



WHEN MOTHER LETS US MAKE TOYS

G. ELLINGWOOD RICH



Class TT160

Book R5

Copyright N^o _____

COPYRIGHT DEPOSIT.

WHEN MOTHER LETS US MAKE TOYS



In Partnership

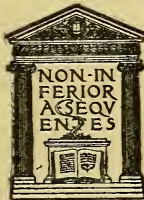
WHEN MOTHER LETS US MAKE TOYS

A BOOK WHICH DEVELOPS INGENUITY AND
INVENTIVE POWER THROUGH THE MAKING
OF UNIQUE TOYS OUT OF MATERIALS WHICH
EVERY BOY AND GIRL CAN GET WITH AL-
MOST NO EXPENSE.

By G. ELLINGWOOD RICH

*Teacher of Art and Manual Training, Brooklyn Training
School for Teachers; Author of "When Mother Lets
Us Make Paper Box Furniture."*

ILLUSTRATED BY THE AUTHOR



NEW YORK
MOFFAT, YARD AND COMPANY

1915

TT 160
R 5

Copyright, 1914, by
MOFFAT, YARD AND COMPANY
NEW YORK

All Rights Reserved



FEB 20 1915

80.75

© Cl. A 393698

401

TO
MY SISTER

WHO SHARES WITH ME
MEMORIES OF A CHILDHOOD
MADE HAPPY BY THE THINGS
OUR MOTHER LET US DO.

15-4786

TABLE OF CONTENTS

TOYS

	PAGE
SEE-SAW	32
DOLL CARRIAGE	36
WHEELBARROW	40
LAWN MOWER	42
RAKE	42
STEPLADDER	46
PONY CART	50
BABY SULKY	52
BABY SWING	56
CANNON	60
FORT	62
BATTLESHIP	64
GARDEN SWING	66
FRYING PAN	70
KETTLE	70
DOG KENNEL	74
TWO-STORY COTTAGE	76
CROQUET SET	80
RING TOSS	82
CHICKEN COOP	86
BUNGALOW	88
SCALES	92
“DAIRY LUNCH” TABLE	94
“DAIRY LUNCH” CHAIR	94
TROLLEY CAR	98
HOUSE WITH STAIRWAY	104

TABLE OF CONTENTS

	PAGE
ROCKING HORSE	108
ROLLER COASTER	112
COUPÉ	116
LOCOMOTIVE	118

RHYMES

TOYMAKERS	15
“SUNSHINE BAND”	29
UP AND DOWN THEY’LL GO	30
A THOUGHTFUL LITTLE MOTHER	34
THE GARDENER	38
IMITATING FATHER	44
THE HARNESS MAKER	48
TO AND FRO	54
A MARKSMAN	58
A WATCH-DOG	72
PLAYING CROQUET	78
AN EASTER GIFT	84
PLAYING STORE	90
CHUMS	96
GREAT FUN	110
MAKING CALLS	114

LIST OF ILLUSTRATIONS

IN PARTNERSHIP	<i>Frontispiece</i>
	PAGE
TOOLS	18
OTHER "HELPS"	19
SEE-SAW	31
DETAILS OF SEE-SAW	33
DOLL CARRIAGE	35
DETAILS OF DOLL CARRIAGE	37
WHEELBARROW	39
DETAILS OF WHEELBARROW	41
LAWN MOWER AND RAKE	43
STEPLADDER	45
DETAILS OF STEPLADDER	47
PONY CART	49
DETAILS OF PONY CART	51
BABY SULKY	53
BABY SWING	55
DETAILS OF BABY SWING	57
CANNON	59
DETAILS OF CANNON	61
FORT	63
BATTLESHIP	65
GARDEN SWING	67
DETAILS OF GARDEN SWING	68
DETAILS OF GARDEN SWING [continued]	69
FRYING PAN AND KETTLE	71
DOG KENNEL	73
DETAILS OF DOG KENNEL	75

LIST OF ILLUSTRATIONS

	PAGE
TWO-STORY COTTAGE	77
CROQUET SET	79
DETAILS OF CROQUET SET	81
RING TOSS	83
CHICKEN COOP	85
DETAILS OF CHICKEN COOP	87
BUNGALOW	89
SCALES	91
DETAILS OF SCALES	93
“DAIRY LUNCH ROOM”	95
CHUMS	97
TROLLEY CAR	99
DETAILS OF TROLLEY CAR	100
DETAILS OF TROLLEY CAR [continued]	101
DETAILS OF TROLLEY CAR [concluded]	103
HOUSE WITH STAIRWAY	105
PATTERN OF ROCKING HORSE	106
ROCKING HORSE	107
DETAILS OF ROCKING HORSE	109
ROLLER COASTER	111
DETAILS OF ROLLER COASTER	113
COUPÉ	115
DETAILS OF COUPÉ	117
LOCOMOTIVE	119
DETAILS OF LOCOMOTIVE	120
DETAILS OF LOCOMOTIVE [continued]	121

WHEN MOTHER LETS US
MAKE TOYS

FOREWORD TO GROWN-UPS.

The author's aim in offering this little book to the child world is fourfold:

To make children happy.

To develop their ingenuity and resourcefulness.

To train their hands to be skillful.

To provide independent occupation for their active minds and busy fingers.

TO YOUNG INVENTORS.

Every wide awake boy and girl knows that this big world of ours is full of wonderful things invented and made by men and women.

I'm sure that many of you would like to become great inventors when you grow up and make clever and ingenious things. But you need not wait until you grow up. You can begin *now* and invent things for the little folks in your child world.

This little book shows just how to make a great many ingenious toys. Almost every toy has some fascinating motion. It either rolls, slides, rocks, swings or shoots. When you have succeeded in making these, I am sure you will be brimming over with ideas all your own for other toys which no one else has ever thought of making.

Then, indeed, you will be real inventors, ingenious and clever in making original toys; and perhaps, *per-haps* you'll some day grow to be very wonderful inventors of whom we'll all be proud.

TOYMAKERS.

A host of clever ideas is here
For ingenious girls and boys,
With pictures clear, directions and rhymes,
For making attractive toys.

The things of which the toys are made
Are of a simple kind;
Such things as mother'll let you have,
Or 'round your house you'll find.

Some boxes and some fasteners
You'll need for each new thing.
For some, use buttons, beads or spools;
For others, hairpins, string.

And best of all, as you'll agree,
When making them you try,
Is that their cost is nowhere near
As much as toys you buy.

So get your knife and scissors, too,
And pliers, perhaps you'll need;
And quite a toymaker you'll become,
If directions you will heed.

MATERIALS.

You will need at least one paper box for every toy and for some of the toys you'll need several boxes. You can get many fine strong boxes at the stores in your neighborhood by simply asking for them. You'll be surprised when you find how many are thrown away every day. When you tell the store-keeper that you are turning these discarded boxes into attractive toys, he will be sure to save them for you.

You will need ordinary spools for some toys, and for others the kind on which narrow ribbon is wound. Any small dry goods store will save these ribbon spools for you.

Wooden button molds are very useful and if you have to buy them they will not cost much. Small ones cost about three cents a dozen and very large ones cost only ten cents a dozen.

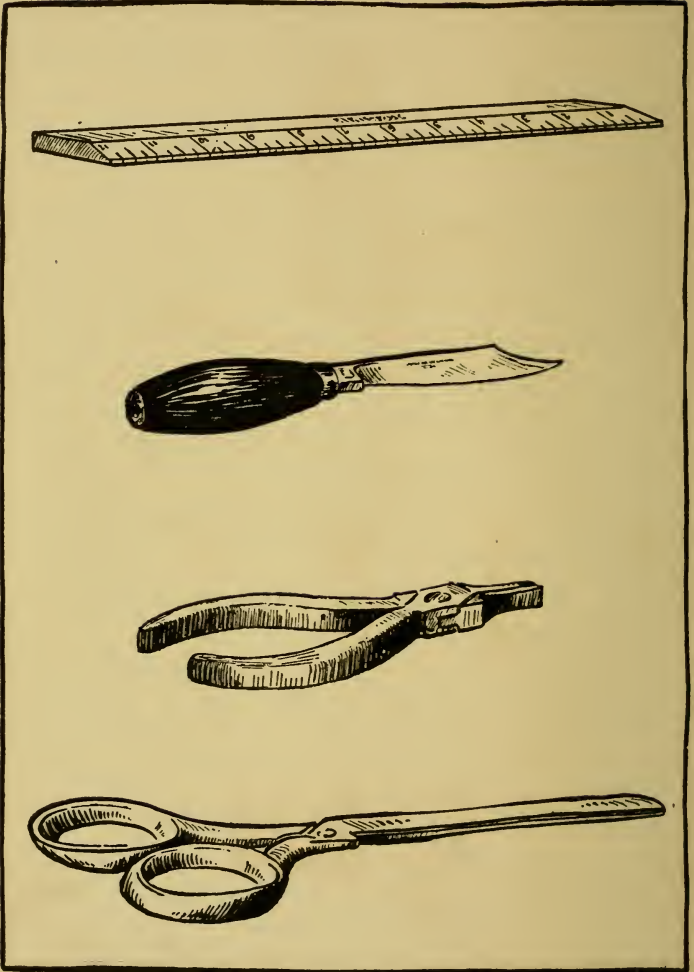
Ordinary straight wire hairpins are needed for several toys. Mother will probably give you a few of these.

A pasteboard mailing tube is suggested for a couple of the toys and father can probably find one for you at his office. He may also have a few large elastic bands he can give you and perhaps he has a little coil of thick copper wire he doesn't need. If he hasn't any wire, you can get all you'll need at any hardware store for a few cents.

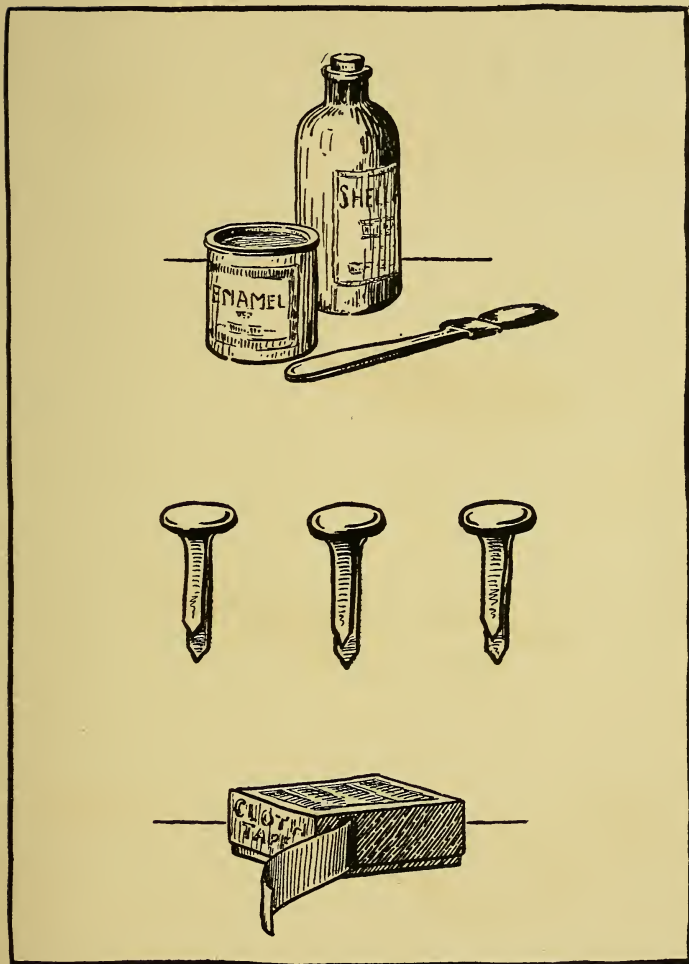
Some brass embroidery or curtain rings are needed and you can probably find these around the house. Of course you can find plenty of string and heavy cord. A few large glass or wooden beads, such as children string, will make some of the toys more complete.

One toy makes use even of the tongs from a candy box, cotton wadding and little one cent American flags. Another suggests using a "dowel." Perhaps you do not know what a dowel is. It is a long stick like a cane which a cabinet maker cuts up and uses to fasten pieces of wood together. You will see some used between the leaves of your extension table. You can buy one in any carpenter shop. A small curtain rod might be used for the same purpose.

When you begin to invent toys yourself, you will find that you can use all sorts of discarded things. So it will be a good plan, when you start in this toymaking business, to get a good sized box and make a collection of odds and ends which may prove useful.



Tools.



Other "Helps."

PROPORTIONS.

You will wish each toy that you make to look as real as can be; so be very, very careful about its proportions.

Choose your materials so that each part of a toy is just the size to look right with the other parts. For instance, if you have for wheels the largest button molds that you can get, you should choose for the wagon, a box which is small enough to look right with the wheels.

If you are making a locomotive, be sure to use for the stack a mailing tube which is small enough so that it will not look too large for the rest of the engine.

Be patient and persistent in hunting for just the right materials and your toys will be really fine ones.



"SCORING."

If you wish to bend a stiff piece of cardboard so that it will make a nice straight edge you should "score" it.

Lay a ruler along the line where you wish to bend the cardboard and make a light, clean-cut scratch with the knife. This is called "scoring." Bend the cardboard so that the "scoring" is on the *outside*.

The roof of the dog-kennel was "scored" before it was bent.



CUTTING.

To cut a box into two pieces, draw down the sides and across the bottom, making it "square" by using a carpenter's square, a draughtsman's triangle, or the *corner of another box*. Use scissors to cut down the vertical sides of the box; if the scissors will not cut quite to the bottom, finish with the knife. Score across the bottom, and bend it. By bending back and forth, the two pieces will come apart.

To cut a piece *out of the edge* of a box as in shaping the body of the baby carriage, use scissors to make two cuts down from the edge; use the knife to score across between the cuts, and bend the piece back and forth until it comes out.

To cut a piece *out* like the windows of the house, use a ruler to shape the "hole"; stick the point of the knife through the cardboard at the corner of the "hole" and, with a *sawing motion*, carefully follow the lines. To prevent the cardboard from tearing, put your hand underneath to support it, but be *very careful* to keep your fingers away from the knife.



FASTENING.

The different parts of each toy are to be fastened together with brass paper fasteners. Glue is not satisfactory because it will not securely hold together the heavy cardboard and because time is wasted waiting for it to dry. The toys must be strong and securely fastened so that you can *play with them*.

While two parts are held in place stick the point of the knife through both pieces. Push the prongs of the fastener through the little slit and separate them on the other side; then flatten them in opposite directions.

Fasteners cost about ten cents for a box containing one hundred of medium length. Longer ones are useful in some toys and cost only a few cents more.

Parts can be fastened together by punching *two holes* instead of one slit, and using wire or string threaded in a short darning needle. This method of fastening is much slower, more difficult and less firm.



MENDING AND STRENGTHENING.

If a corner of a box is split you can still use the box by mending it with *gummed cloth tape*.

This tape is sold in stationery stores. It comes in a roll like any tape except that it is in a small box which has a little slit in its side through which the tape pulls like a tape measure.

When a toy is made, but before it is painted, it is a good plan to *strengthen* the parts which would be most easily split or broken in playing with it.

Pull the tape out and cut off a piece of the right length. Then fit it around the corner or along the edge which you wish to strengthen. *Before* you moisten the glued side of the tape *crease it hard* with your thumb nail. This will make a nice sharp edge and a close fit so that the tape will hardly show after it is covered with paint.



HOW TO USE WIRE.

To bend wire a pair of small "square-nosed" pliers is very useful. If you try to bend wire without using pliers your fingers will be hurt and the bend will not be satisfactory.

Ordinary wire hairpins can be straightened out with pliers and used for axles. If they are too short you will need a small coil of wire from which you can cut pieces the length you wish. Copper wire, which is between one-sixteenth and one-eighth of an inch thick, is about right and costs about two cents a yard.

To "cut off" a piece of wire, hold it firmly between the jaws of the pliers and bend it sharply back and forth until it breaks.

In bending the end of an axle to keep a wheel from coming off be careful not to *break it off*.



PAINTING.

The toys are very attractive when finished whether they are painted or not, but don't you think that a *black* locomotive, a *white* baby carriage, or a *red* swing will look much more "real" because of its color?

Most paper boxes have printed labels which will show right through paint unless it is *thick*. In any paint shop you can buy thick paint which will have a nice shiny surface when it dries. It is called "enamel" and can be bought in small ten cent cans. It comes in a great variety of colors. If several toys are to be painted the same color, it will be cheaper to buy larger cans.

If the boxes are clean and without labels a thin stain can be used. A coat of shellac over the stain will make it shine like varnish. Transparent shellac can be bought in pint bottles for about twenty cents.

It will be convenient to have several brushes but it is only necessary to have *one* because, with care, it can be kept clean and soft even though used for different colors. When cleaning brushes, be sure to use the right things or they will get stiff so they cannot be used.

PRACTICAL SUGGESTIONS:

Choose a place to work—table in nursery—work shop—kitchen table—barn—back porch—under a tree in the orchard or back yard—bench in wood shed.

Spread papers or oil cloth to protect mother's floors, carpets and furniture from paint.

Choose some place to put your toys while drying where no one is liable to put other things which might be damaged by the paint.

Use a screw driver to pry off the cover of the paint cans; scissors or knife will break if used for this purpose.

Use a small stick like a meat skewer or old pen-holder to stir your paint from the bottom. It will need to be stirred thoroughly each time it is used. If a *crust* forms over the top of the paint in the can, pick it out and throw it away.

Paint all the underneath and lower parts first, while you are still able to hold it in your hands; then set it down and hold an upper corner while you paint all the rest; then let go and paint that corner.

Put the cover on the can when you have finished. If the paint has thickened on the edge of the can it should be scraped off because the paint will dry up if the cover is not tightly closed.

Thoroughly clean your brushes, using:

Water for glue brushes.

Alcohol for shellac brushes.

Turpentine or kerosene for paint brushes.

Thoroughly clean your *hands*, using turpentine or kerosene and then hot water and soap. A little toilet water will take away the smell of turpentine.

Put your painting materials in some place where mother lets you keep such things.

Pick up and destroy all the soiled papers.



SUNSHINE BAND.

If you'd like to make someone happy
And add to childhood's joys,
You might do what is here suggested
For generous girls and boys.

You might find for yourself a partner,
Who'll work with willing hand;
You might organize your little friends
Into a "Sunshine" band.

For some sick little child who is lonesome,
Who cannot romp and play,
You can make of your boxes, such playthings,
That you'll brighten his weary day.

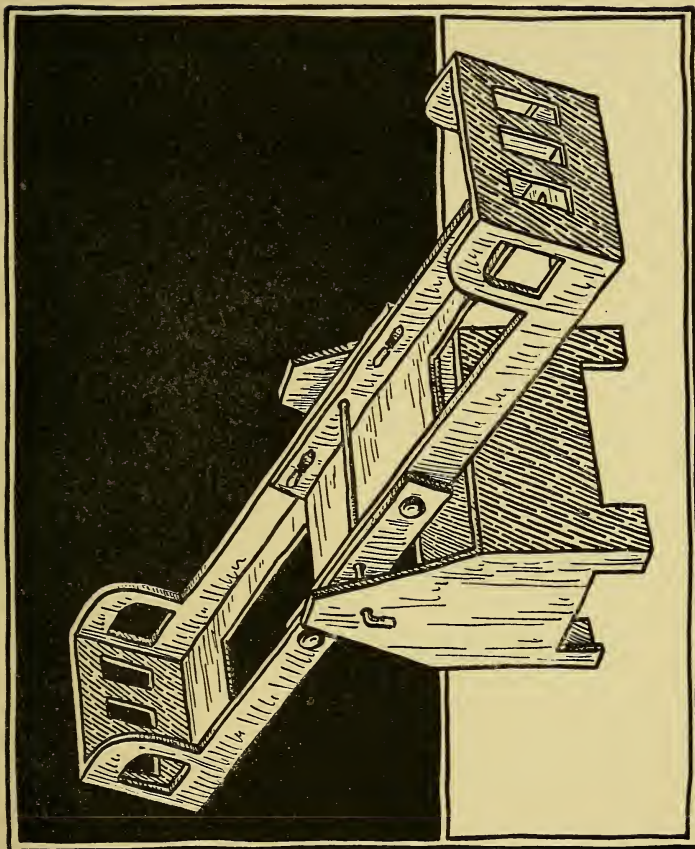
And the children in tenements tall,
Whose toys are very few,
Would be pleased with the smallest thing
That you little folks could do.

If you'd like to make toys for a table
At your church fair to sell,
You will find that in this little book,
There are things you can make quite well.

UP AND DOWN THEY'LL GO.

Just get two little jointed dolls
Whose legs will bend, you know.
Then set them in the teeter seats
And up and down they'll go.

And so that they won't fall or slide
I'd make them quite secure,
I'd tie them both into their seats
And they'll be safe, I'm sure.

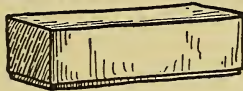


See-Saw.

SEE-SAW.

Use a chocolate peppermint box and a small, deep box with a square base, like a shoe dressing or druggist's box.

1. Turn the *cover* up side down.
2. Cut away one small end of the *cover* and of the box.
3. Push the box into its cover just far enough to fasten them together to form one long box. [If you have a *very long* peppermint box, you may use the box alone.]
4. Look carefully at the picture and shape the seats; cut holes for the dolls' feet to go through.
5. Make the base by cutting the other box as shown in the details.
6. Pivot the parts together with a hairpin. If it does not exactly balance, prick new holes and readjust it.
7. Paint it bright red.



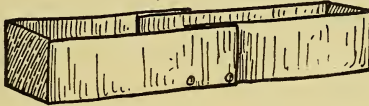
Chocolate Peppermint Box



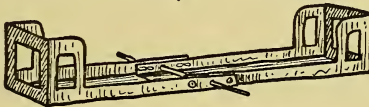
Cover-end cut away



Box-end cut away



Partly pushed together and fastened



Seats shaped -Holes cut for dolls' feet
Hair pin put through middle



Base-shaped from shoe dressing box



Both parts joined by hair pin

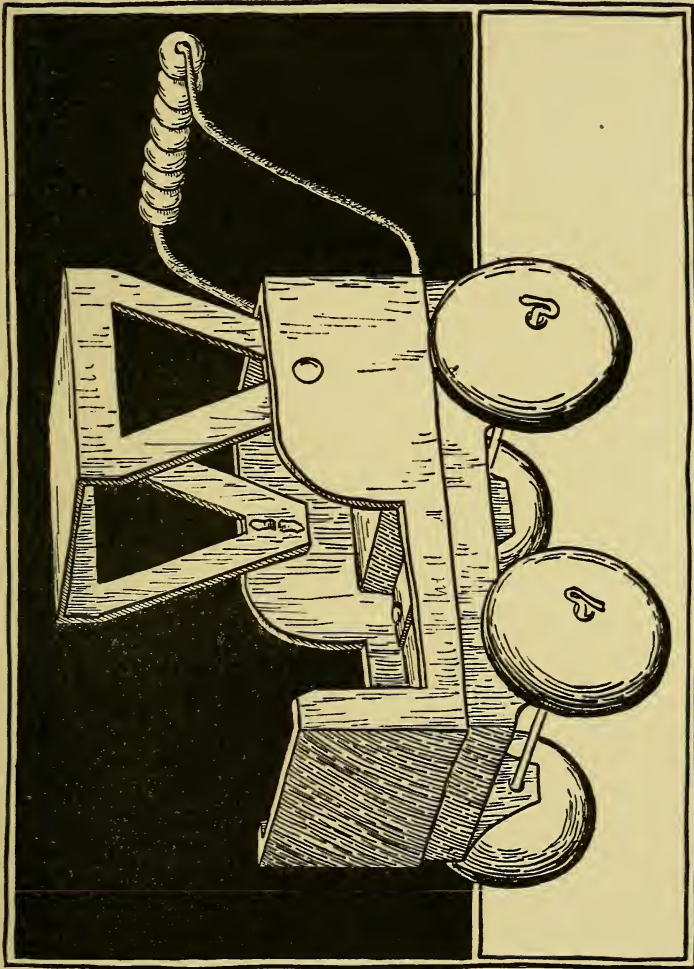
Details of See-Saw.

A THOUGHTFUL LITTLE MOTHER.

If your mother'll let you have some wool
Which is nice and soft and white,
You can knit a little blanket warm,
And then tuck your doll in tight.

On a little pillow fresh and clean
Which from dainty cloth you've made,
Lay your baby doll to rest and sleep,
And be sure to adjust the shade.

If you're busy with your doll-house work,
And your baby needs fresh air,
Wheel her out into the garden cool,
She will surely sleep well there.



Doll Carriage.

DOLL CARRIAGE.

Use two *small* candy boxes of the same size, eight *largest size* wooden button molds, about 18" of copper wire and a few large beads.

1. Turn one *box* bottom up; stand its *cover* on top of it; fasten them firmly together.

2. Shape the body and lower part as shown in the details.

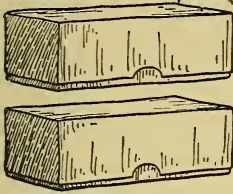
3. Put enough beads on the wire to make the handle as wide as the carriage. Bend the wire sharply to hold the beads in place. Push the ends of the wire through two holes at the *bottom, back corners* of the carriage *body*. Push them *down* through two more holes in the floor of the carriage. Be sure you have left enough for a good handle and then bend the ends sharply *back* against the under side of the carriage.

4. From the other *box* cut the canopy and pivot it *inside* the body so that it will move.

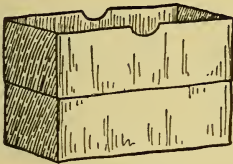
5. From what is left of the second box, cut a low seat and fasten it so that it covers the wires on the floor of the carriage.

6. Glue *two* button molds face to face to form *one* wheel. Put the wheels on with wire axles.

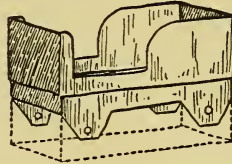
7. Paint the carriage white.



Two candy boxes-same size
Eight wooden button molds
About 18 inches of copper wire
A few beads



Box-bottom up
Cover fastened to it



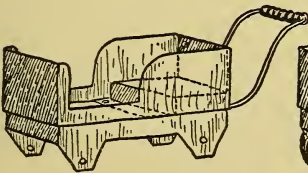
Body of carriage shaped
Bottom shaped to hold axles



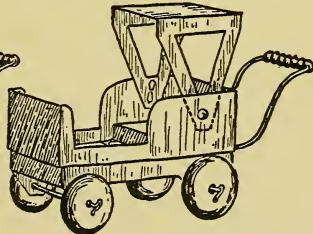
Canopy cut from
one end of the
second box



Wire pushed through holes at back-
down through holes in floor-
bent back flat under the bottom



Handle bent up
and curved-wires
covered by seat



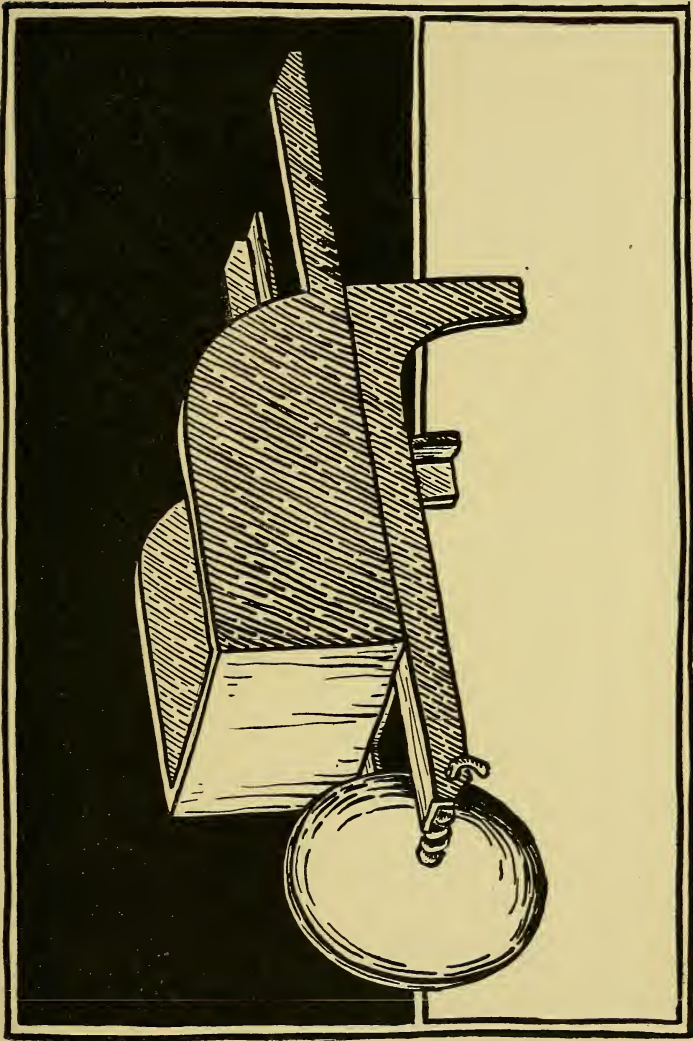
Canopy pivoted with fasteners
Wheels = two button molds
glued together-hair pin axles

Details of Doll Carriage.

THE GARDENER.

When you with your cutter sharp
The lawn have nicely mowed,
Rake the grass into a heap
And into your wheelbarrow load.

If before your little house
A garden you would make,
In your barrow wheel some dirt,
Several loads perhaps 'twill take.



Wheelbarrow.

WHEELBARROW.

Use a small candy box, two largest size wooden button molds and a few beads or corks.

1. Stand the *box* on top of its *cover*. Slide the box so that about one third of it is projecting beyond the *end* of the cover. Fasten them together.

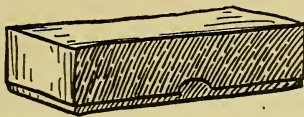
2. Shape them to form the legs, handles, body and wheel supports as shown in the details.

3. Glue *two* button molds face to face to form the wheel.

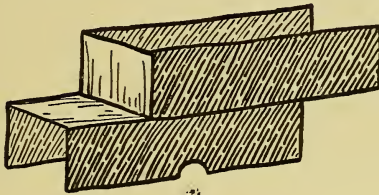
4. Punch two holes for the axle.

5. Put the axle through the supports and the wheel with enough beads on each side of the wheel to keep it in the middle. If you haven't the beads, put a small cork on each side of the wheel and whittle or file it down like the handle on the little brass kettle.

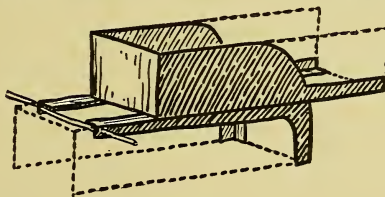
6. Paint the wheelbarrow bright red.



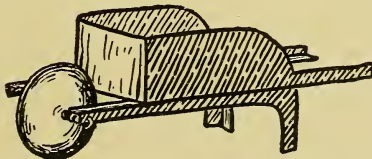
Candy box and cover.



Box fastened through bottom to top of cover
One end of each cut away.



Parts of box and cover cut away to form
 legs - handles - body - wheel supports.



Two button molds glued together to form wheel.
 Hair pin axle - beads on axle each side of wheel.

Details of Wheelbarrow.

LAWN MOWER AND RAKE.

Use two large spools of the same size, a meat skewer or match, and heavy copper wire.

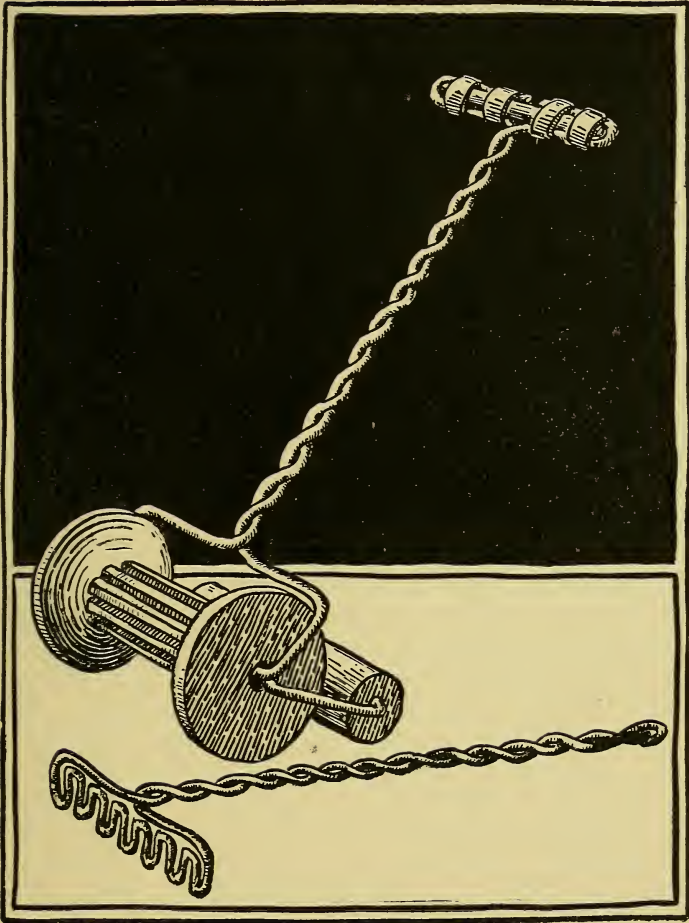
1. Stand one spool on its end; whittle *down* the lower end until it is the same size and smoothness as the middle of spool. Stand it on its other end and do the same thing. This is the back "roller."

2. Stand the other spool on its end; with the point of a knife make deep cuts *down* the *middle* part of spool. Slant the cuts so that V-shaped pieces of wood will fall out. This will give the suggestion of "cutters" between the "wheels."

3. Use about two feet of wire. Push it through "roller"; bend sharply at ends of "roller" making both ends the same length. Push *both* ends of wire through the "cutter" in *opposite* directions. Bend sharply *up* and *across* until they meet. Twist these *tightly* together until the handle is the right length.

4. Bend the ends sharply *out*, then *in*. Cut wire off where they meet. Fit in a piece of skewer or match; bind with gummed tape.

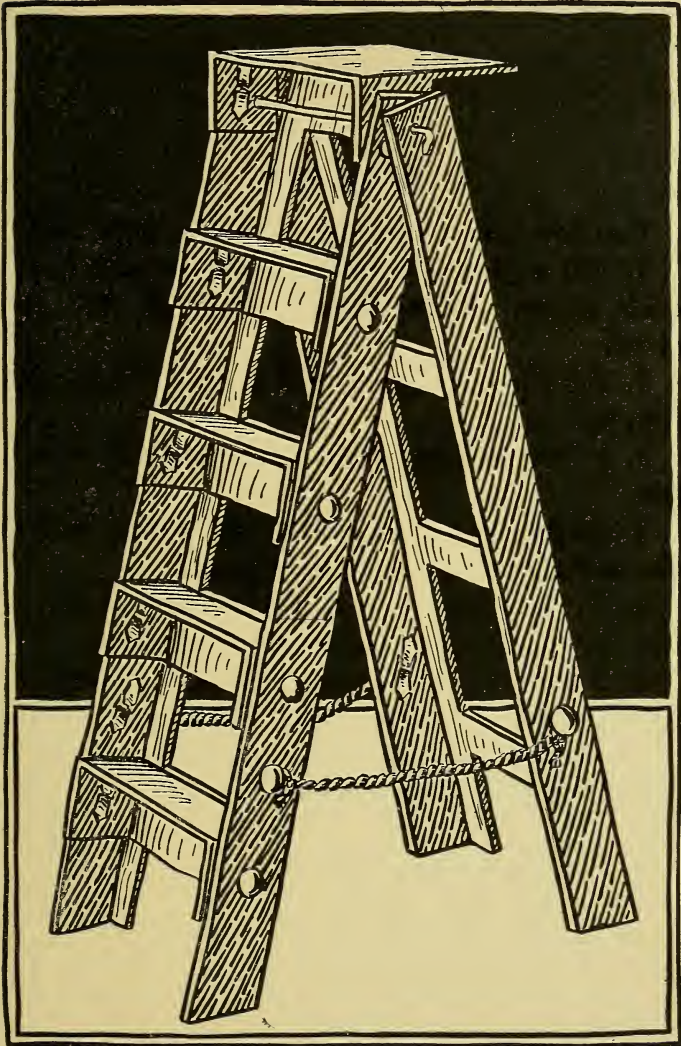
5. Paint "cutter" silver; paint "wheels" bright red with black "tires."



Lawn mower and Rake.

IMITATING FATHER.

When father has finished with all of his work,
He puts his stepladder away.
So fold up this little one just as he does,
As soon as you've finished your play.



Stepladder.

STEPLADDER.

Use two corset box covers of the same size.

1. Cut a piece one inch wide from each end of each cover. These four pieces are the four steps.

2. Cut the remaining part of one of the covers into halves.

3. Pivot the two halves at the top with a hair-pin.

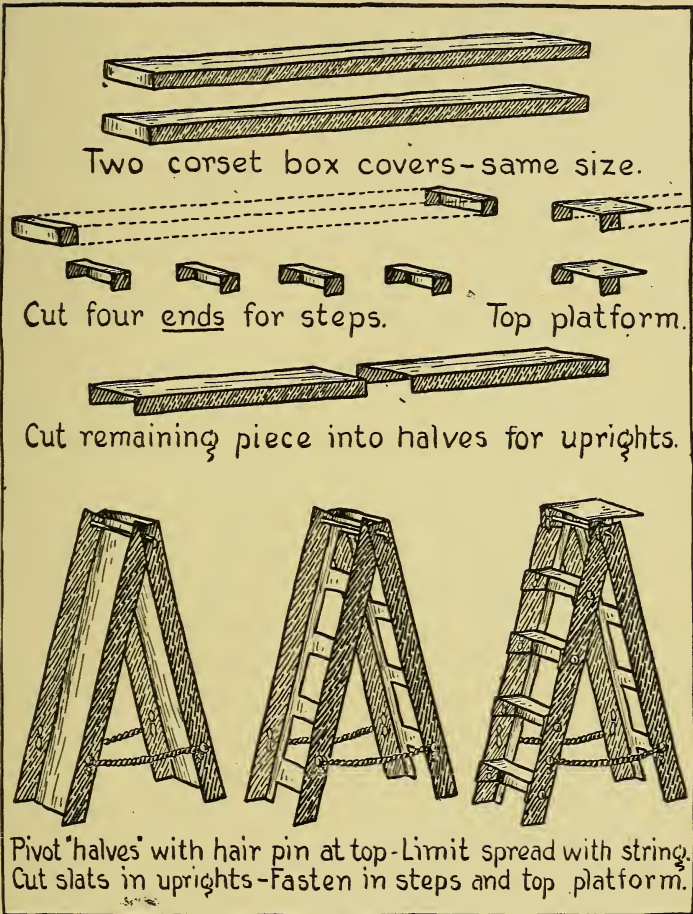
4. Adjust two strings near the bottom to limit the distance they can spread apart.

5. From what is left of the other cover cut the top platform as shown in the details.

6. Fasten the platform at the top so that it is in a horizontal position when the legs are spread.

7. Fasten the four steps equal distances apart.

8. Paint the stepladder brown.



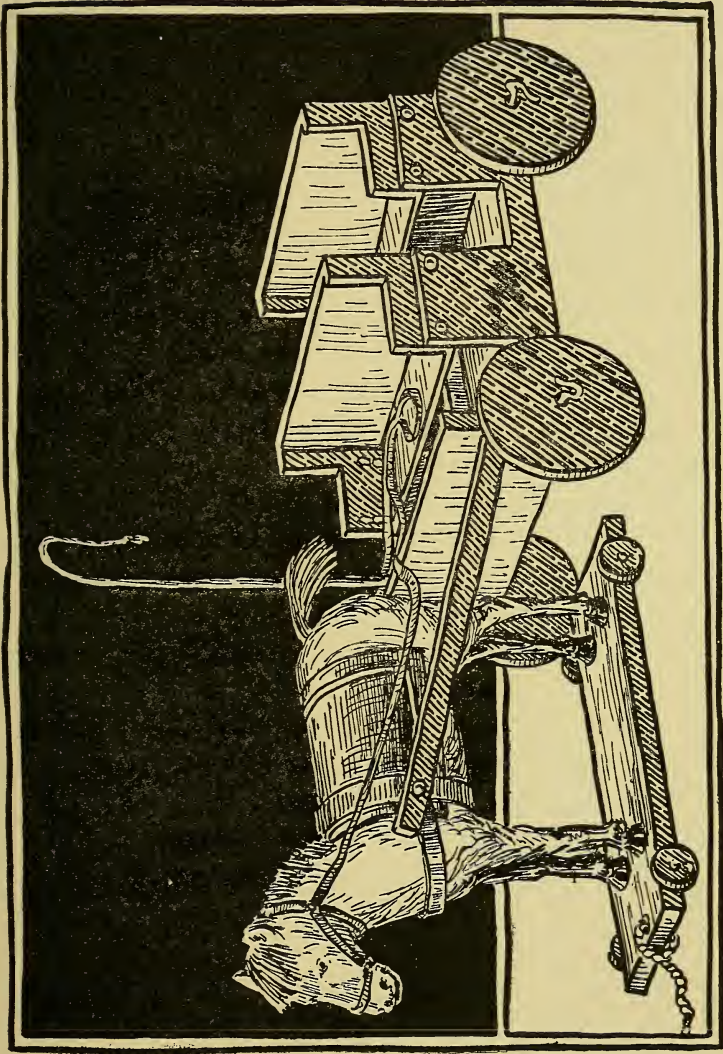
Details of Stepladder.

THE HARNESS MAKER.

When the little cart is done
And ready for a trip,
Whittle off a little switch
And use it for the whip.

Make the reins of tape or cord
A blanket, too, you'll need,
To throw upon the pony's back
When he stops to take his feed.

With another piece of cord
A little halter make,
And so that he won't run away,
I'd tie him to a stake.



Pony Cart.

PONY CART.

Use a writing paper box.

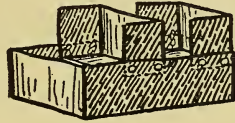
1. Cut two ends of the *box* to use as seats.
2. Use the *cover* for the body of the carriage.
3. Fasten the seats into the body as shown in the details. The seats should be put about one inch below the top edge of the cover.
4. Cut pieces out of the long sides of the cover to form the entrances. The front end of the cover forms the dash board.
5. Shape the arms of the seats.
6. Pivot the shafts to the front corners of the body. Use very strong cardboard or thin wooden splints for the shafts.
7. Make the wheels of heavy cardboard or cut them out of cigar-box wood.
8. Fasten the end of a discarded metal pencil holder into a front corner for the whip socket.
9. Harness a little toy horse into the cart. Use heavy cord or tape for the harness.
10. Paint the cart black and the wheels red.



Writing paper box.



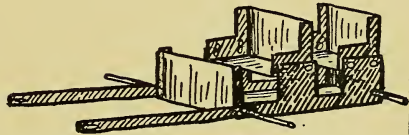
Two ends of box
cut for seats.



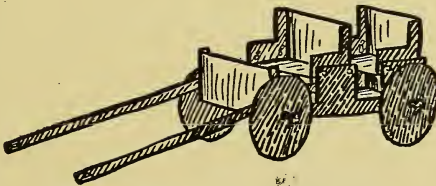
Seats fastened
into cover.



Sides cut down
for entrances



Arms of seats shaped
Shafts pivoted on.



Cardboard wheels
Hair pin axles.

Details of Pony Cart.

BABY SULKY.

Use a *small* candy box, a *large* spool and two hairpins.

1. Cut off both ends of the box; use one end for the seat and the other end for the part into which the spool is fitted.

2. Shape the arms and back; cut the slats.

3. Shape the lower part as shown in the picture: You can not see the *back* of this piece, so I will tell you that there is a short vertical part of the box which is not to be cut away. This makes a strong frame in which the "wheels" will roll freely.

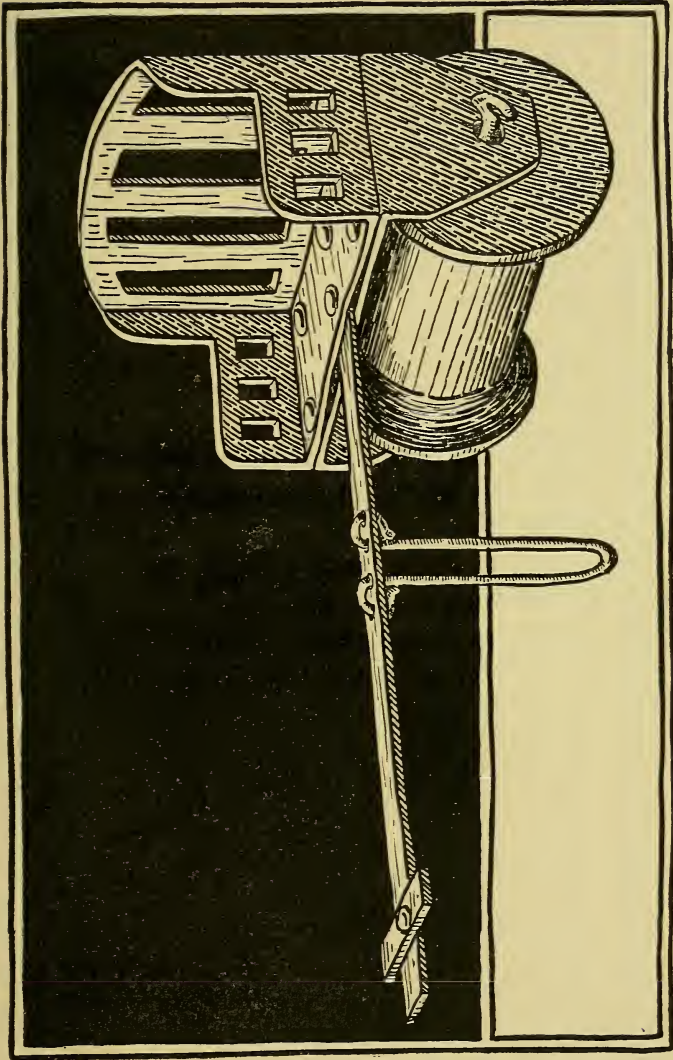
4. Make the "tongue" of *very heavy* cardboard, thin wood or tin.

5. Fasten the seat and bottom frame together with the tongue *between* them.

6. Prick holes in the tongue; bend a hairpin and fit it as a support for the tongue.

7. Fasten the spool in with a hairpin axle.

8. Paint it bright red.

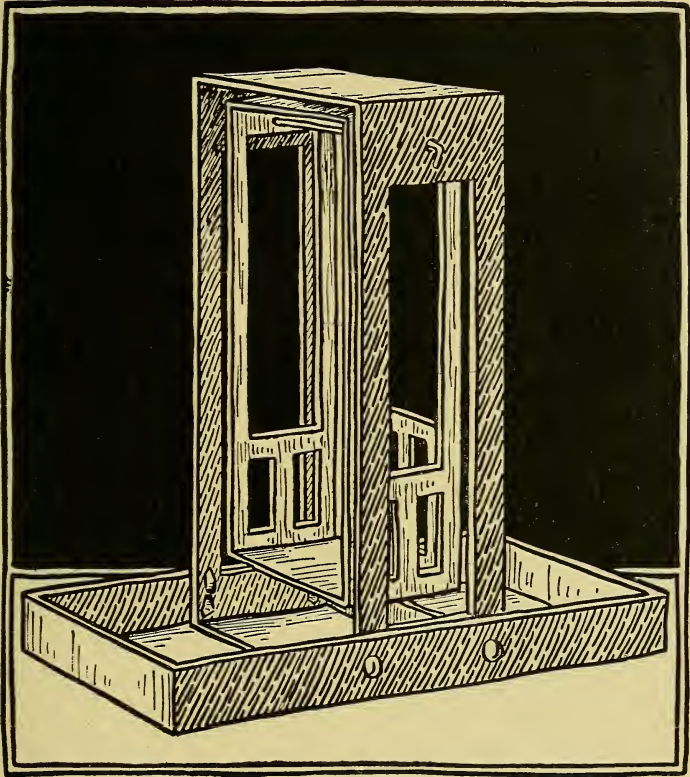


Baby Sulky.

TO AND FRO.

Place your tiny baby doll
In this little swing;
And so that she won't tumble out
Tie her with some string.

Then when baby's safely in,
Push her to and fro.
Make believe she is alive
And hear her laugh and crow.



Baby Swing.

BABY SWING.

Use a fairly large candy box with a cover which overlaps only a little, and a smaller candy box.

1. Stand the larger box on its *end* across the middle of its cover; fasten them firmly together.

2. Cut the openings in sides and back as shown in the details. Do not weaken the swing by making the uprights too frail.

3. Use the smaller box for the swinging seat; cut the slats and openings of this seat as shown in the details.

4. Pivot the seat into the upright with a hair-pin. Adjust it so that it swings freely.

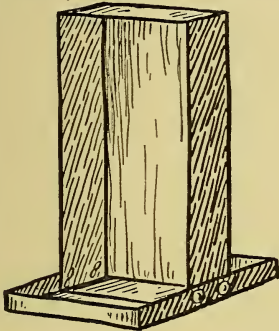
5. Paint it green or bright red.



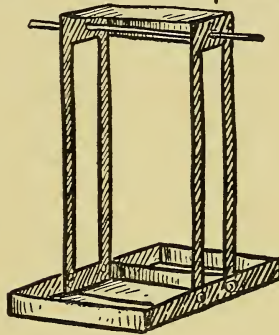
Candy box and cover



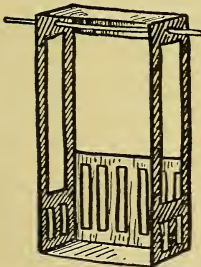
Smaller candy box



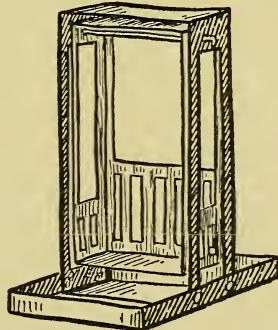
larger box on end
fastened to its cover



Upright shaped
Hair pin through top



Smaller box shaped
into swinging seat.



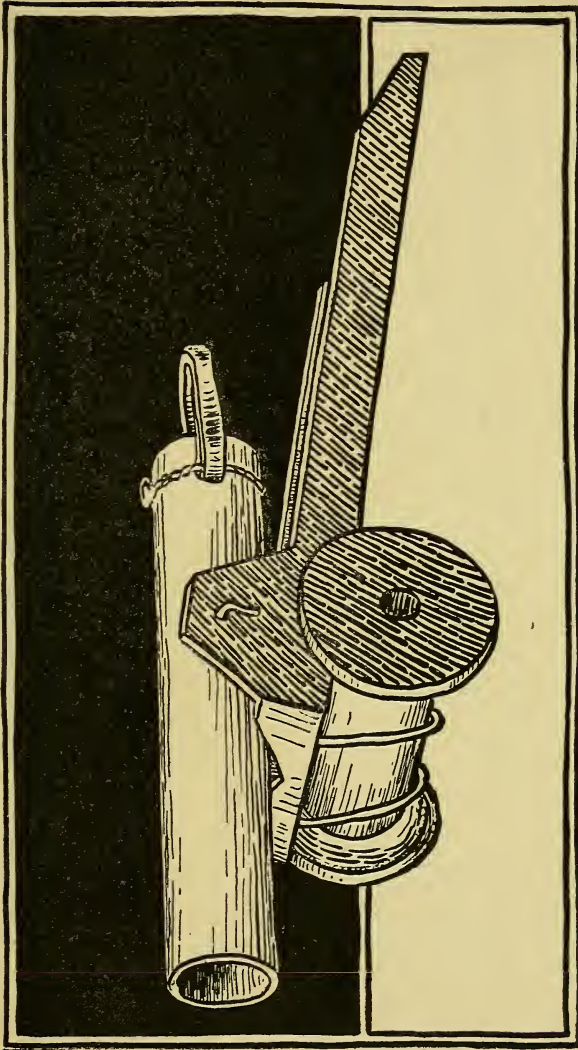
Seat suspended in
upright by hair pin.

Details of Baby Swing.

A MARKSMAN.

For a target set up spools,
One upon the other.
See who first can knock one down,
You or little brother.

Every time a spool goes down,
It counts "one" in the game.
He will make the highest score
Who takes the straightest aim.



Cannon.

CANNON.

Use a small candy box, a small pasteboard mailing tube, a large ribbon spool, a hairpin and a large flat elastic band.

1. Cut away one short end of the box; shape the other end and sides as shown in the details to form the "gun carriage."

2. Slant the box against the spool; when it looks right, prick four holes in the bottom of the box; curve two hairpins to fit around the spool; fit them *under* the spool and push the ends *up* through the four holes; bend the ends in *opposite* directions. The wires must be loose enough to allow the "wheels" to roll.

3. *Double* the elastic band; hold one loop against each side of the tube; put string or gummed tape through these loops and bind firmly around the tube. Put a fastener at top and bottom to prevent the tape or string from slipping.

4. Pivot the "gun" with a hairpin.

5. Paint the "gun" and "carriage" black. Paint the wheels silver with black tires.

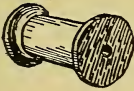
6. Use a blunt stick for the projectile.



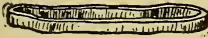
Candy box



Pasteboard mailing tube



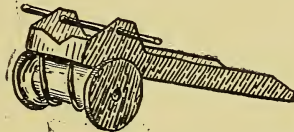
Large spool.



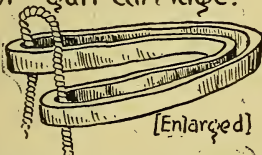
Large, flat elastic band.



Box shaped for body of "gun carriage".



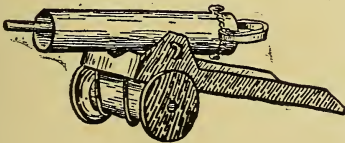
Curve two hair pins under spool - up through floor of body - bend in opposite directions



[Enlarged]



Elastic band doubled and fastened through loops by string bound around tube - String held in place by brass fasteners at top and bottom



"Gun" mounted on "carriage" by hair pin - pivoted so gun can be "trained" high or low - use a blunt stick for the "projectile".

Details of Cannon.

FORT.

Use any box of suitable size and shape.

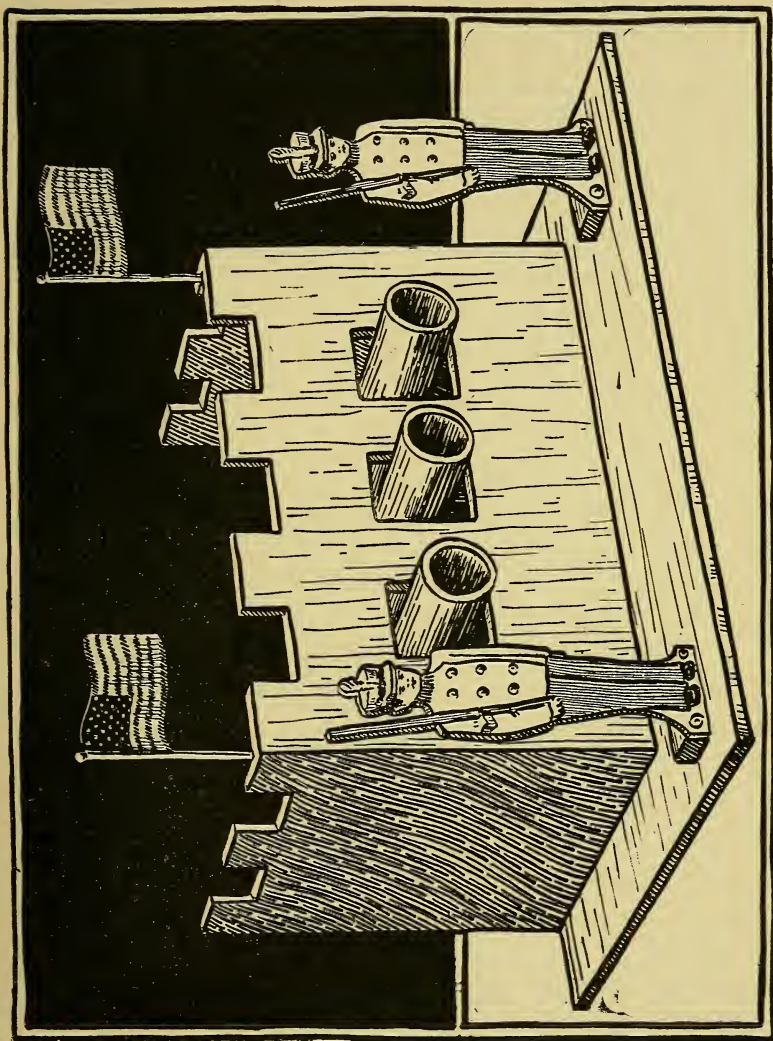
1. Cut away the back so that the cannons can be rolled in and "operated." Cut the battlements at the top. Cut the "ports" through which the muzzles of the cannons will project.

2. Fasten flags at the corners. You might make a taller "staff" with a tiny ring or wire loop at the top. Run a string through the ring and raise and lower your flag as real soldiers do. Lower it at "sunset" but I suspect you won't be likely to raise it at "sunrise," except perhaps on Fourth of July.

3. Fasten your fort to its platform and "station sentinels" on guard.

4. You probably have plenty of paper soldiers. I suggest that you draw and paint one for yourself. Think what fun it will be to dress him in just the kind of "uniform" you wish.

5. Cut a pattern of your soldier and make enough more to "man" your "fortification." Don't forget to design some smart little officers. Tack them to small blocks of wood.



Fort.

BATTLESHIP.

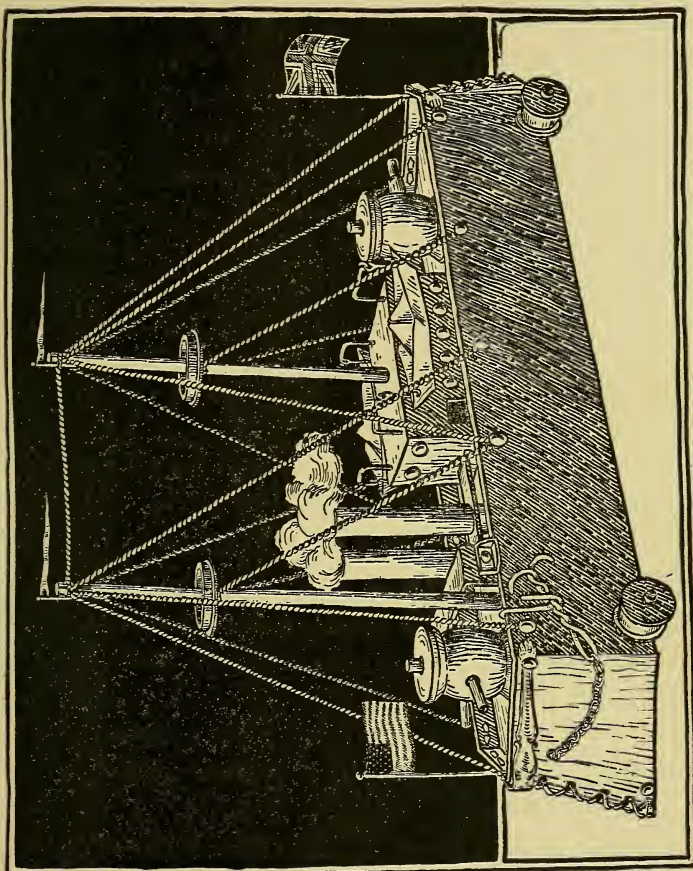
Use a corset box and "odds and ends."

1. Cut away both *ends* of the *box* and *cover*. Turn the *cover* up side down; fasten it *inside* the box with their top edges together. This forms the "deck."

2. Draw pointed ends on bottom of the "hull." Draw slightly shorter points on the ends of the "deck."

3. Cut away the triangular portions *outside* of the points. "Score" two lines on each side of the "hull." Bend the ends together. Clip off enough to make them fit the shorter ends of the deck. Lace these with string to form the "prow" and "stern." Complete these with tongs from candy boxes.

4. The picture will show all the details for completing the ship. The masts are stuck through holes in the deck and held in place by string "rigging." The "revolving turrets" are embroidery silk spools pivoted on meat skewers stuck through the deck. The "guns" are ends of metal pencil holders or handles of old mucilage brushes. The "crows' nests" are pill box and cover. The anchor is a hairpin. The "boats" are of folded paper and hang on hairpin "davits." The "funnels" are mailing tubes and the "smoke" is singed cotton wadding.



Battleship.

GARDEN SWING.

Use three shoe box covers of same size, one "square end" corset box and the cover of some small box.

1. Cut an oblong hole out of the top of each of *two* of the covers, leaving $\frac{3}{4}$ " margin on all four edges of each.

2. Invert the third cover; stand the two covers in it leaning together like a tent. Cut cardboard to fit between the tops and fasten firmly. Also fasten bottom edges to ends of inverted cover.

3. Cut corset box cover in halves to form up-rights.

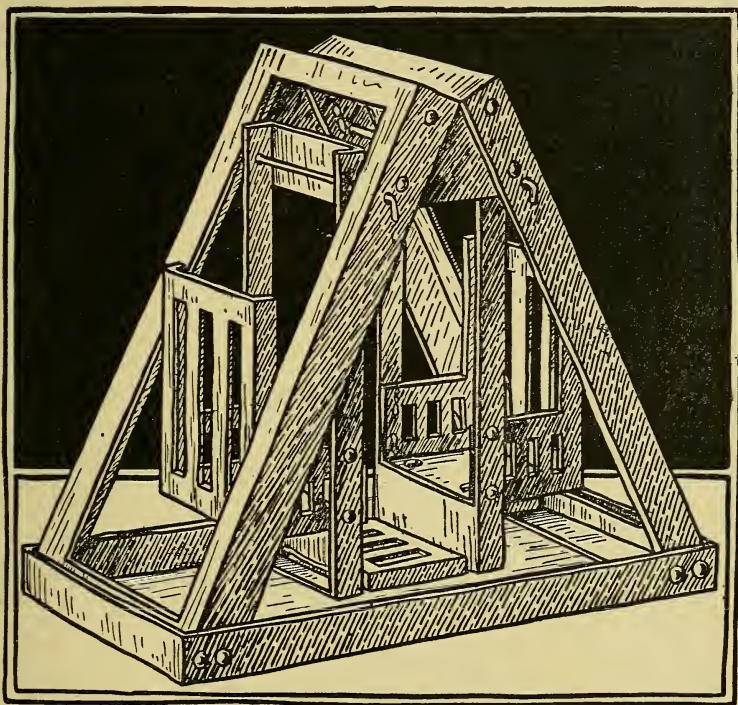
4. Cut 4" piece from each end of corset box for seats.

5. Shape seats and uprights; fasten them together. Notice the "shelf" on which the front edge of the seat rests. Put fasteners through bottom of seat into "shelf" as well as through sides and uprights.

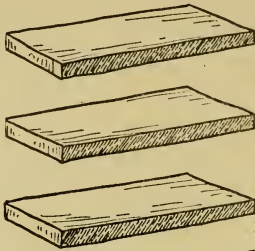
6. Use small box or folded cardboard for "platform." Fasten with hairpins or fasteners. Make it loose enough to swing.

7. Adjust the swing so that it will not touch the bottom. If necessary cut off some of the *tops* of uprights. Pivot the swing to the support with heavy wire.

8. Paint bright red or pretty green.



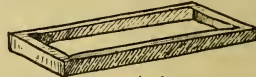
Garden Swing.



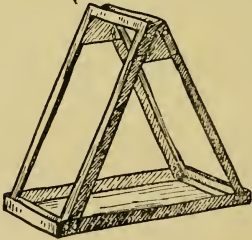
Three shoe box covers
The same size



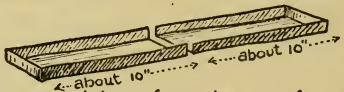
"Square end" corset box and cover.



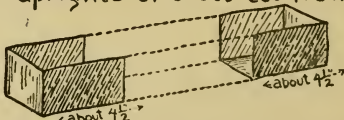
Cut oblong holes out of tops of two covers.
Leave margin of about $\frac{3}{4}$ " on all four edges.



Invert third cover.
Fit the other covers
into this like a tent.
Fasten at top with two
triangular pieces of
cardboard.
Fasten at bottom edges.



Tall uprights of seats cut from cover.

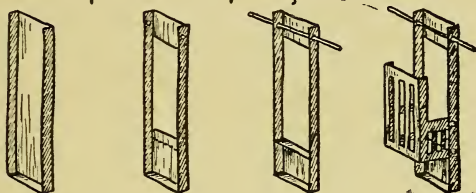


Two seats cut from two ends of box.

Details of Garden Swing.

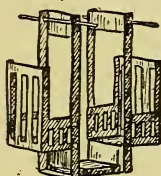


Steps in shaping of seats

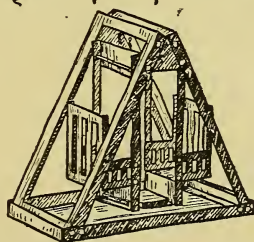


Steps in shaping uprights
Bend on dots to form "shelf."

Fasten seat to sides and "shelf."



"Platform" made by small inverted box fastened between uprights by hairpins-loose enough to swing



Seats-uprights-platform suspended in tentlike support by hairpins or wire.

FRYING PAN AND KETTLE.

Use the small brass box in which your paper fasteners were packed, two hairpins and a small cork.

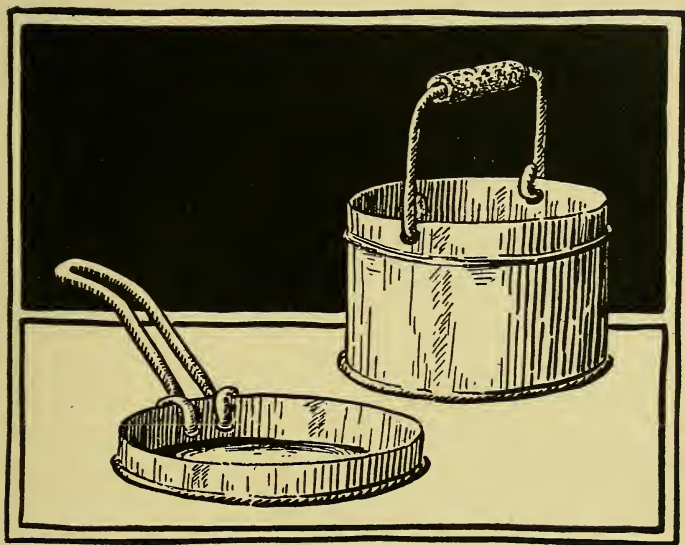
1. Hold your *box* against the corner of some old piece of wood that will go partly inside of it. With a small nail and hammer punch two holes. Be sure that they are *exactly opposite*.

2. Cut a piece of wire the right length for the "bail." Prick a hole with a hatpin through the length of the cork. Carefully force the wire through this hole. With a sharp knife whittle off the cork; with a fine file [a nail file will do] smoothly round it off. A long bead might be used instead of a cork.

3. Bend the "bail" down and *in* from the *outside* of the kettle; bend it *up* and pinch the ends against the bail. It should move freely.

4. Punch two holes in edge of *cover*. Push the wire *in* from the *outside*; then *up* and *over* the edge. Pinch the hairpin until it is firm. Curve the handle.

5. Use the frying pan and kettle on the little stove which I showed you how to make in a book on the making of paper box furniture.



Frying Pan and Kettle.

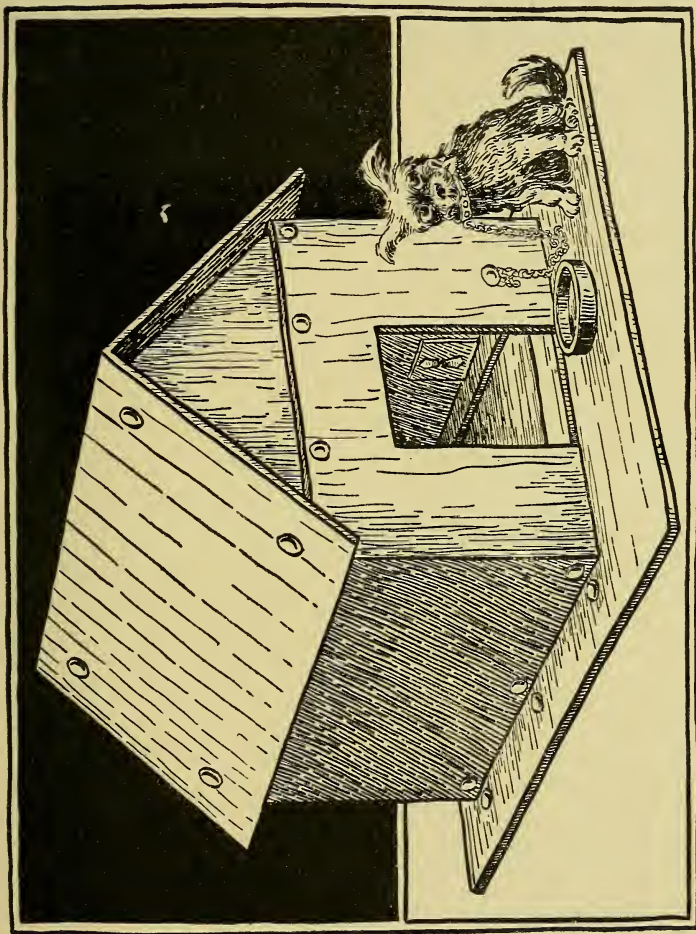
A WATCH-DOG.

When you've made the little kennel
And you've got your watch-dog, too,
Chain him fast, I would advise you,
So no harm he'll ever do.

He will bark unless he's happy,
And your neighbor might complain
That he had disturbed their sleeping,
Which would surely be a shame.

Then a little tin box fasten
Just beside him on the floor,
So that he can drink, when thirsty,
As he sits before his door.

Our own beds are soft and downy,
We use pillows at the head;
But as dogs don't care for such things,
I'd make his of straw, instead.



Dog Kennel.

DOG KENNEL.

Use a small collar box and some extra cardboard.

1. Hold the cover against the *end* of the box so that one corner projects above the top edge like the gable of a house. Draw line "A." Do the same with the opposite corner. Draw lines parallel to "A" and "A," making the "B" spaces $\frac{1}{2}$ " wide.

2. Cut away the "waste" part of the cover to make the two gable ends.

3. Hold each gable so that the "B" space is inside. Put the fasteners through the box into the "B" space.

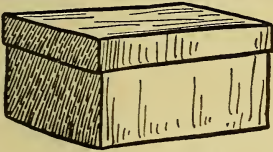
4. Cut a large oblong hole in the bottom.

5. Cut extra cardboard for the roof. Score and bend the "ridge pole" and fit it to the kennel.

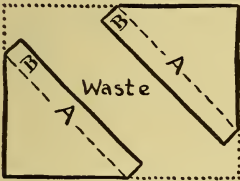
6. Put your hand through the hole in the bottom and fasten the roof to the edges projecting in from the gable ends.

7. Cut the doorway. If the door is large enough, put your hand through it to fasten the kennel to the platform. If the doorway is small, use strips of cardboard and slits like those in the chicken coop.

8. Paint the kennel; chain a little toy dog by the door.

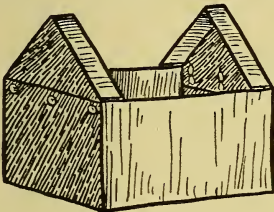


Two collar boxes - same size.

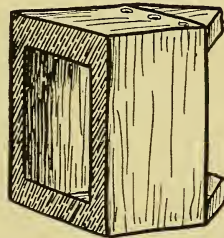


Cut "waste" away to form gable ends

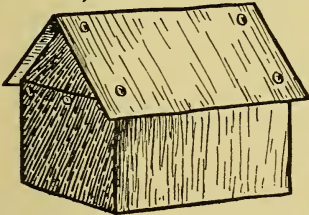
On top of cover draw lines A and A as long as short end of box. Make B about $\frac{1}{2}$ wide



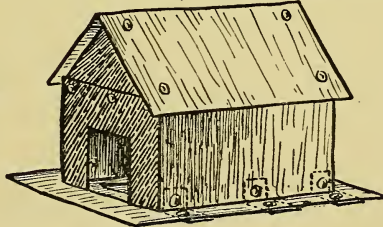
Fasten gable ends to house.



Cut oblong hole in bottom.



Make roof from extra cardboard. "Score" and bend "ridge pole". Put hand through hole to fasten roof.



Cut doorway - Fasten house to platform with strips of cardboard put through slits.

Details of Dog Kennel.

TWO-STORY COTTAGE.

Use a large flat cover, corrugated cardboard [used for packing bottles], two collar boxes of the same size and an extra cover of the same size.

1. Make the second story and roof exactly as the dog kennel is made. Turn the other box bottom up. Stand the upper part of the house on it.

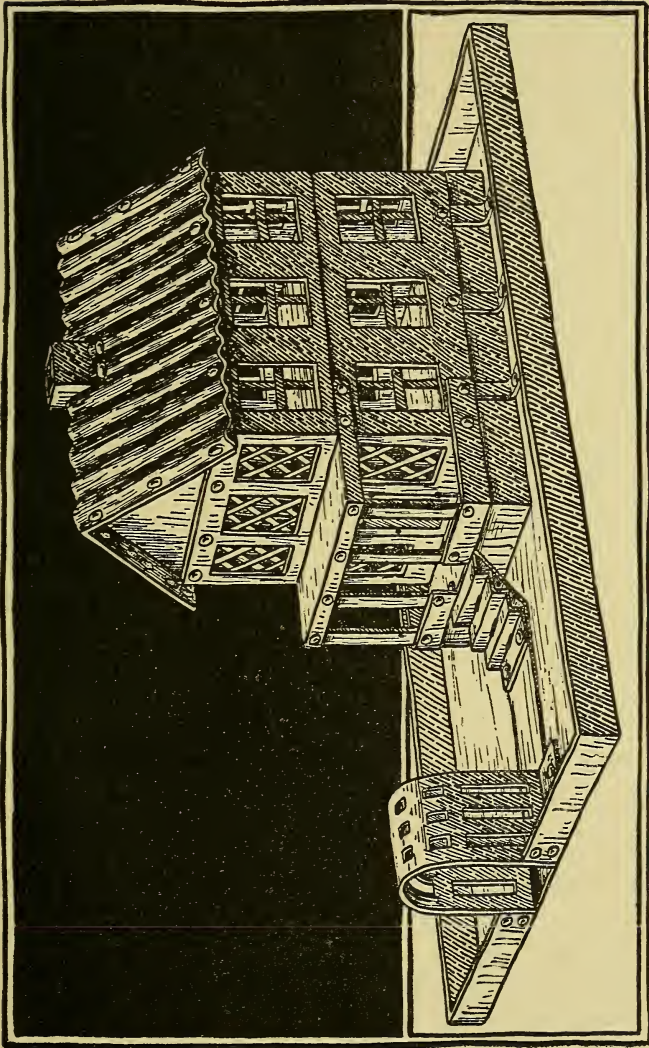
2. From two ends of one *cover* cut pieces to form the porch and its roof. Make them wider than the porch as shown in the picture. Slip the "roof" *between* the upper and lower "stories." Put your fingers through the windows and fasten the *three* parts together.

3. Place the "porch" *under* the first "story" so that it projects the same as the "roof." Fasten to sides of house. Fasten in little cardboard "posts" to support the roof.

4. Make the "foundation" from the other two covers. Fasten strips of cardboard to project below bottom edges of the house. Make these strips long enough to be fastened down sides of foundation and bent *out* and fastened to "lawn."

5. Fasten front steps *between* porch and foundation and to the "lawn."

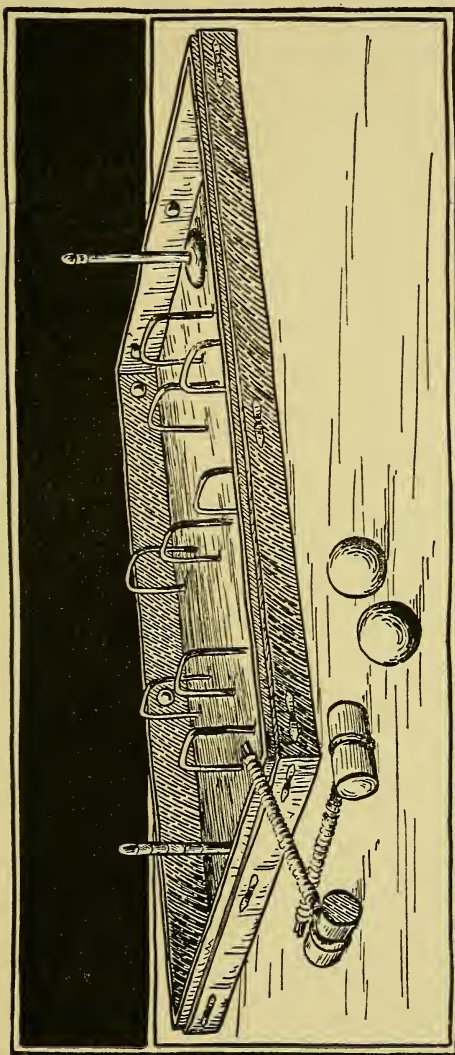
6. Paint house white, lawn green, roof dark red.



Two-Story Cottage.

PLAYING CROQUET.

Each ball must through the wickets go,
Before the game is done.
If you're the first to hit the stake,
Then you the game have won.



Croquet Set.

CROQUET SET.

Use a large flat box such as union suits are packed in, a "dowel," hairpins or wire, two meat skewers, two button molds and marbles.

1. From the end of a *large* "dowel" or *small* curtain rod, saw pieces for the heads of the mallets. Whittle a groove around the middle of each.

2. Bend a piece of wire or a very long hairpin around each piece; pinch it into the groove; wind string, gummed cloth tape or adhesive plaster around the projecting wires to form the handle.

3. Bend nine hairpins into arches.

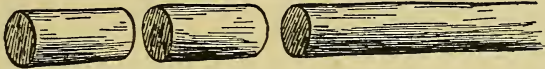
4. Turn the *box* bottom up; draw lines and measure to locate places for the wickets; prick eighteen holes.

5. Turn the box right side up and push the ends of the wickets down through pricked holes; bend one end of each wicket wire toward one *end* of box and the other end toward the opposite *end* of the box.

6. Press the box into its cover; fasten them through their sides. The loose wickets will stand rigidly upright.

7. Force the skewers into the button molds. Be sure the bottoms are flat; then glue the molds to the "lawn."

8. Paint the "lawn" green; stripe the stakes, mallets and balls to match.



Cut two mallet heads from a "dowel."



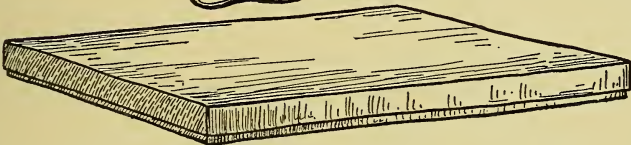
Whittle groove around middle of head



Put hairpin [or soft wire] around the head
Pinch into groove



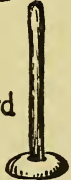
Tightly wind handle with string
or adhesive tape



Long, wide, shallow box [union-suit box]

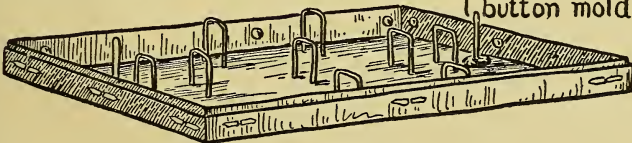


On box bottom locate and
prick holes for wickets



Bend points of hairpins toward
opposite ends of box

Glue in stakes { meat skewer
button mold



Set box into cover and fasten
This makes wickets stand firmly upright

Details of Croquet Set.

RING TOSS.

For a *small* ring toss use a pill box, meat skewer, button mold and brass embroidery rings.

For a *larger* ring toss use a circular candy box, a dowel [a piece of cane or umbrella handle will do] and rings made of wire or twisted rope.

The directions given are for the small one shown in the picture.

1. Punch a hole in the middle of the cover; stick the skewer through the hole.

2. Force the lower end of skewer into the hole of a button mold [which fits box if possible]. If it is loose, glue it.

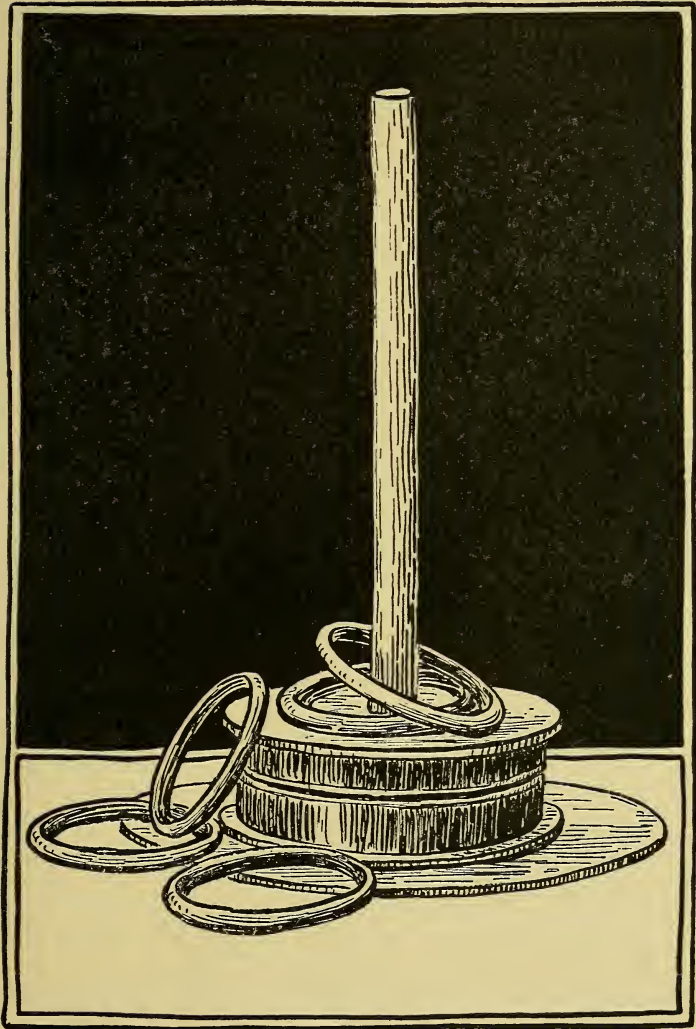
3. Set the button mold down into the box; slide the cover down the skewer so that it fits on the box.

4. If the skewer does not stand firmly upright, take the cover off and drop a little glue *under* the button mold.

5. Slide the cover down again and fasten it to the box by sticking two ordinary pins through opposite sides.

6. Paint bright red. The stake might be painted red and then striped with white.

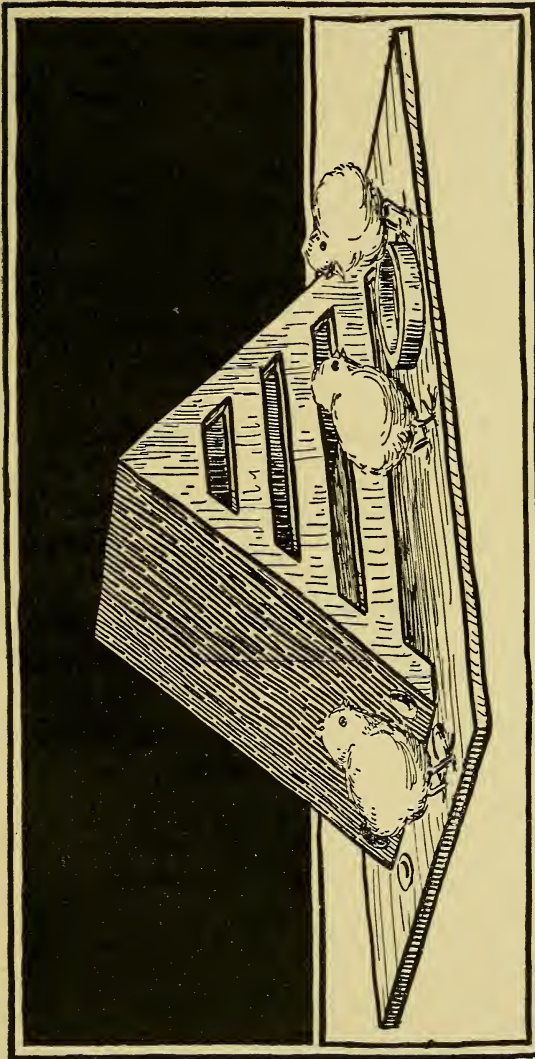
7. Plan a system of counts for keeping score when you play the game.



Ring Toss.

AN EASTER GIFT.

At Easter time, this little coop
Will give dear mother pleasure,
As gifts made by her boy or girl
She's always sure to treasure.



Chicken Coop.

CHICKEN COOP.

Use a loaf sugar box or any deep box with an overlapping cover.

1. Cut off one corner of the *box* and *cover* so that when they stand together on their cut edges they will form a coop.

If you haven't such a box, you can use the corner of any deep box with an ordinary cover, by fastening the two pieces together.

2. Cut the slats for the front.

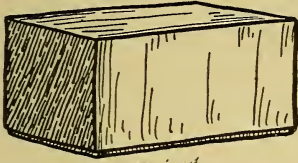
3. Stand the coop on its platform; mark around it with a pencil.

4. Cut four slits on the pencil mark. Fasten four cardboard strips *inside* of the bottom edge of the coop.

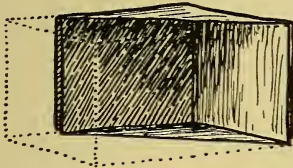
5. Push the strips down through the slits; bend them *outward*; put fasteners through the platform into the strips.

6. Paint the "grass" green and the coop white. You might glue artificial moss to the platform for "grass."

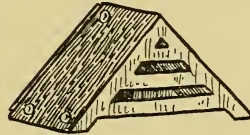
7. Fasten some tiny yellow chicks to the platform, and a small tin box for their food. If you have a very small toy hen you can fasten her inside of the coop.



Loaf sugar box or
any deep box with
overlapping cover.



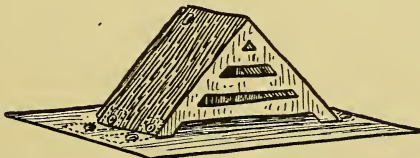
Cut one corner from
box and cover



Fasten parts together
Cut slats in front.



Fasten projecting strips of cardboard to bottom
edges - Cut corresponding slits in platform.



Push strips through slits - Fasten to platform.

Details of Chicken Coop.

BUNGALOW.

I shall not tell you just how to make this little bungalow, but simply say that it is made from a correspondence card box and its cover.

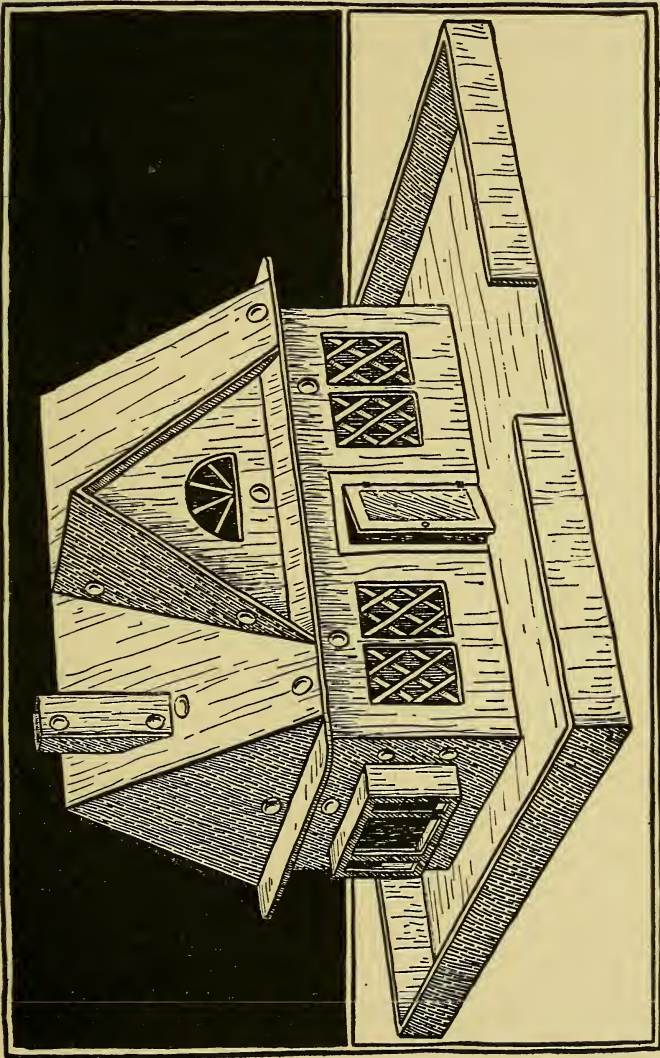
The roof and gable are made from the *cover*. The *box* is used for the "down stairs" part of the house. The "yard" is made from the cover of a larger box. The lattice work in the windows is made with narrow strips of gummed tape.

You may puzzle out for yourself how to make it, or you may use this only as a suggestion and design an original bungalow.

This little bungalow is only six inches high and very cunning. You could use much larger boxes and add new ideas for bay windows, porches, window boxes, etc.

You might put thin colored paper back of the lattice work; then put a tiny electric light bulb inside.

You might "plant" little bushes or trees in your yard, using evergreen twigs set in small spools glued to the "lawn." You might glue bits of evergreen to the "fence" and turn it into a "hedge." You might make "graveled" walks, using coarse sandpaper.

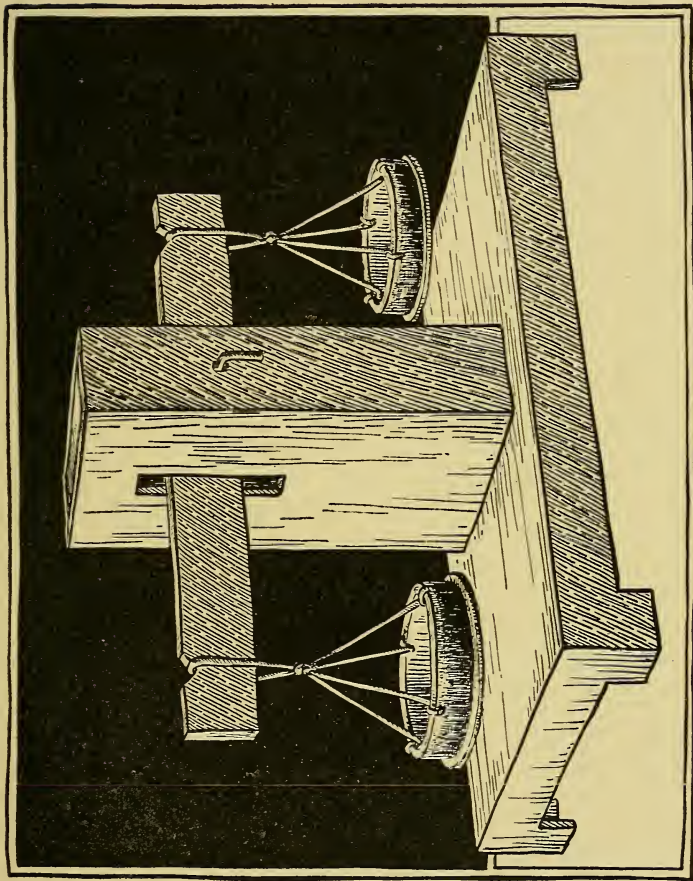


Bungalow.

PLAYING STORE.

If you make small weights of tin or lead
To put into one tray,
These scales you then can really use,
When keeping store you play.

If you cut some little paper coins,
Your dolls their bills can pay,
When to your store they come to buy
On dollies' market day.



Scales.

SCALES.

Use a small, shallow paper box, a box with a sliding cover such as cough drops are packed in, a pill box, a hairpin and some coarse thread.

1. Turn the larger box bottom up. Stand the smaller *box* on its end *across* the middle of the inverted box; fasten *very* firmly with at least three fasteners.

2. Slide the *cover* down over the box.

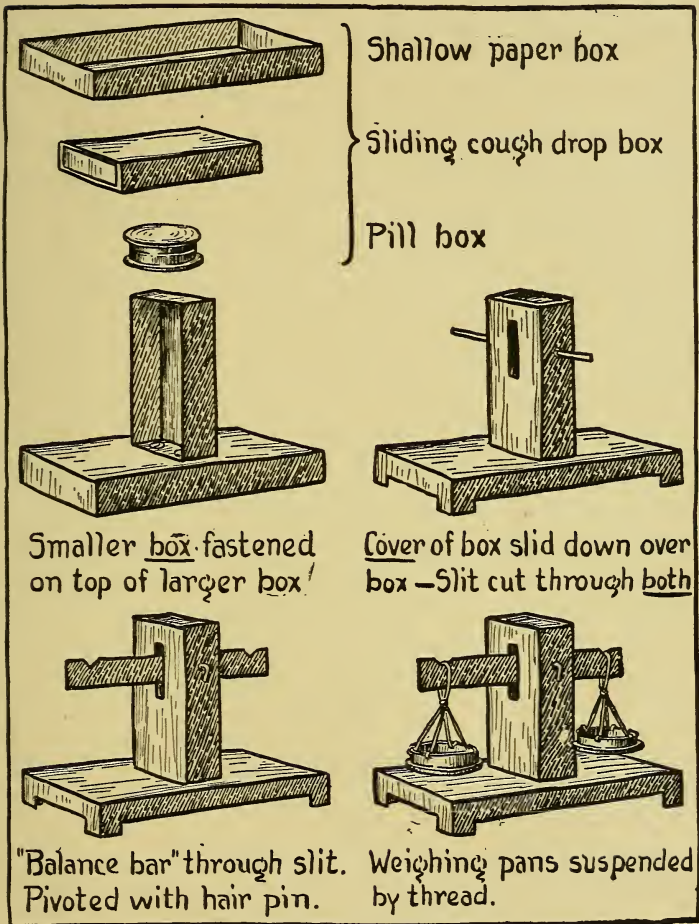
3. Cut a narrow slit through both broad sides of the cover *and* through the *box* down which you slid the cover. This slit must be long and wide enough for the "balance bar" to move freely up and down.

4. Cut the balance bar from very strong cardboard or whittle it from cigar-box wood. You might even cut it from the cover of a tin cracker-box.

5. Use the pill box and its cover for the weighing pans. Remove the extra rim of cardboard in the *box* by running the point of a knife between the parts. Then the trays will balance.

6. With a darning needle and coarse thread suspend the pans.

7. Paint the pans and bar silver, *top* of platform white and all the rest of the scales blue.



Details of Scales.

DAIRY LUNCH ROOM.

Use chocolate peppermint boxes, ordinary size spools and larger spools.

1. From each end of the *cover and box* cut a piece that can be shaped into a little chair seat. There will be four chairs.

2. Cut the slats and arms.

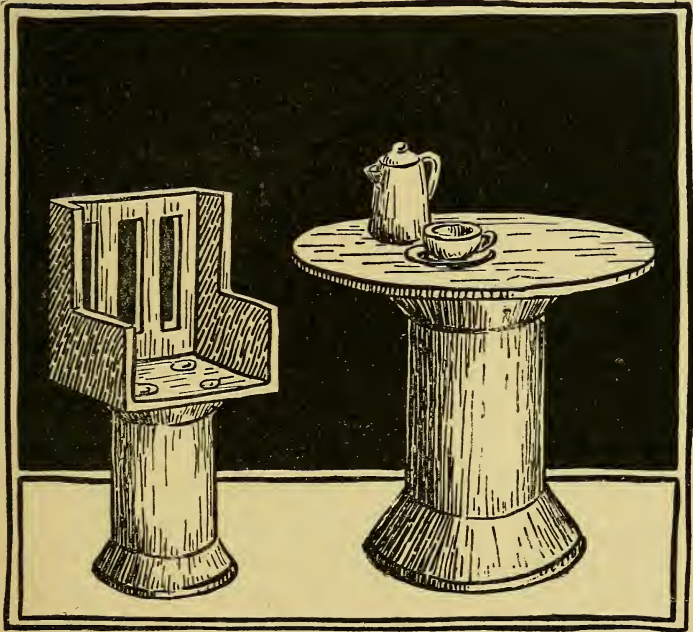
3. Place each seat on top of an ordinary spool. Tack on with very small "brads."

4. Make the table by tacking a circular piece of *heavy* cardboard on top of a larger spool. You might use, instead, cigar box wood or an inverted cover of a pill or powder box.

5. Use a large pasteboard suit box for the "lunch room." Cover the "floor" with oil cloth, glazed paper, or paint blue and white squares to suggest "tiles."

6. Arrange your little tables and chairs like a restaurant. Cut tiny paper napkins and use the smallest dishes you can find.

7. At one end of "room" make a "counter" and fix it up with little plates, cups, tin boxes, etc., so that it will look "real."



“Dairy Lunch Room.”

CHUMS.

Of all the friends I've ever had,
I like my sister best;
For as a chum, in work or play,
She always stands the test.

If I suggest that we make toys,
She's filled with such delight,
That off she goes and hunts things up
And helps with all her might.

Of course, she's very small indeed,
While I'm a great big lad;
But all the same, she is, for sure,
Of chums, the best I've had.



Chums.

TROLLEY CAR.

Use a cylindrical hat box, six shoe boxes of same size, cover of corset box, sixteen *largest size* button molds.

1. Across the top of hat box *cover* draw four parallel lines. Make middle space as wide as the shoe box. Make two narrow spaces as *wide* as the rim of hat box cover is *high*. Extend the lines down the sides of cover.

2. Cut where lines "1" go down the side; score lines "1" and bend until the two "C" spaces break off.

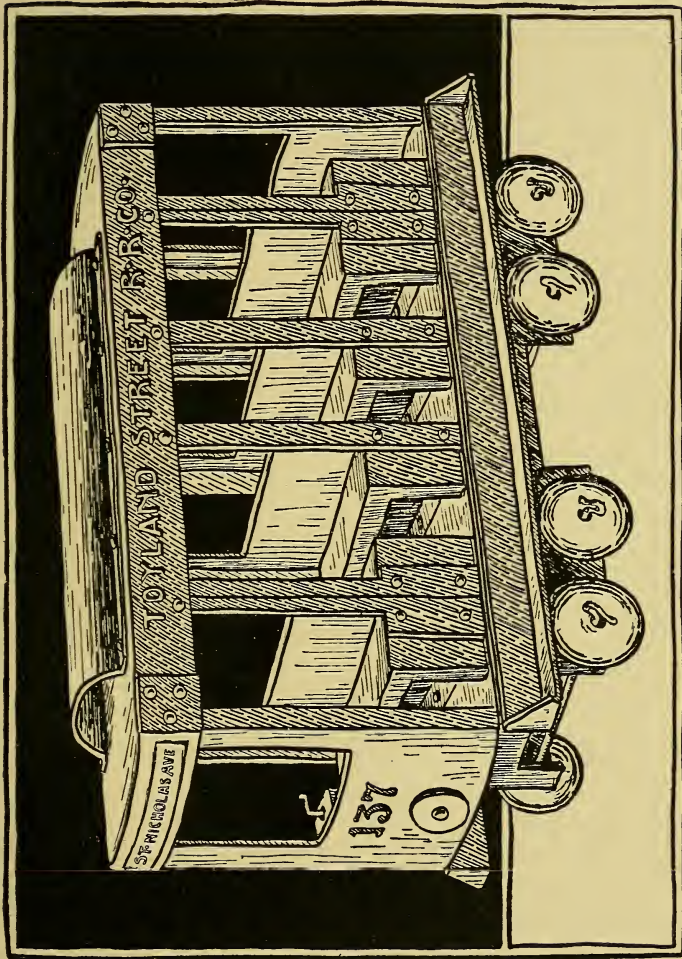
3. Cut the four short edges marked "S"; score "2" and bend "B" *down*; score the four little "x" lines and bend projecting pieces *inward* and fasten to "B."

4. Turn the hat *box* bottom up; draw four parallel lines across the bottom and down the sides as in making the "roof."

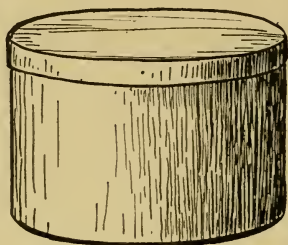
5. Cut away the "G" spaces of bottom and sides; turn the box right side up; cut the vertical sides down to 7" in height.

6. Cut the four short edges marked "R"; score lines "W" and bend "F" inward; score lines "4" and bend "E" downward.

7. Set the roof on; fasten at the ends and at the top of the four "F" spaces; cut front and back openings.

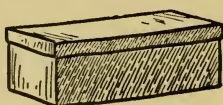


Trolley Car.

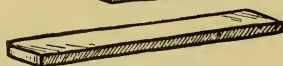


One cylindrical hat box for body and roof of car.

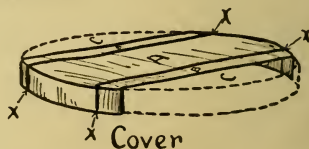
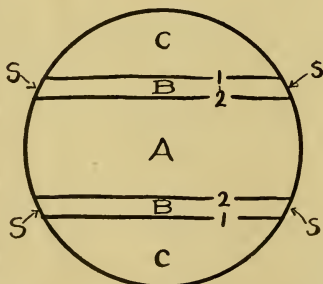
Six shoe boxes and covers—all the same size—for seats.



One corset box cover for "running board".



Sixteen largest size button molds and wire for wheels and axles.



Roof of car.

Measure A to equal the width of shoe boxes.
Measure B to equal height of rim of hat box cover.
Cut on lines 1 and discard C.

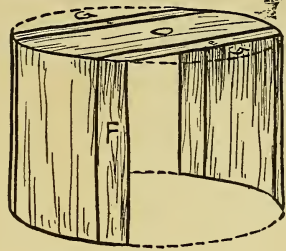
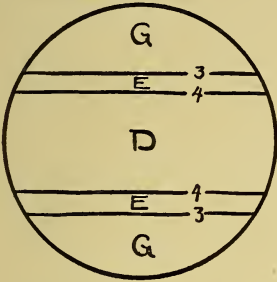
Cut on lines S.

"Score" on lines 2 and bend B down.

"Score" on lines X—Bend and fasten to B.

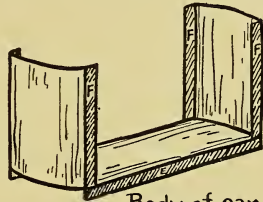
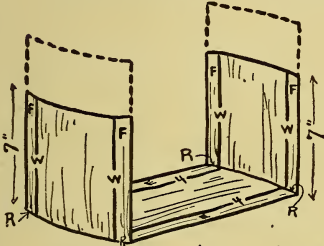
Make arch for top of roof from extra cardboard.

Details of Trolley Car.



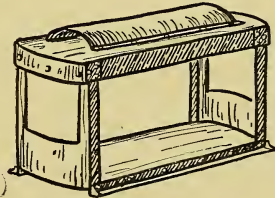
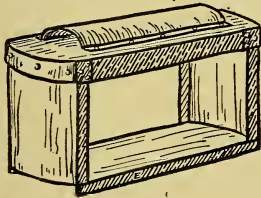
Box-bottom up.

Measure D to equal the width of shoe boxes.
 Measure E and F each about $\frac{3}{4}$ "
 Cut on lines 3 - Discard G - Reverse position of box



Body of car.

Cut ends down to about 7" for height of body.
 Cut on lines R - "Score" lines W - Bend F inward
 "Score" lines 4 - Bend E down to fasten "running board"



Fasten roof to body - Cut openings in front and back ends
 Make "running board" of edges of corset box cover and
 fasten securely to E

Details of Trolley Car [continued].

8. Cut a 7" piece from one end of each of the six *covers* for the uprights in the car.

9. Turn three of the *boxes* bottom up; from the ends cut six seats 2" high and 1½" wide.

10. Shape the seats and uprights as shown in the picture and fasten them together.

11. Make the front and rear "double seats" by fastening two uprights back to back.

12. Stand the seats on the floor of the car; space them equally; mark where they are to be fastened.

13. Fasten bottom edge of each upright to the floor.

14. *After* the seats are fastened to the floor, see that they stand straight; fasten the upper end of each upright to the overhanging "B" space of the roof.

15. Turn another *box* bottom up; cut it 2½" in height; shape and complete the "truck," using wire for axles and button molds for wheels. Glue *two molds face to face* to form each wheel.

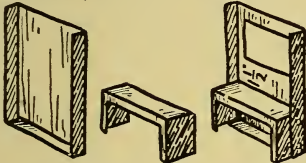
16. Set the body of car on the truck; put fasteners down through the floor into top of truck.

17. Fasten small box in front with hairpin handle. Put a fastener through a button mold for a head light.

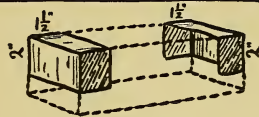
18. Paint it like some real car and be sure to remember to paint its number and street sign.



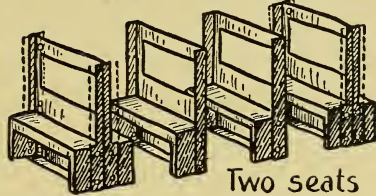
Cut all six shoe box covers 7" for uprights of seats.



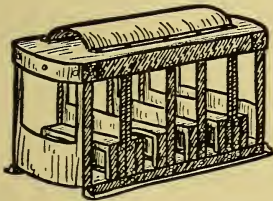
Back - Seat - Fastened



Cut six seats from ends of three shoe boxes.



Two seats fastened "back to back" for the front and rear "double seats".



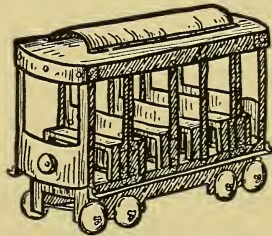
Fit seats into body of car - Space equally
Fasten into floor through bottom ends of uprights.

Fasten upper parts of uprights through overhanging part of roof.



Cut another shoe box down to $2\frac{1}{2}$ " height - Shape ends and sides
Glue two button molds to form one wheel - Use wire for axles

Fasten "truck" to bottom of car - Use enough fasteners to make it strong
Button mold for "head light".



Details of Trolley Car [concluded].

HOUSE WITH STAIRWAY.

Use four *deep* hat boxes, a corset box, a candy box and extra cardboard.

1. Fasten hat boxes together to form rooms. Cut doors and windows. Make roof of extra cardboard.

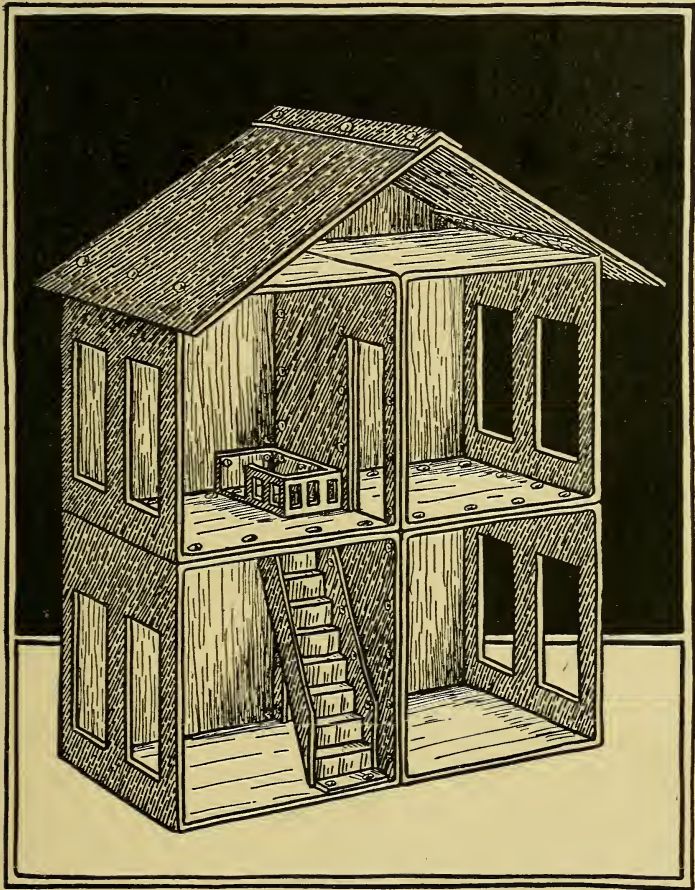
2. Cut out bottom of candy box *except* about two inches which must be saved for the "landing." Cut an opening in the side of candy box at the "landing."

3. Fit the box into back corner of upstairs room. Draw through the bottom hole on to the "floor." Cut down through the floor on *three sides* of the hole. Score the *back* edge; bend the piece so that it slants *down* from "ceiling" of room below.

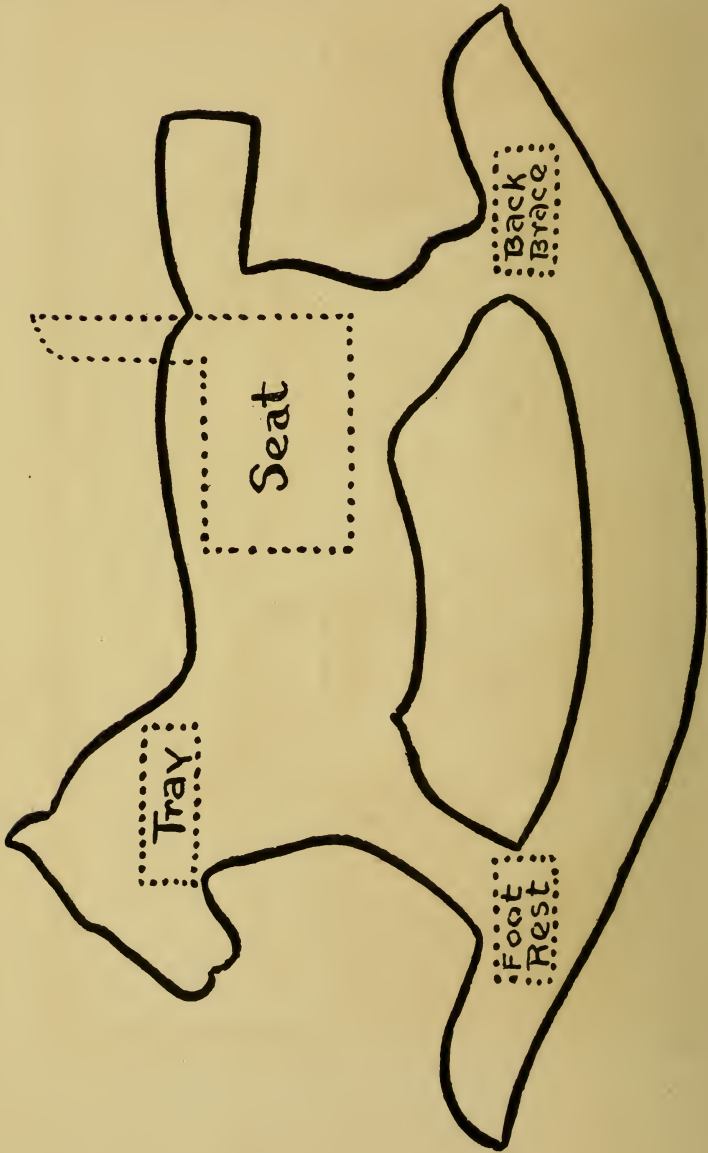
4. Push end of corset *box* up through the hole in the floor and candy box. Adjust the slant and cut off left over part at the top. Fasten bottom of corset box to the piece which slants down. Fasten candy box and corset box to the back and side walls.

5. Cut a long strip of thin cardboard as wide as the corset box. Draw lines across at equal distances to form "treads" and "risers" for the steps. Score and bend these. Adjust them and fasten to corset box *bottom* with darning needle and coarse thread.

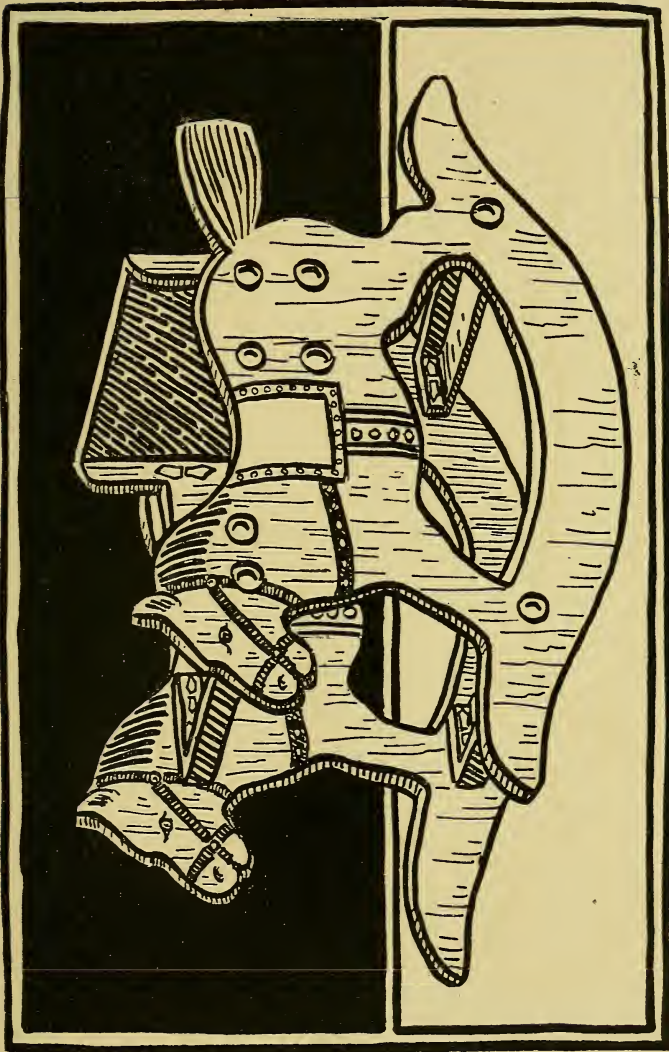
6. Make the furniture for each room as described in "When Mother Lets Us Make Paper Box Furniture."



House with Stairway.



Pattern of Rocking Horse.



Rocking Horse.

ROCKING HORSE.

Use two pieces of *heavy* cardboard for the horses and a small candy box and its cover for the parts between the horses.

1. Lay some thin paper over the "pattern" of the horse and trace it. With a piece of carbon paper, or by blackening the back of the paper on which you traced the horse, transfer the pattern to each of the pieces of heavy cardboard.

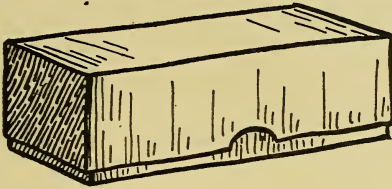
2. Cut the horses out with scissors. If the cardboard is very heavy, you may need to use a sharp knife.

3. Cut the tray and seat from the two ends of the *box*.

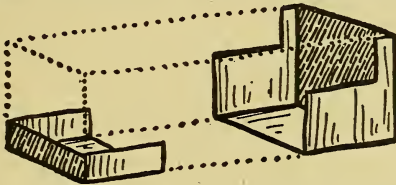
4. Cut the foot rest and back brace from the two ends of the *cover*.

5. Fasten these four parts between the horses as shown in the "pattern" and "picture."

6. Paint the entire toy white. When it is *dry*, use black and red paint with a fine brush to paint the mane, tail, harness and seat.



Small candy box and cover



Tray and seat cut from box

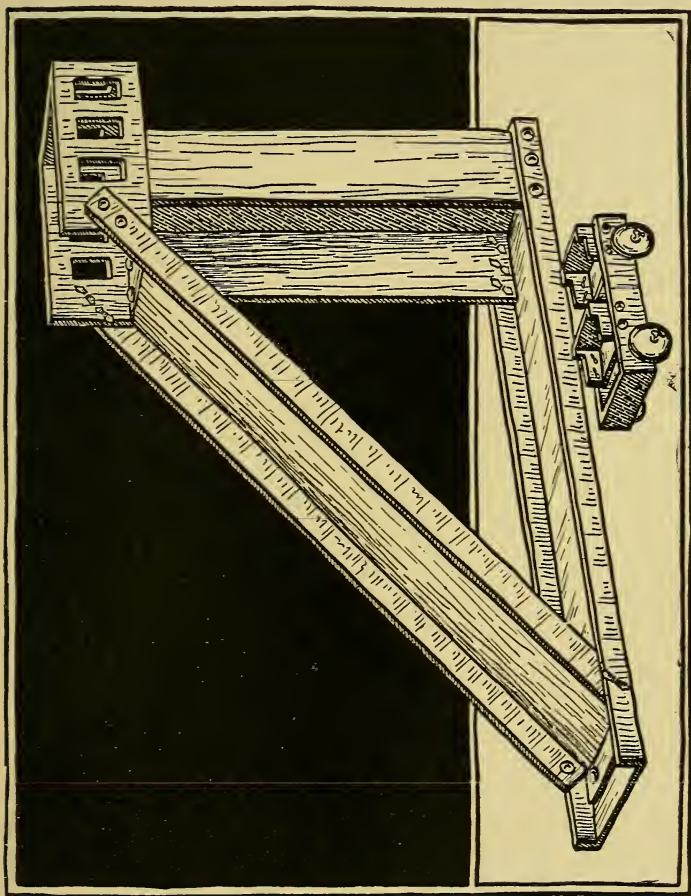


Foot rest and back brace
cut from the cover

Fasten these four parts between
the two horses as shown in "pattern"

GREAT FUN.

Set the car right at the top
All ready for a start.
Give it just a little push
And down the slide 'twill dart.



Roller Coaster.

ROLLER COASTER.

Use two *wide* corset boxes of the same size, a *small* spool box and eight *small* button molds.

1. Cut about 11" from one end and about 6" from the other end of the same box.

2. Stand the larger piece up on its cut edges; place the smaller piece on the upper end as shown in the details. Fasten them together.

3. Turn one cover upside down. In one end of it stand the parts you fastened together. Fasten them in this position.

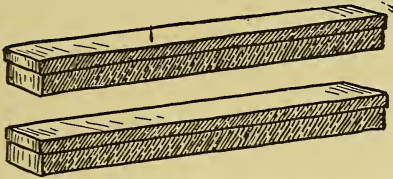
4. Turn the other cover upside down; cut, score and bend it at the ends as shown in the details of the "slide."

5. Adjust the "slide" so that one projecting piece rests on the platform. The two projecting pieces of the long sides will fit against the *outside* of the platform. The bottom end will rest in the bottom cover. Fasten the slide as indicated.

6. The "slide" can be extended on the floor by adding other covers; or the car can run out on the floor.

7. The little car is made like the pony cart.

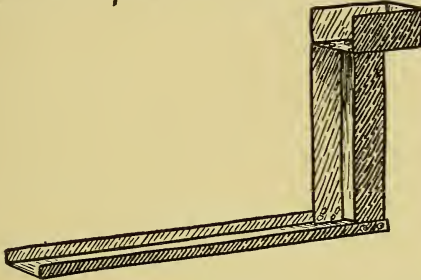
8. Do not paint the floor of the "slide" or the wheels so that the car will coast freely.



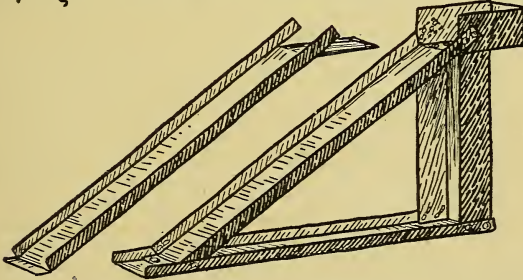
Two corset boxes - Same size.



Upright and "platform"-cut from one box



"Platform" fastened to upright.
Upright fastened into cover for base.



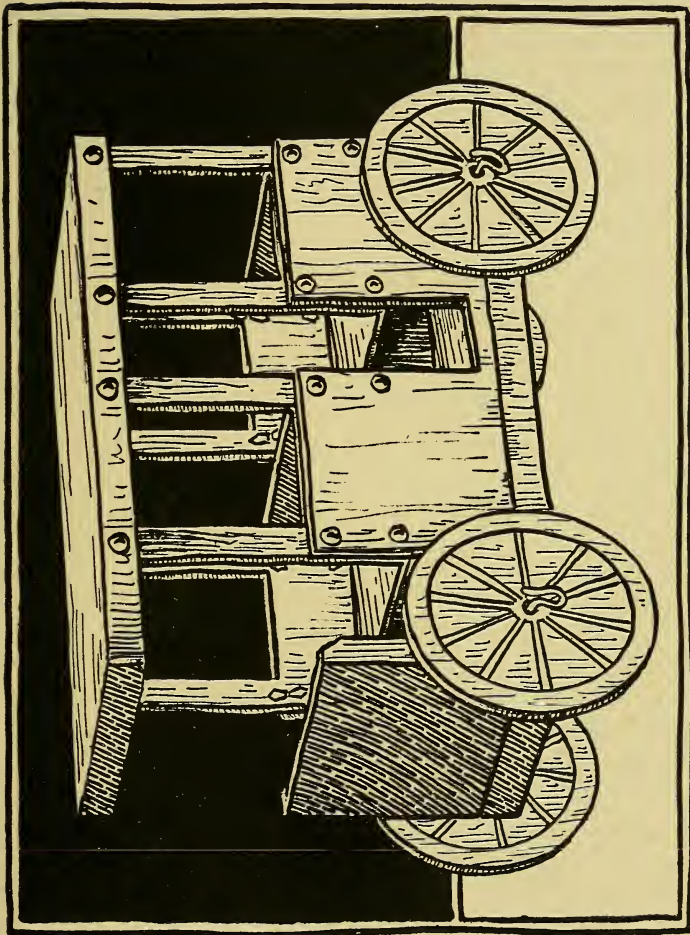
Cover cut, "scored" and bent to form "slide"
"Slide" firmly fastened to platform and base.

Details of Roller Coaster.

MAKING CALLS.

When dollie goes to make her calls
 On friends, some fine clear day,
They'll think she's very stylish, if
 She comes in her coupé.

If you make some cards quite small,
 And on them print her name,
Her friends will all consider her
 A proper little dame.

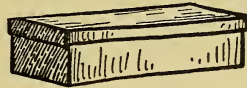
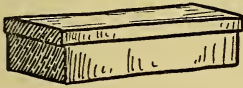


Coupé.

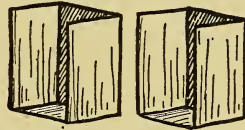
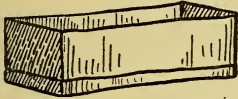
COUPÉ.

Use two shoe boxes of the same size.

1. Fasten one box on *top* of its cover.
2. Cut the second box in halves for the seats.
3. Fasten the seats inside of the first box about an inch and a half below the top edge.
4. Set the second cover on top of the seats to form the canopy top.
5. Cut pieces out of the long sides of the box to form the entrances.
6. Cut out the "window" openings. If you have some pieces of transparent celluloid or isinglass, you might put them in the windows so that your carriage will be a "closed" one.
7. Cut large wheels of very heavy cardboard or cigar-box wood; put them on with wire axles.
8. Paint dark green or black.

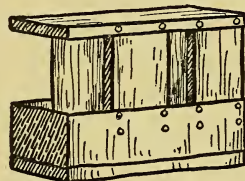
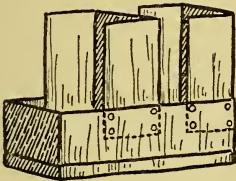


Two shoe boxes and covers - same size.



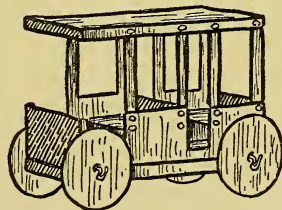
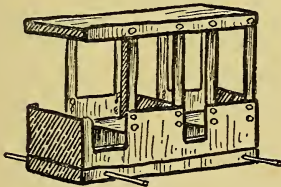
Fasten one box on top of its cover.

Cut second box into halves for seats.



Fasten the seats.

Fasten cover on for top



Cut openings in sides and back.
Hair pin for axles.

Cut wheels from extra piece of cardboard.
Bend ends of axles.

Details of Coupé.

LOCOMOTIVE.

Use cylindrical paper box and candy box of same *length*, a correspondence card box of the same *width* as candy box and sixteen largest size button molds.

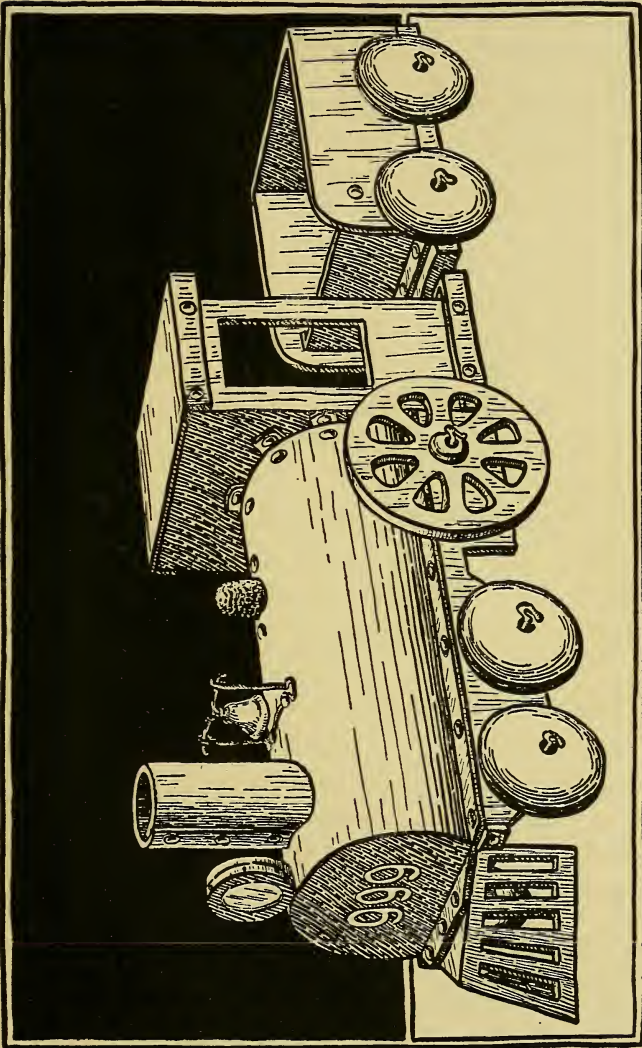
1. Draw a line across *bottom* of cylindrical box to make it the shape of front end of "boiler." Continue this line up both vertical sides. Score all three lines. Cut down the vertical side of box *between* scored lines and around lower edge between same lines. Bend the three parts *out* and trim off like the boiler in the details.

2. Shape the lower part; fasten boiler on and cut hole for "stack." Fasten bell on; push a thimble *up* through a hole in the boiler and fasten a strip *under* it. This is the "whistle."

3. Fasten a pill *box* through its side to top of boiler. Cut circle out of cover and glue orange paper in for the "light"; fasten *cover* on to its box with pins through its sides.

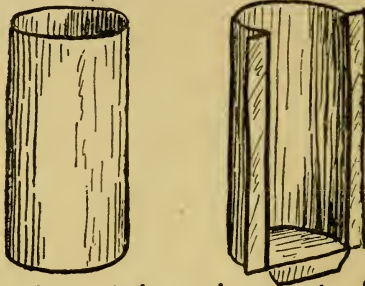
4. Fasten extra projecting strips *inside* of *back* edge of boiler; bend these *outward* to fasten to "cab." Also fasten "cab" to *back end* of candy box. Use correspondence card *box* for the "coal tender" and the *cover* for the "cab."

5. Make "cowcatcher" from corner of a small box. Fasten its top *between* boiler and candy box.

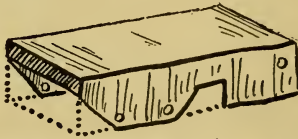


Locomotive.

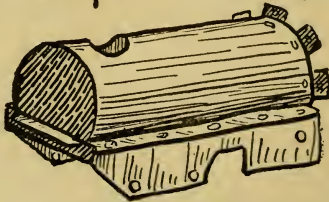
Cylindrical paper box [bird seed box]
Correspondence card box.
Long candy box.



Cut "score-bend box to make "boiler"

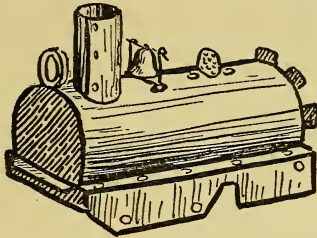


Shape lower part from candy box

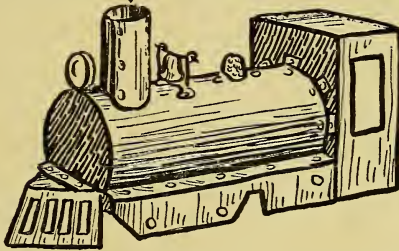


Fasten boiler on - Cut hole for "stack".

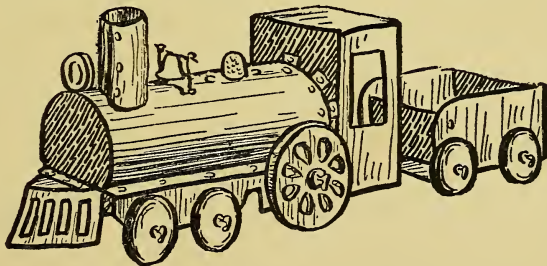
Details of Locomotive.



Fasten headlight-stack-bell-whistle.



Fasten on cab and cow-catcher.



Button mold and cardboard wheels

Details of Locomotive [continued].

IN APPRECIATION.

In an "ingenuity contest" entered into by my students, four of them made toys which are included in this book.

I am sure that my little toymaking readers join with me in appreciative acknowledgment of their clever ideas.

Battleship made by Grethe Guenther.

Locomotive made by Helen Hatscher.

Garden Swing made by Marie Heddaeus.

Bungalow made by Martha Leigh.

LIBRARY OF CONGRESS



0 013 970 710 2

