liquid. Empty this milk colored liquid into the third glass and you will get a water colored solution.

WATER TO MILK

(12) Take three glasses. Fill the first half full of a solution of calcium oxide, the second half full of a solution of sodium carbonate, leaving the third glass empty. Then fill the third glass with the contents of the first and second glasses and you will get a milky solution.

BLOWING A CLEAR LIQUID WHITE

(13) Fill a glass half full of lime water. Add to this a half teaspoonful of sugar. Stir until the sugar dissolves. Now blow into the liquid through a glass quill and the solution will become milky.

MILK AND WATER

(14) Dissolve twenty full grains of sodium thiosulphite in three-fourths of a glass of water. In another glass one-fourth full of water dissolve ten grains of sodium bisulphate. Pour the one-fourth glass into the other glass, and in about five minutes the liquid will turn to a milk color. In order to make this trick more effective, show the glass full of clear liquid to the audience after you have mixed it. Then cover it with a handkerchief, let it stand about five minutes, uncover the glass and it will look like a glass of milk.

BLOWING A RED LIQUID CLEAR

(15) Dissolve four or five grains of sodium carbonate in a glass one-fourth full of water, and to this solution add two drops of phenolphthalein solution. The liquid will then turn red. Blow into this liquid through a glass straw for a few minutes and the liquid will become clear.

BLOWING A RED LIQUID WHITE

(16) Dissolve ten grains of calcium oxide and two teaspoonsful of sugar in a glass of water. Then add two drops of phenolphthalein solution. Blow through this solution and it will turn a milky color.

INK AND WATER MAGIC

(17) Dissolve ten grains of tannic acid in a wine glass half full of water; in another wine glass half full of water dissolve ten grains of iron sulphate. Now mix the two glasses together and you will get an inky solution.

INK AND WATER

(18) In a pitcher of water dissolve about twenty grains of iron chloride. Use two glasses. In the first put nothing, but in the second put a few drops of tannic acid solution. Now pour the water from the pitcher into the first glass and you will get the clear liquid. Pour from the pitcher into the second glass and you will get an inky solution.

INK AND WATER

(19) Use three glasses. Fill the first with water and in it dissolve a little ferric ammonium sulphate. In the second put a few drops of tannic acid solution, and in the third glass put a few drops of strong oxalic acid solution. Now pour from the first glass into the second glass, and you will get an inky solution. When you pour this inky solution from the second glass into the third glass, the solution will turn back to water.

WINE TO INK MAGIC

(20) In a pitcher containing a quart of water, dissolve a small amount of sodium sulphocyanide and iron chloride, which will result in a wine colored liquid. Now put a few drops of tannic solution in a glass and pour the wine colored liquid from the pitcher into the glass, and you will get an inky solution.

WINE AND INK

(21) Dissolve a small amount of ferric ammonium sulphate in a pitcher containing a quart of water. Use two glasses. Put a few drops of sodium salicylate solution in the first glass and a few drops of tannic acid solution in the second glass. Now pour the liquid from the pitcher into the first glass and you will get a wine colored solution. When you pour from the pitcher into the second glass, you will get an inky solution.

WINE AND INK

(22) Get two light bottles and two eight ounce glasses. Fill the first bottle with water and in it dissolve a little iron chloride. Fill the second bottle with water and also dissolve in it a little iron chloride. Put a little sodium sulphocyanide in the first glass, and a few drops of sodium ferrocyanide solution in the second glass. Now ask someone to pour from the second bottle into the second glass, and he will get an ink color, while you pour from the first bottle into the first glass and get a wine color.

WINE AND INK

(23) Get three glasses and fill one-third full of water. In the first put a small amount of ferric ammonium sulphate. In the second glass put a few drops of sodium salicylate solution, and in the third glass put a few drops of sodium ferrocyanide solution. Now pour the colorless liquid from the first glass into the second and you will get a wine colored liquid. Now pour the wine colored from the second glass into the third and you will get an inky solution.

MYSTERY BLUE

(24) Get six empty glasses and a pitcher. Fill the pitcher with six glasses of water, and in the water dissolve a small amount of ferric ammonium sulphate. Put a few drops of solution of sodium ferrocyanide in the bottom of each of the empty glasses. Pour the water from the pitcher into the glasses and you will get six glasses of blueing.

RED, BLUE AND GOLD MAGIC

(25) Place three glasses on a table and fill them half full of water. In the first glass dissolve a small quantity of sodium ferrocyanide, and in the second glass the same amount of sodium bisulphite. In the third glass dissolve a small amount of sodium salicylate. Fill a pitcher with a pint of water and dissolve a small amount of ferric ammonium sulphate in the water. Then pour from the pitcher into the glasses and in the first you will get a blue color, in the second glass a gold color and in the third glass, a red color.

RED, BLUE AND BLACK MAGIC

(26) Fill a pitcher with three glasses of water. Dissolve a small amount of ferric ammonium sulphate in the pitcher of water. Then get three empty glasses and in the first glass place fifteen drops of sodium salicylate solution, in the second glass, place fifteen drops of sodium ferrocyanide solution, and in the third glass place fifteen drops of tannic acid solution. Pour from the pitcher into the first glass and you will obtain a red color, from the second glass a blue color and from the third glass a black color.

RIVER WATER

(27) Fill two glasses half full of water. In the first glass dissolve a small amount of iron chloride, in the second glass, a small amount of sodium carbonate. Now pour the two glasses into a third glass and you will obtain a color like muddy river water.

FLAG COLORS

(28) Pour three glass of water into a pitcher. Dissolve a small amount of ferric ammonium sulphate in the pitcher. Obtain three empty glasses and in the first glass put a few drops of sodium salicylate solution.

In the second glass do not put anything and in the third glass put a few drops of sodium ferrocyanide solution. When you pour from the pitcher into the glasses you will get a red color in the first, a white color in the second and a blue color in the third.

DISSOLVING SMOKE IN A LIQUID

(29) Dissolve a small amount of hypo in a glass of water. Get an empty glass and put a few drops of sulphuric acid in it. Pour the water from the first glass with the water into the one with the sulphuric acid. Now cover the glass with a handkerchief and tell the audience that you are going to dissolve smoke in the liquid. Light a cigarette and stand off a few feet and blow the smoke toward the glass. When you uncover the glass you will find a milk colored liquid. The secret of this trick is that when you first pour the water from the first glass into the other glass, it takes a few seconds for it to change, thereby giving you a chance to show the liquid to the audience before covering with a handkerchief for the change to take place.

MAGIC HANDKERCHIEF

(30) Fill three glasses with water. In the first dissolve a little iron chloride, in the second dissolve a little potassium sulphocyanide, and in the third dissolve a little potassium ferrocyanide. Dip a handkerchief in the first glass, and you will only wet the cloth. Wring the handkerchief out and dip it into the second glass. It will be dyed a red color. Wring the handkerchief out again and dip into the third glass; this time it will be dyed a dark blue.

GREEN HANDKERCHIEF

(31) Fill two glasses with water. In the first dissolve some cobalt chloride, and in the second some sodium ferrocyanide. Dip your handkerchief in the first, take it out, and wring. Now dip it into the second glass and it will be dyed green.

KNOCKING BLOOD OUT OF YOUR FINGER

(32) Put a few drops of phenolphthalein solution in a glass filled with water. Under your fingernail put a little sodium carbonate. Using a hammer, make it appear to the audience that you hit your finger. Now stick your finger in the glass and stir the solution, and it will become a blood red color.

KNOCKING INK OUT OF YOUR FINGER

(33) Pour enough tincture of iodine in a glass of water to tint it a light brown. Now stick a little starch paste on your fingernail. After you

pretend to the audience that you have hit your finger, stick it in the glass, stir it around, and the liquid will turn to the color of ink.

WINE, INK AND WATER MAGIC

(34) Dissolve in a pitcher filled with seven glasses of water a small amount of tannic acid. Prepare seven empty glasses as follows: In the first glass put nothing, in the second a few drops of iron chloride, in the third glass nothing, in the fourth glass a few drops of iron chloride, in the fifth glass twelve drops of oxalic acid solution, in the sixth glass ten drops of strong ammonia water, and in the seventh glass sixty drops of sulphuric acid. When you fill the first four glasses from the pitcher you will get the following results: first glass water, second glass ink, third glass water, and fourth glass ink. Now empty the four glasses back into the pitcher, and then fill the first six glasses. The first four will be the color of ink, the fifth glass the color of water, and the sixth glass the color of wine. Pour the liquid from the six glasses back into the pitcher, and then fill all seven glasses. The first six glasses will be the color of wine, and the seventh glass will be the color of water. Now empty all seven glasses back into the pitcher, and then refill them from the pitcher. This time the liquid in all seven glasses will resemble water.

CHAPTER II

MAGIC WITH FIRE

Caution: In the following fire experiments use caution so that you will not burn yourself or someone else. Use caution also in mixing chemicals.

LYCOPodium FLASH

(1) Place a lighted candle on a table. Throw a pinch of lycopodium into the flame—a beautiful flash will result.

SILVER FLASH

(2) Throw some powdered aluminum into the flame of a candle. The result will be a silver flash.

GOLDEN FLASH

(3) Place a lighted candle on a table. Throw some iron filings into the flame. A beautiful golden color will be the result.

WHITE FLASH

(4) Throw a pinch of powdered magnesium into the flame of a lighted candle, and you will secure a white flash.

COMBINATION FLASH

(5) Place a lighted candle on a table. Mix some lycopodium, powdered aluminum and iron

filings together and throw into the flame. This will cause a beautiful color to flash.

SILVER FIRE

(6) Put a piece of glowing charcoal into a dish. When you sprinkle a few grains of silver nitrate on the charcoal, it will look like pure silver has been sprinkled on it.

BLUE FIRE

(7) Mix together carefully:

Powdered potassium chlorate	4	drams
Powdered copper sulphide	1	dram
Powdered copper oxide	1/2	dram
Powdered sulphur	2	drams
Powdered mercurous chloride	1	dram
Powdered charcoal	1/2	dram

RED FIRE

(8) Mix together carefully:

Powdered strontium nitrate	2	drams
Powdered potassium chlorate	6	drams
Powdered mercurous chloride	2	drams
Powdered sulphur	1 1/2	drams
Powdered shellac	1/2	dram
Powdered charcoal	1/2	dram

GREEN FIRE

(9) Mix together carefully:

Powdered borium nitrate C.P.	6	drams
Powdered potassium chlorate	3	drams
Powdered sulphur	1 1/2	drams

Powdered shellac	1/2 dram
Powdered mercurous chloride	1 dram
Powdered charcoal	1/2 dram

YELLOW FIRE

(10) Mix the following together carefully:

Powdered potassium chlorate	3 drams
Powdered sodium oxalate	1 dram
Powdered sulphur	1 1/2 drams
Powdered shellac	1/2 dram

PURPLE JAR

(1) Heat a pyrex dish or jar. After it has become hot, throw a few flakes of iodine in it. It will become full of purple colored vapor.

MAGIC SNAKES

(12) These magic snakes are the kind you see sold in magical supply houses. They are shaped like a cone or funnel, and when you light the small tip end the snake seems to crawl out. There are several different ways of making them, and we give you the following suggestions:

Take mercuric sulphocyanide and shape it into a small cone. When the end is lit, the snake appears.

Another way is to mix the following, and press into small cones:

Powdered michromate	1 dram
Potassium nitrate	1/2 dram
Powdered sugar	1/2 dram

When the ends of the cones are lit the snake appears.

FIRE BANDS

(13) Soak several pieces of cloth or paper about two inches wide and six inches long in a strong solution of alum. After they have thoroughly soaked, remove them and let them dry. When completely dry, take a paint brush and paint them lengthwise with a strong solution of potassium nitrate. When you again let them dry, you can light a match to them anywhere along the line of length and the bands will burn but will not be consumed by the fire.

AUTOMATIC WICK

(14) Set an old fashioned kerosene lamp on the table. Now mix together one-half dram of granulated sugar and one-half dram of potassium chloride. Remove the chimney from the lamp and put some of this mixture on the wick. Let a drop of sulphuric acid fall on the wick and it will light.

HUMAN BLOW TORCH

(15) Dissolve two drams of white phosphorus and twelve drams carbon bisulphide in a bottle and cover tightly. Dip a piece of paper into the solution. When you hold the paper away from the face and blow on it, the paper will burn as quickly as the carbon evaporates from it.

FIREPROOF HANDKERCHIEF

(16) Soak a handkerchief in sodium hypsulphate. After drying it can be held in a flame without burning.

Soak a handkerchief in a strong solution of alum. After drying, you can hold it in a flame and it will not burn.

HUMAN FIRE EATER

(17) Soak a piece of clothesline overnight in a strong solution of potassium nitrate. After it has dried thoroughly, cut it into small pieces. Light one of these pieces and put in a ball of tow. Be sure that the tow covers the smoking cord. Now place in the mouth. When you blow through the mouth, clouds of smoke and sparks will fly out. If the heat becomes uncomfortable, simply close the mouth and breathe through the nose. *Caution: Do not inhale the breath through the mouth while the cord is in it.*

MAGIC FLAMES

(18) This can be used for several effects—sprinkling on a hot piece of metal, on an open hearth or in the open fireplace. It burns with different colored flames. Mix equal parts of powdered barium chloride, powdered strontium nitrate, powdered calcium chloride, powdered sodium chloride, and powdered potassium nitrate.

QUICK BURNING CIGARETTE

(19) Soak the tobacco in a solution of potassium nitrate and let dry. When you light the cigarette, it will burn very rapidly. These are the kind you buy at magical supply houses.

POPPING CORD

(20) Soak a piece of cotton cord in a strong solution of potassium nitrate and let dry. When you hang the cord up and light it, it will burn rapidly, making a popping noise as it burns.

CIGARETTE FLASH

(21) Mix twenty grains of potassium perchlorate and twenty grains of granulated sugar. Put some of this mixture in the end of a cigarette. When a drop of sulphuric acid touches the end it will burn.

HUMAN GAS LAMP

(22) Attach an ordinary gas tip to the end of a straight glass drinking tube. Soak a small sponge in gasoline and put in the mouth. After putting the sponge in the mouth, blow through the gas tip. If a match is struck and held to the end of the tube, the end of the tube will stay lit as long as the air is expelled.

THREE MYSTERY CANDLES

(23) Place three candles on a table. In the wick of each candle place a piece of sodium metal about the size of one-half peanut. Let a drop of water from a piece of ice fall on the candle wicks. The candles will then light and sputter in a very mysterious manner.

BURNING HANDKERCHIEF

(24) Mix two ounces of alcohol and two ounces of water in a bowl. Dip a handkerchief

into this solution. When the handkerchief is lit it will burn but will not be destroyed.

PIPE BOMBS

(25) Place a piece of gasoline soaked cotton in the bowl of an old-fashioned clay pipe. Put a small piece of screen wire down on the cotton and hold it in the pipe. Now make a strong soap solution, to which add a small amount of glycerine. Dip the pipe into the soap suds and blow a bubble. When the bubble sails off into the air, light with a match or candle and it will explode with a flash.

FIRE WATER

(26) Use a small pitcher filled with water. Put three tablespoonsful of C.P. ether and a piece of potassium about the size of a pea into a metal bowl. When you pour the water from the pitcher into the metal bowl, a flame will fly upwards. If you want to make this trick more effective to the audience, you can drink some of the water from the pitcher.

BURNING WATER

(27) Put a piece of sodium on the surface of a bowl of hot water. The sodium will catch fire; or you can place a piece of blotting paper on the surface of the water, and the sodium, as soon as the blotter becomes wet the sodium will melt and catch fire.

BURNING SIGN

(28) Soak a string in a strong solution of potassium nitrate. When the string is dry, paste it on a piece of cardboard, forming some name. Set fire to the string and the name or outline will be burned on the cardboard.

WEIRD ALCOHOLIC EFFECTS

(29) Dissolve a small quantity of sodium chloride in alcohol and pour this mixture in a shallow dish. In a few minutes light the alcohol and it will burn with a peculiar colored flame, causing anyone standing around it to have weird colored faces. You can also burn alcohol that has had saffron soaked in it. It will make one standing around seem to have weird complexions.

ICE TORCH

(30) Fold a small piece of paper and moisten with a little gasoline. Put a piece of pure sodium metal in the fold of the paper. Rump the paper into a little ball and put in a dish. When water is dropped from ice on the paper, it will catch afire.

FIRE NAMES

(31) Dissolve two teaspoonsful of potassium nitrate and one-half teaspoonful of gum arabic into one-third glass of water. Write your name on a piece of cardboard with this solution. After the solution dries on the cardboard, light it with a match and your name will appear in burning letters.

CHAPTER III.

INK AND PAINT MAGIC

NAVY BLUE

(1) Make a solution of cobalt nitrate. Write with this solution, and when dry spray with ammonia water—the writing will turn dark blue.

BLUE

(2) Make a solution of potassium ferrocyanide. Write with this solution, and when dry spray with a diluted solution of iron chloride. The writing will turn blue.

LIGHT BLUE

(3) Make a solution of copper sulphate. Write with this solution, and when dry spray with a solution of strong ammonia water. The writing will turn light blue.

BROWN

(4) Make a solution of copper sulphate. Write with this solution, and when dry spray with a solution of potassium ferrocyanide. The writing will turn brown.

REDDISH BROWN

(5) Make a solution of cobalt nitrate. Write with this solution, and when dry spray with a solution of potassium ferrocyanide. The writing will turn reddish brown.

DARK RED

(6) Make a solution of chloride of mercury. Write with this, and when dry spray with a solution of potassium iodide. The writing will turn a dark red.

RED

(7) Make a solution of iron chloride. Write with this solution, and when dry spray with a solution of sodium sulphocyanide.

LIGHT RED

(8) Make a solution by dissolving some phenolphthalein in alcohol. Write with this solution, and when dry spray with a solution of sodium carbonate. The writing will turn light red.

YELLOW

(9) Make a solution of chloride of mercury. Write with this solution, and when dry spray with a weak solution of caustic soda. The writing will turn yellow.

CANARY YELLOW

(10) Dissolve two drams of potassium bromide and two drams of pure copper sulphate in one ounce of water. Write with this solution, and when heat is applied a canary yellow color is obtained.

PURPLE

(11) Make a solution by boiling some starch in water. Write with this solution, and when dry

spray with a solution of potassium iodide. The writing will turn a purple color.

VIOLET

(12) Make a solution by dissolving some carbolic acid in water. Write with this solution, and when dry spray with a solution of iron chloride. The writing will appear violet.

GREEN

(13) Make a solution of sodium chlorate. Write with this solution, and when dry spray with a solution of copper sulphate. The writing will turn green.

DARK GREEN

(14) Make a solution of cobalt nitrate. Write with this solution, and when dry spray with a solution of potassium ferrocyanide. The writing will turn dark green.

BRIGHT GREEN

(15) Make a solution of copper chloride. Write with this solution, and when dry spray with a solution of cobalt chloride. The writing will be bright green.

BLACK

(16) Make a solution of iron sulphate. Write with this solution, and when dry spray with a solution of tannic acid. The writing will be black.

WHITE

(17) This experiment will have to be done on dark colored paper. Make a solution of barium chloride. Write with this solution, and when dry spray with a weak solution of sulphuric acid.

YELLOW INVISIBLE

(18) Make a solution by dissolving equal parts of copper sulphate and ammonium chloride. Write with this solution, and when dry heat paper. The writing will turn yellow.

ROSE RED INVISIBLE

(19) Make a weak solution of cobalt nitrate. Write with this solution, and when dry heat the paper. The writing will turn rose red.

BROWN INVISIBLE

(20) Make a strong solution of ferric ammonium sulphate. Write with this solution, and when dry heat paper. The writing will turn brown.

LEMON INVISIBLE

(21) Write with the juice of a lemon, and when dry heat the paper. The writing will appear after the paper is heated.

VINEGAR INVISIBLE

(22) Write with vinegar, and when dry heat the paper. The writing will appear when the paper is heated.

FLAG PAINTING

(23) Paint a large piece of cardboard in the following manner: Paint the blue portion with a solution of potassium ferrocyanide; paint the red stripes with a solution of sodium sulphocyanate. Paint the staff with a solution of tannic acid. When the solutions are dry, spray with a solution of iron chloride. The flag will then appear in its proper colors.

FLAG PAINTING

(24) Instead of painting the flag on cardboard, use a muslin cloth stretched over a frame. Use the same method of painting as above but spray from the back of the picture.

MAGIC BLACK STATIONERY

(25) Mix equal amounts of tannic acid and ferric ammonium sulphate. Rub this mixture on a piece of stationery. When you write with water on the paper, the writing will turn black.

MAGIC BLUE STATIONERY

(26) Mix equal amounts of sodium ferrocyanide and ferric ammonium sulphate. Rub this mixture on a piece of stationery. When you write with water on the paper, the writing will appear blue.

MAGIC RED STATIONERY

(27) Mix equal amounts of ferric ammonium sulphate and sodium salicylate. Rub this mixture on a piece of stationery. When you write with water on the paper, the writing will appear red.

CUTTING ARM OFF

(28) Make a solution of sodium sulphocyanate in a glass, and in another glass make a solution of iron chloride. Paint around the arm with the solution of iron chloride. Dip a knife into the sodium sulphocyanate solution, and pass the knife over the arm with the dull side of the blade—a bloody streak will appear.

CHEMICAL BLOTTER

(30) Fill two glasses half full of water. In the first glass dissolve a teaspoonful of sodium salicylate and in the second dissolve a half teaspoonful of ferric ammonium sulphate. Write with the solution in the first glass on a piece of white paper. Soak a piece of blotter in the second glass, and when you blot the writing with the blotter it will appear a red color.

INVISIBLE WRITING

(31) Using a saturated solution of cobalt chloride and a tooth-pick or piece of sharp wood or a pen, write on a piece of white paper. When you heat the paper the writing will appear, but when you blow your breath on it the writing will disappear.

CHEMICAL HANDKERCHIEF

(31) Make a saturated solution of cobalt chloride. Wet a white handkerchief thoroughly with this mixture and let dry. When you warm the handkerchief it will be blue, but when you blow on it, it will become white again.

CHEMICAL BOTTLE

(33) Fill a small bottle with a saturated solution of cobalt chloride and set on a radiator. It will turn blue. When you set it in a cool place it will become its original color.

BLUSHING GIRL

(34) Draw a picture of a girl's face and paint the cheeks with a solution made by dissolving a small amount of phenolphthalein in a little alcohol and water. When the picture is dry pass it over a dish or bottle containing some strong ammonia water, and it will turn red. When you withdraw the picture, it will appear in its natural colors.

MAGIC ART PAPER

(35) Rub powdered iron chloride over the surface of a piece of heavy paper. Use three glasses of water. In the first dissolve a small amount of potassium sulphocyanide, in the second dissolve a small amount of potassium ferrocyanide, and in the third glass dissolve a small amount of tannic acid. All the solutions in the glasses will appear colorless. When you paint on the paper with the solution from the first glass it will appear red; when you paint with the solution in the second glass it will appear blue; and with the solution in the third glass the color will be black.

CHEMICAL ROSE

(36) Make a saturated solution of cobalt chloride. Dip a paper rose into this solution and let dry. When you lay the rose on a hot surface

it will turn blue. When you remove it from the hot surface and blow your breath on it, it will become its original color.

LUMINOUS INK

(37) Luminous ink may be made by dissolving over a water bath one part of yellow phosphorus in eight parts of cinnamon oil. Be sure to keep vial well corked and keep out air. *Caution:* Handle phosphorus with care as it is explosive.

FINGER PRINTING

(38) Apply a strong solution of sodium sulphocyanate to the surface of a piece of cardboard or paper and let dry. Dip your finger or hand in water and lay on the paper. When you raise your hand there will appear a big red imprint.

NAME BLOTTER

(39) Rub equal parts of tannic acid and ferric ammonium sulphate over a piece of paper. Take a blotter and wet the parts you want to show on the paper, such as your name, etc. When you place the blotter on the paper, the name will appear.

MAGIC PAINTING

(40) Sketch a scene, such as trees, grass, sky, water, etc. Paint the objects you want to appear green with a solution of cobalt chloride, sky and water effects with a solution of cobalt acetone, then thoroughly dry the paper. Heat the paper over an alcohol lamp and it will appear in its natural colors. If you want a winter and summer

scene, use a solution of cobalt chloride for snow, which, when heated will turn a greenish color like that of summer; when you breathe on the summer scene it will change back to its original color.

VANISHING NAME

(41) Write on a piece of paper with a solution of cobalt chloride. Heat the paper until the writing appears blue. Now ask someone to hold the paper in his hands and blow on it. When he opens his hands, the name has vanished.

TRAVELING NAMES

(42) Dissolve equal amounts of ferric ammonium sulphate and sodium ferrocyanide in a little water. Write a name with this solution on a piece of cardboard. While the name is drying take some sodium carbonate and dissolve it in a little water, and in this solution soak a piece of blotting paper the same size as the white cardboard. In separate containers prepare a solution of sodium ferrocyanide and one of ferric ammonium sulphate. Now write the same name on a piece of cardboard and the same size as the first with the sodium ferrocyanide solution, and soak a piece of blotting paper the same size in the ferric ammonium solution. Place the first piece of cardboard and wet blotter on one side of the room and the second cardboard and blotter on the other side of the room. Press the first blotter slightly on the first cardboard, and when you remove the blotter the name has disappeared. When you press the second cardboard slightly with the second blotter, the name appears.

CHAPTER IV.

MISCELLANEOUS TRICKS

MYSTERY PILL BOX

(1) Take equal parts of finely powdered potassium iodide and powdered lead nitrate and place one over the other in the pill box. Both of these powders are white, but when you put them together and shake them up the whole mass turns yellow.

“GO OUT” MATCHES

(3) Dip the heads of safety matches in sodium silicate solution. Allow them to dry. When you strike them, they will make a sputtering noise and smoke but will not blaze.

MONOGRAM CIGARETTES

(4) Write a name, slogan, or funny saying on a cigarette with sulphuric acid solution. Let it dry. When you light the cigarette, the words will appear when the heat reaches them.

READING SEALED MESSAGES

(5) Put a message someone has written in a small opaque envelope and seal it. If you will rub ether over the envelope, you can read the message. The ether will evaporate in a few seconds, leaving no trace.

MELTING TINFOIL

(6) Place some tinfoil over a card and hold the card over the flame of a candle. The tinfoil will melt but the card will not burn.

CHEMICAL SMOKE

(7) Use two glasses. Put a few drops of muriatic acid into one and a few drops of strong ammonia water in the other. Shake the glasses so that the liquid will spread out over the bottom. Keep the glasses apart until you are ready to perform the trick, as they will smoke. When ready, place one glass over the other and cover with a handkerchief. Light a cigarette or paper and pretend that you are going to blow the smoke in the glasses. In about a minute or two uncover the glasses and they will be filled with smoke.

DIVING EGG

(8) Put an egg into a tall cylinder glass filled with a diluted solution of hydrochloric acid. The egg will rise to the top and fall several times.

DIVING MOTH BALL

(9) Drop a moth ball into a test tube that has been filled with acetic acid, with a little sodium carbonate added to generate a gas. The moth ball will rise and fall several times.

TRICK CAMPHOR

(10) Place a piece of camphor in a shallow basin of water. Light the camphor and it will dart about on the surface.

SOLIDS FROM LIQUIDS

(11) Make a saturated solution of calcium chloride in hot water. Set aside to cool. Prepare a solution of potassium carbonate in the same manner. Now pour the clear parts of the liquids together and a solid will be produced.

CHEMICAL BEANS

(12) Take twelve drams of copper sulphate, two drams of iron sulphate, two drams of cobalt chloride, twelve drams of manganese sulphate, eight drams of plaster paris, and mix with water sufficient to make a thick paste. From the thick paste mold some pieces about the size of beans. Put about one-fourth pint of water glass and one-half pint of water into a glass bowl. Now place the seeds in the solution—in a short while you will have a beautiful chemical garden.

WATERPROOF DIRT

(13) Heat fine sand on a stove, into which stir melted paraffine wax until it is well mixed. Let this mass cool and break into fine pieces. When you drop it into water it will continue to be dry.

TRICK SOAP

(14) Rub some aniline dye on a piece of soap. When you use this soap in water your hands will become streaked.

DRY WATER

(15) Tell someone that you can get a coin out of a bowl of water without wetting your hand.

If you will rub your hand with lycopodium the water will not adhere to it, also, the lycopodium will not show on the hand.

TRICK SUGAR

(16) Take lumps of sugar and coat them with collodion. Now when you drop them in a liquid they will float. The collodion is colorless.

COLOR CHANGE

(17) Heat mercuric oxide on a crucible and it will change to several colors, returning to its original color when cooled.

BLACK HANDS

(18) Rub some tannic acid over your hands and then dip them in a basin of water into which has been put a small amount of iron sulphate. Your hands will become black.

CAMPBOR SNAKE

(19) Crumble a piece of camphor up and place the pieces in a basin of water. Shape the pieces like small snakes, and to your surprise they will in a few minutes go wiggling off.

POPPING BAG

(20) Throw a piece of sodium metal in a basin of water, and it will catch fire and make a sputtering noise.

MYSTERY EGGS

(21) Fill one quart jar with clear water. Fill another half full of saturated solution of sodium

chloride and finish filling with water. Drop an egg into the first jar, and it will sink. Drop an egg into the second jar and it will stop midway.

LIGHTING YOUR CIGARETTE WITH WATER

(22) Remove a small amount of the tobacco from the end of a cigarette and put about eight or nine grains of potassium permanganate in its place. Fold the end of the paper so it will not fall out. Drop two drops of glycerine on the potassium permanganate. In a few minutes the cigarette will catch fire and burn.

LIGHTING CIGARETTE WITH FOUNTAIN PEN

Dissolve some black dye in a small amount of glycerine and put into a fountain pen. The glycerine will look like ink, from which you can light your cigarette, as in the above experiment.

LIGHTING CIGARETTE WITH RED CAKE COLORING

(24) Dissolve some red dye in a small amount of glycerine and label, Cake Coloring. Now use this for glycerine, as in the above experiment.

CHEMICAL GARDEN

(25)	Sodium Silicate	Teaspoonful
	Aluminum Sulphate	20 grains
	Ferrous Ammonium Sulphate	20 grains
	Ferric Ammonium Sulphate	20 grains
	Cobalt Chloride	20 grains
	Nickel Ammonium Sulphate	20 grains

Mix ten teaspoonsful of water with the sodium silicate. Add the solids to this solution and set away.

FRUIT, VEGETABLE AND MILK INKS

(26) By writing with any of the following, milk, onion, grapefruit, lemon, vinegar, and heating the paper, the writing will appear.

WINE, WATER AND INK

(27) Use four empty glasses. In the first put a few grains of powdered sandalwood; in the second a few drops of acetic acid; in the third a few drops of potash solution, and in the fourth a few drops of strong alum solution. Pour some water from a pitcher into the first glass—the liquid will turn red. Pour the liquid from the first glass into the second glass and it will turn another color. Pour this liquid from the second glass into the third glass and it will turn back to its original color. Pour the liquid into the fourth glass and it will change to an inky color.

MILK AND WINE

(28) Use three glasses. Put an ounce of iodine in the first, an ounce of acetic acid in the second, and an ounce of hyposulphite solution in the third glass. When you pour the contents of the first glass into the second glass you will get a wine color. When you pour the contents of the second glass into the third glass you will get a milky color.

MAGIC IN WRITING

(29) Write on a piece of paper with a solution of platinum chloride, and it will appear colorless. Now hold the writing over a vessel containing a small amount of mercury, and the writing will appear on the paper.

COLORED HANDKERCHIEF

(30) Dissolve a small amount of indigo in a half glass of diluted sulphuric acid. Add a half glass of potassium carbonate solution to this mixture. Take a yellow handkerchief and put into this mixture, and it will change to blue. Put a red handkerchief into this mixture and it will change to purple. Put a blue handkerchief in this mixture and it will change to red.

MAGICIAN'S FIREPROOF LIQUID

(31) This is a liquid used by some magicians for applying to the hands and arms in order not to burn the skin when held in a flame. It is made by dissolving an ounce of camphor in four ounces of aqua vitae, and adding two ounces of quick silver and two ounces of liquid styrax. Shake well before applying for the trick.

MYSTERY SPOT REMOVER

(32) Have you ever seen the magician take a bottle of ink, pour it on his snow white shirt, rub his handkerchief over the spot, and the ink vanishes? It is done in this manner. The ink is made by mixing iodine with cooked starch solu-

tion and putting into an ink bottle so as to look like real ink. When this ink is put on a white cloth and rubbed with a handkerchief saturated in sodium hyposulphite solution, the spot will disappear.

EXPLODING MATCHES

- (33) Silver Nitrate $\frac{1}{4}$ ounce
Distilled water 1 ounce

Set this aside and prepare the following solution:

- Sodium Hydrate $\frac{1}{2}$ ounce
Distilled Water 1 ounce

Shake this well until it is entirely dissolved and add a little at a time to the first solution that was prepared. A black precipitate acid will be thrown down. Continue to add the sodium solution as long as it continues to precipitate to the black silver salt, and when this ceases, pour the silver solution in a paper (filter) and wash by adding a little water occasionally. This makes the silver salt suitable to make silver fulminate to be put on the matches. To make the silver fulminate, take the black powder on the filter paper and press it between several thicknesses of dry blotting paper. When dry enough scrape it off and put in a wide mouthed bottle, or jar, of about one pint capacity and add 26% ammonia water—enough to cover the silver about one-fourth under. Cover and set aside in a dark place to digest for about twelve to fifteen hours. After that, pour off the clear liquid about the black silver salt and remove the salt very carefully from the jar, avoiding as much scraping as possible. Dust a mere trace of

powdered gum arabic on it so as to make a little sticky. This sticky paste is to be put on the matches. Let the matches dry in a warm, airy room. Use only a small streak half an inch long and as wide as the match. Do not put only a few matches in a box.

Caution: There is no danger to speak of until the adding of the Ammonia takes place. After that time there is constant danger of explosion, so make this up in very small quantities, and protect the eyes, face and hands from burn by suitable coverings. Very rarely will explosions occur unless by careless handling of chemicals.

FOUR BUBBLE SOLUTION FORMULAE

PROCEDURE

	Formula:	Parts by Weight			
		1	2	3	4
"Cellosize (8% solution)	42	47.5	44.0	43	
Glycerine	37	-----	-----	18.5	
"Carbowax" Compound 1000	-----	7.0	3.5	18.5	
Propylene Glycol	-----	9.0	-----	-----	
Triethanolamine	-----	4.5	-----	-----	
"Tergitol" Wetting Agent No. 7	5	5.0	5.0	5.0	
Nacconol NRSF	2.5	2.5	2.5	2.5	
Water	13.5	31.5	41.5	27.5	

PROCEDURE

1. Mix the "Tergitol" Wetting Agent No. 7 and Nacconol NRSF and stir until a clear gel is obtained.

2. Add the solvent or solvents. In Formula No. 3, dissolve the "Carbowax" Compound 1000 in 7 parts of the water and use as the solvent.

3. Add the water and stir to obtain a clear solution.

4. Add the "Cellosize" solution and stir until clear.

Note: All these items may be gotten from any chemical or drug house. We also add another simple formula if you can get quantities of glycerine.

(5) Aerosol O.T. 100%	-----	1/2 pound
Glycerine	-----	6 pints
Water	-----	6 pints

Mix the Glycerine and water and dissolve the Aerosol in the mixture by means of heat and stirring.

The Aerosol O.T. 100% can be purchased at the American Cyanamid Corporation, Radio City, New York.

THE END