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EC5600 Toys for Children

Mary E. Runnalls

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TOYS

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FOR CHILDREN



EXTENSION CIRCULAR 5600

The Extension Service of the University of Nebraska
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EXTENSION CIRCULAR 5600

SEPTEMBER, 1941

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 W. H. Brokaw, Director, Agricultural Extension Service, Lincoln, Nebraska

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Toys for Children

MARY E. RUNNALLS

WHAT TOYS shall we give our children? This is a question that homemakers are constantly asking, particularly at Christmas time. It is easy to overdo Christmas festivities. A Christmas tree hung with apples, a few shining ornaments, and strings of cranberries and popcorn and colored papers provides just as much fun as one more elaborately trimmed.

Spending a great deal of money is not an indication of a successful Christmas. Simple toys or homemade toys are often those most loved by children. Some of the happiest Christmas days have been planned by parents who could not afford to spend much money. Christmas will be happier if the whole family will avoid confusion, fatigue, overeating, and too much excitement.

Wise homemakers realize that play material is no longer given to children just to amuse them and to keep them out of mischief. Play is not a waste of time, but is a most important way of learning. It contributes to the development of a wholesome personality and helps the child to adjust himself to the world in which he lives.

Toys are the child's tools for learning. We know that the child begins to learn at birth, and he continues to learn "by doing" throughout his entire life. Education does not wait for school. It begins with the infant's first random movements. Soft balls, rattles, and noise-making objects are toys that help the infant to make discoveries. In learning how to hold or throw a ball, or to shake a rattle, the baby is acquiring his first experience of mastery over his environment. This process continues throughout his entire life.

Here are some of the advantages of play: (1) Rigorous physical play, especially out of doors, develops the larger muscles and helps to build strong bodies. (2) A child learns to think and reason as he plays. By working out ways of solving his difficulties, he gains resourcefulness. (3) Concentration may be learned through "sticking at the job" in play activities. (4) A child learns to keep wholesomely busy at play. He learns that self-directed activity is more fun than being idle. (5) When a child learns to handle his own toys and do for himself, he develops a sense of security. Other desirable character traits are developed through play, such as self-control, persistence, an inquiring attitude of mind, sportsmanship, property rights, unselfishness, good manners, and control of emotions. (6) Orderliness, neatness, and care of property may be learned through keeping toys in order and in repair. (7) In sharing and "taking turns," cooperation and consideration for others are learned which are fundamentals in living successfully with others. (8) Pleasure in ownership can be encouraged through having toys and space respected by others. (9) Interests may be aroused that will carry over into adult life. (10) Love and sympathy for others may be fostered through attitudes toward dolls and pets. (11) Knowledge and skills may be acquired by using various types of play equipment.

There are also undesirable habits that may be acquired through play, especially if the toys are not wisely selected, or if the parent fails to take advantage of the opportunities for teaching good habits that play and toys offer. The habit of demanding entertainment from other people is developed if the child has toys that are too difficult for him to play with by himself or if they hold little interest for him. Too many playthings and cheap, easily broken toys lead to carelessness, destructiveness, indifference, and extravagance. When suitable storage space is not provided for toys, the child does not learn orderliness in picking them up and putting them away.

When a child is playing, it is well not to try to make him imitate what you do. He gets joy and valuable development from his play, regardless of how good his results are. Adults sometimes retard development of the child by interfering with his play. If he asks for help, give some, but do not tell him exactly what to do. To promote self-reliance, help him find the best way to work it out for himself, instead of doing it for him. Let him carry on in his own way. The child should be praised for especially good work and encouraged to do even better.

If a child becomes bored with play or if he develops an irritable, destructive mood, a parent can suggest new ideas for activity. By joining in the play occasionally and withdrawing when the child can carry on for himself, the parent may inject new interest.

Selection of Toys

When selecting toys to give to children, it is important to keep in mind the age, sex, and individual interests of the child. Grown-ups need to curb their own interests and likes when selecting toys. Playthings often fail to satisfy the child, because adults, instead of keeping the children's needs and interests in mind, have selected what they think children ought to like, or toys they themselves enjoy.

When planning toys to give to children, consider these questions: (1) What good habits may be encouraged through play with this toy? (2) Will it fit the age, sex, and individual interests of the child? (3) Is it safe, sanitary, durable, and attractive? (4) Will it give lasting satisfaction and can it be adapted to new interests as the child develops?

Children's play equipment should be selected on the basis of the growth needs of the child. Early in life the child needs equipment that encourages the use of his larger muscles, such as balls, swings, slides, and a place to climb. The finer motor coordination develops later and can be promoted by scissors, paper, crayons, pencils, and beads to string. For imaginative play, dolls, trains, trucks, blocks, housekeeping equipment, and toy animals are wise selections. Creativeness is encouraged by such equipment as musical toys, paints and an easel, tools and wood, and modeling clay.

Motor and manipulative skills, constructive and dramatic play, and social and creative play are all essential sides of a child's growth and need to be considered when selecting toys.

Toys Children Enjoy

There are many toys of lasting interest; children enjoy for years their sand pile, blocks, balls, tools, wagons, dolls, and constructive toys. Many inexpensive home materials interest children. Planks, boards, packing boxes, kitchen utensils, clothes pins, empty spools, boxes, bottles, cans with rounded

edges, or newspapers and magazines with crayons and scissors will often hold a child's interest. A scrap bag or a dress-up box is frequently a joy to a little girl.

In addition to the play equipment mentioned above, the following lists suggest various types of toys appropriate for different age levels. From them, parents, relatives, or friends may make selections.

For the Baby

Until a child is six months old, he is busy sleeping, eating, and growing and does not find much use for toys. His feet, hands, and mouth are his chief interests. Soft, cuddly, light-weight, washable toys are best. At six months, the baby shows an interest in seeing, tasting, hearing, and handling objects. He begins to make an effort to learn all he can by holding, dropping, and biting whatever he can get his hands on. Toys should be brightly colored with washable, nonpoisonous lacquers. They should be well constructed with no pointed or sharp edges, no removable parts, and also be large enough so there is no danger of the baby choking on the toy or swallowing it. Articles commonly found at home give the baby great pleasure. The baby enjoys the following:

Spools strung together	Rattles
Pie tins	Soft washable dolls and animals
Spoons	Tinker dolls
Brightly colored rubber dolls	

The Toddler

The toddler's toys should be large, simple, and durable. His world is no longer limited to crib or play pen, but extends anywhere he can reach, run, or walk. He is interested in examining and pulling apart his toys, and he needs those which can be pulled and carried about. He is interested in size, shapes, and color. He enjoys toys which encourage active play.

Physical Exercise

Low swing	Sand box
Wheelbarrow	Large ball
Kiddy car	Small wagon
Push and pull toys	

Dramatic Play (Imitative or Imaginative)

Dolls	Wooden trains
Doll and carriage	Small automobiles

Constructive and Creative Play

Large blocks	Spools and large beads
Crayons	Color pyramids

Books

Linen picture books	Mother Goose rhymes
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Child Three to Six

Play equipment for this age group should continue to aid in exercising the larger muscles and also should begin to provide for finer motor co-ordination. At this age there is great physical activity, and the development of speech, interest in activity rather than in results, imagination, and interest in dramatic play are all evident. Youngsters of this age are beginning to be interested in constructing very simple things. No matter how crude they are, they must operate if they are to satisfy the maker. Toys that children blow help spread colds and infection.

Physical Exercise

Slides	Wheelbarrow
Sand boxes	Scooters
Tricycle	Facilities for climbing

Dramatic Play (Imitative or Imaginative)

Storekeeping toys	Boats
Trucks and automobiles	Trains
Housekeeping toys	Telephones

Constructive and Creative Play

Large blocks	Blunt scissors
Paints and easels	Crayons
Clay	Rhythm instruments or drum
Blackboard	

Books

Animal stories	Poetry
Nursery rhymes	Nursery songs
Stories of simple childhood experiences	

Child Six to Eight

Boys' and girls' interests begin to differ considerably at this age. Children from six to eight years of age reproduce actual experiences and structures. Play equipment should satisfy their love of activity and their desire for sports, games, and group play.

Physical Exercise

Roller skates	Footballs	Auto coasters
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Dramatic Play (Imitative or Imaginative)

Doll carriages	Dolls, housekeeping equipment
Doll houses and furniture	Boats
Trains	Airplanes
Trucks and tractors	Cowboy and Indian suits

Constructive and Creative Play

Building blocks	Bird houses to build
Paints, clay, and crayons	Weaving looms
Musical toys	Sewing materials
Xylophone	Paper dolls

Books, Games, and Puzzles

Maps	Dominoes
Story books	Croquet
Geographical games	Puzzles
Marbles	Checkers
Lotto	Dissected maps

Child Eight to Twelve

From the time a child is eight, he will begin to develop special interests and hobbies. These interests should be encouraged. There may be a rapid shifting of interests at this age. Equipment that encourages interest in scientific experimentation, such as chemistry or radio, is of value.

Physical Exercise

Ice skates	Footballs
Sleds	Baseballs
Bicycles	Basketballs
Punching bags	Airplanes and kites
Boxing gloves	Saddle for horse

Dramatic Play (Imitative or Imaginative)

Dress-up costumes	Suitcases or trunks
Housekeeping equipment	Play houses
Dolls	

Constructive and Creative Play

Paints and clay	Work bench and tools
Building sets	Sewing materials
Chemistry sets	Cooking and laundry sets

Books and Games

Ping-pong	Map games
Card games	Cameras
Checkers	Globes
Authors	Croquet
Puzzles	Marbles
Story books	Adventure stories

Books and Pictures

Children enjoy books and pictures at an early age. For the very small child, books made of cloth are the most satisfactory, as he can handle them without tearing the pages. Washable window shades or brightly colored chambray cut into pages and sewed together makes excellent scrap books.

Fine content, clear and pleasing pictures, good paper, binding, and stitching are points to consider when buying. The increasing number of good inexpensive books on the market makes it possible for children to have a good selection of books.

Large, gaily colored, simple pictures are enjoyed most. Pictures of things that children know about are of greatest interest to them. Very little children enjoy the sound rhythm of simple Mother Goose rhymes. Interest in the story comes later. Children enjoy having the same story told and retold to

them. Pleasant, happy stories and pictures are always best for children. Do not give children books or pictures that may frighten them.

Colored pictures of familiar animals or of children playing, or pictures illustrating nursery rhymes or stories are always enjoyed. Attractive pictures which interest children appear in many of our popular magazines. Pictures may be mounted on wrapping paper or wall board and should be hung on the wall low enough so that children can see them easily.

Children's magazines suggest appropriate Christmas gifts. Not only good stories, but crafts, party suggestions, and constructive amusements are offered each month in many good children's magazines.

Good magazines, books, and pictures bring lasting and wholesome development to children.

Pets

Pets are the right of every child, and they make excellent gifts. From play with pets the child learns kindness, responsibilities, and facts about the creation of life.

Parents sometimes think that pets are bothersome, and it is true that they are often destructive and dirty and that the final responsibility for their care usually falls upon the mother, but the pleasure they afford and the lessons they teach are worth the effort.

Most children love cats and dogs. Dogs are perhaps the most practical pets because of their activeness and their affection for children. Cats, dogs, young farm animals, rabbits, guinea pigs, canaries all make good pets. Farm children enjoy a pony or small riding horse. If it is possible to have a pony which children can harness and drive, it will offer keen pleasure.

Facts to Remember When Choosing Toys

1. Strongly constructed toys capable of much wear and tear are usually better to select than flimsy ones. Easily broken toys may encourage destructiveness and carelessness.

2. Simple toys that offer possibility for use of the imagination are better than elaborately outfitted toys.

3. Children should have good tools, such as sharp, rounded-point scissors, good paint brushes, plenty of paper, good quality paints, sturdy hammers, and real saws. Poor tools destroy the child's joy in creation and do not help to develop good standards of workmanship.

4. The value of a toy is not measured by its cost. Inexpensive or home-made toys often interest a child more than do expensive purchased ones.

5. Toys that are so complex or delicate as to require adult help constantly are not good choices, because they fail to aid in developing self-reliance.

6. Having too many toys at one time is undesirable. It is wise to introduce only one or two new toys at once.

7. Choose some toys that lend themselves to many uses and can be adapted to the age of the child as he develops.

8. Raw materials, such as boards, boxes, bricks, clay, crayons, paints, sand, and water are inexpensive and educational.

A Place to Play

It is important to provide adequate play space for children. Most homes are built and furnished for the convenience of adults. Someone has said,

"If we, as adults, were to spend most of our hours in a giant's house where we could reach only to the window sill, where our legs would dangle as we perched on huge chairs, where water trickled from wrist to elbow as we washed in the giant's washbowl, where the cereal slithered down our fronts, because of our peculiar relation to the table top, and where climbing to bed or scaling the wall to reach a hook for wraps involved hazardous risks, we might perhaps appreciate the little child's difficulties in a home where his needs are not met." Little children do not fit into an adult home, and if we can we should fit a part of our home to them. Every child should have at least a table and a chair his own size.

In every home the child should feel part ownership; he should have a place to keep his own possessions and a place where he may play undisturbed. It may not be possible to give a child a separate room in which to play, but even one corner of a room will provide some privacy and a place to put his toys. A child appreciates a play place where he can leave incompletd play projects in safety when other activities interrupt.

Storage Space for Toys

Everyone needs a place of his own in which to keep his possessions. Marbles, an old box, or a ragged doll are as valuable to the child as are good dishes or silver to the homemaker. If children's toys are carelessly put away in unfamiliar places because they are in the way or are unsightly in the living room, the child will be annoyed and will believe his things are unimportant. Qualities of orderliness, care, respect for property and the rights of others, cooperation, and economy cannot be taught children easily unless they feel a responsibility for the care of their toys.

Since the child should be taught to put his toys away, a place must be provided that he can reach. Shelves are desirable, because the play equipment can be given better care, and the child can see where the toys have been placed. Drawers or a big box are unsatisfactory. Toys or books are thrown in, often getting broken or torn. It is necessary for the child to take everything out of the box or drawer to find what he is looking for. This requires a great deal of energy, and difficulties often arise when it is time to pick up toys and put them away. Attractive toy shelves as well as children's furniture can be made from apple boxes or orange crates at little cost.

Children love to display their finished products somewhere in the home. Having family members and visitors view his work encourages pride in careful work, and the child gains joy and satisfaction that will encourage him to do better things. A bulletin board or a shelf provides an excellent place for such exhibits.

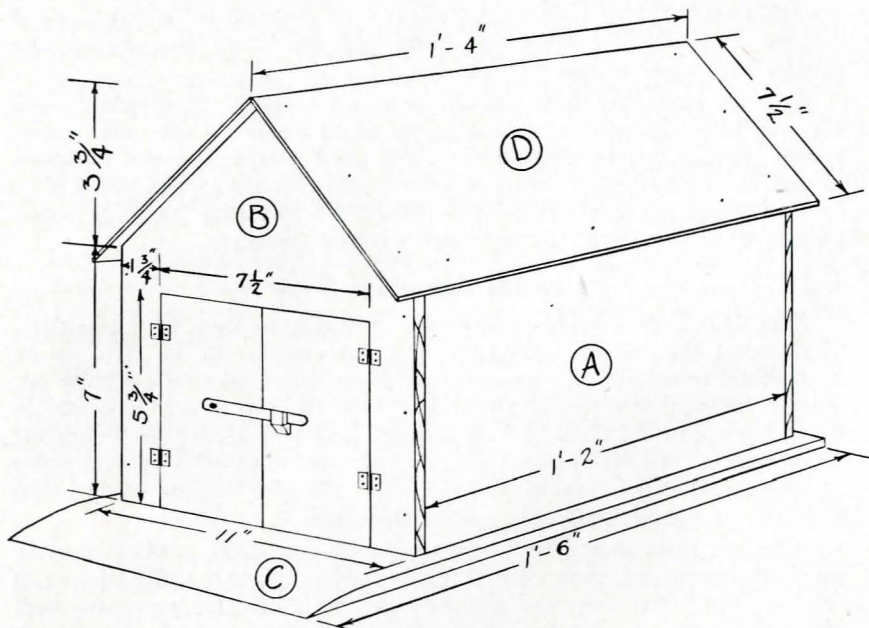
Toys and Equipment That Can Be Made at Home

Many toys and pieces of play equipment can easily be made at home at little or no cost. Grocery, hardware, and department stores have a supply of wooden boxes and crates which they are usually glad to dispose of.

It is well to start by making simple, easy things, encouraging the children to help. Older boys and girls in the family, as well as the parents, aunts, uncles, and grandparents will have fun making play equipment for the younger ones.

A simple home tool kit will provide the necessary tools. Use of sandpaper and a plane will remove markings stenciled on boxes. If a nail puller is not available, the sides and bottoms of the boxes may be removed without splitting if, before the piece is hammered, a block of wood is placed across the piece to be removed. A coping or jig saw is helpful in making these toys.

The following toys and equipment may be made from orange crates, apple boxes, cheese boxes, cigar boxes, or scrap lumber:



GARAGE

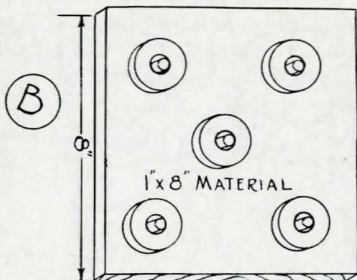
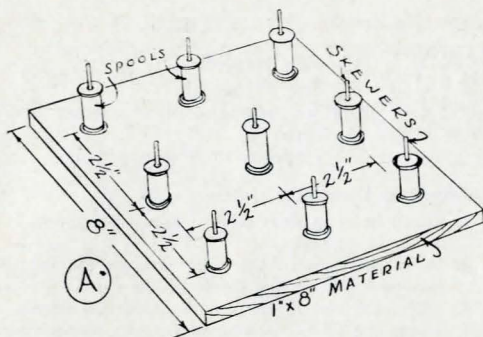
Materials Needed:

Half-inch white pine or $\frac{3}{8}$ " 3-ply is recommended for the base, sides, and ends of this house. If both are available, a price comparison should govern selection.

- 1 pc. $\frac{1}{2}$ "x8"x3'-0" white pine (sides) "A"
- 1 pc. $\frac{1}{2}$ "x12"x2'-0" white pine (ends) "B"
- 1 pc. $\frac{1}{2}$ "x12"x1'-6" white pine (base) "C"
- 1 pc. $7\frac{1}{2}$ "x3'-0" $\frac{1}{4}$ " 3-ply (roof) "D"
- 2 pr. 1"x1" butt hinges
- 3 doz. blue lath nails
- 4 $\frac{1}{2}$ " brads
- 1 $\frac{3}{16}$ " stove bolt or screw for latch

Construction Directions:

1. Cut sides "A" to correct dimension from the $\frac{1}{2}$ "x8"x3'-0".
2. Cut ends "B" to correct dimension from the $\frac{1}{2}$ "x12"x2'-0".
3. Cut door as shown in one end piece.
4. Cut base to size and level end as shown.
5. Fasten sides and ends together with blue lath nails.
6. Fasten base to sides and ends with blue lath nails.
7. Cut roof pieces "D" from $\frac{1}{4}$ " 3-ply.
8. Fasten in place with blue lath nails.
9. Fasten roof pieces together at ridge with $\frac{1}{2}$ " brads.
10. Make door latch from scraps and fasten in place.
11. Fasten hinges to doors and then to end of garage.
12. Smooth all surfaces with sandpaper.
13. Paint if desired.
14. A piece of roll roofing may be tacked on to prevent damage if the garage should be left in the rain.



SPOOL BOARDS

Materials Needed—"A":

- 1 pc. 1"x8"x8" (may be cut from orange crate end)
- 9 large meat skewers
- 9 spools
- Paint—10 different colors

Construction Directions:

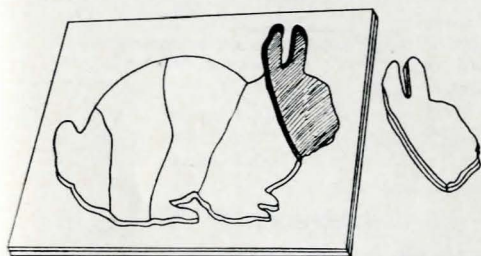
1. Bore holes small enough for skewers to fit tightly.
2. Cut skewers so that they will extend above the spools not more than 1".
3. Paint skewers and spools. Each skewer should be a different color and should have a matching spool. Base should

be a contrasting color to accent colors of skewers. If 10 different colors cannot be purchased, mix some of these colors: black, white, red, yellow, blue.

Materials Needed—"B":

- 1 pc. 1"x8"x8" (may be cut from orange crate end)
- 5 pcs. broom handle 3" long or 5 1/2" dowel pins 3" long
- 5 large spools from ends of rolls of wrapping paper
- Paint—6 colors

Construction Directions: (Same as "A")



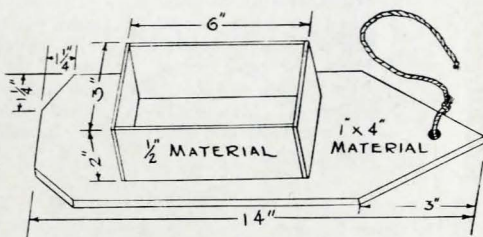
RABBIT FORM BOARD

Materials Needed:

- 2 pcs. 1/4" plywood 12"x12"
- 2 pcs. 1/4" plywood 10"x10"
- 36 1/2" brads

Construction Directions:

1. Trace pattern of rabbit on one of the 12"x12" pieces, and cut out with a coping saw.
2. Smooth the inside edges.
3. Fasten this piece of plywood to the other 12"x12" piece with brads, being sure to have the grain of the two pieces running in opposite directions.
4. Fasten the two pieces of 10"x10" plywood together with 4 brads near the center.
5. Trace the rabbit pattern on one of these boards. Place additional brads



BOAT

Materials Needed:

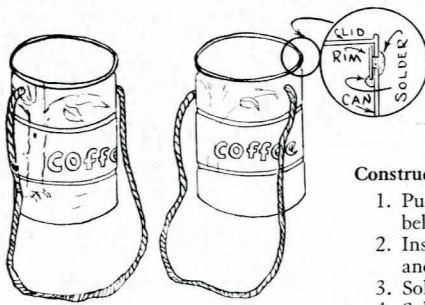
- 1 pc. 1"x4"x14" white pine
- 1 pc. 1/2"x2"x18" white pine
- 12 4-penny finish nails
- 4 6-penny finish nails

Construction Directions:

1. Cut boat bottom from 1"x4"x14".
2. Cut side and end pieces from 1/2"x2"x18" board.
3. Nail ends to sides with 4-penny nail.
4. Fasten box with 6-penny nails.

inside the pattern where they will not interfere with the saw, and fairly close to the edges.

6. Cut out the rabbit with a coping saw.
7. Sand edges of rabbit so it will fit easily into hole in 12"x12" board.
8. Cut rabbit into pieces as shown.



STILTS

Materials Needed:

- 2 2-lb. coffee cans
- 2 pcs. strong cord or clothes line rope
- 1 30-penny or 40-penny nail

Construction Directions:

1. Punch holes in sides of cans approximately $\frac{1}{2}$ " below inner rim.
2. Insert the ends of the rope through the holes and tie knots on the inside of the can.
3. Solder the rim to the can on inside, as shown.
4. Solder the lid to the rim of the can, as shown.

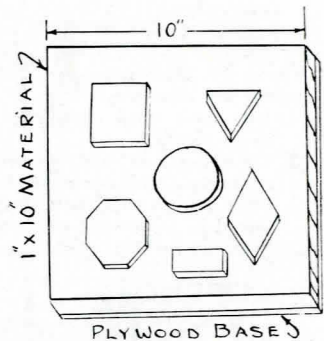
GEOMETRICAL FORM BOARD

Materials Needed:

- 1 pc. $\frac{1}{2}$ "x10"x10" white pine (do not use fir)
- 1 pc. $\frac{1}{4}$ " plywood 10"x10"
- 1 pc. 1"x6"x10"
- 12 $\frac{1}{2}$ " brads
- Paint—2 colors

Construction Directions:

1. Cut the plywood and the $\frac{1}{2}$ "x10"x10" pine to same overall size.
2. Draw shapes of geometrical blocks on $\frac{1}{2}$ " board, spacing as shown.
3. Cut these shapes out of this board with coping saw and smooth inside edges with sandpaper.
4. Draw the same shapes on the 1" board to form blocks, saw out, and sandpaper edges.
5. Fasten $\frac{1}{4}$ " plywood to $\frac{1}{2}$ " board with brads to form base, and paint blocks one color and base another.



TELEPHONE

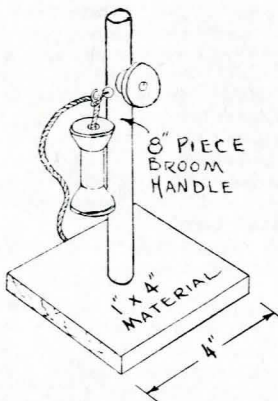
Materials Needed:

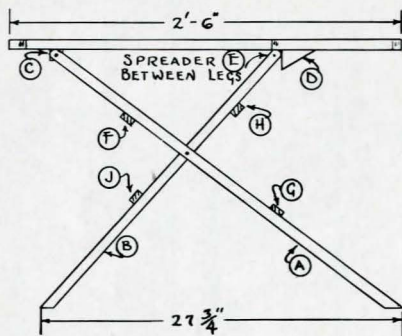
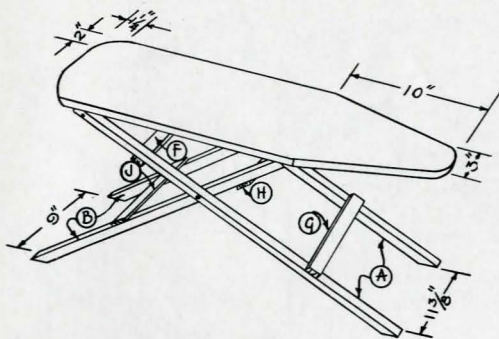
- 1 pc. 1"x4"x4" white pine (for base)
- 1 pc. broom handle, 8" long
- 2 large spools
- 1 pc. heavy cord or twine, 15" long
- 1 2" stove bolt
- 1 cup hook

Construction Directions:

1. Bore hole in center of base for broom handle. Care should be taken to avoid getting hole too large. Broom handle must fit snugly.
2. Cut one spool in half to form the mouthpiece.
3. Attach mouthpiece to broom handle with stove bolt.
4. Fasten twine or heavy cord to base and then run it through second spool, to form receiver.
5. Screw cup hook into broom handle, thereby forming receiver hook.

Note—If coping saw is available a circular base may be cut from 1"x4"x4" piece.





IRONING BOARD

Materials Needed:

- 1 pc. 1"x8"x2'-6" white pine (top)
- 2 pcs. 1"x1"x2'-10" white pine (legs)
"A"
- 2 pcs. 1"x1"x2'-3" white pine (legs)
"B"
- 1 pc. 1"x1"x5 1/2" white pine (leg anchor)
"C"
- 1 pc. 1"x1"x1 1/4" white pine (stop block)
"D"
- 1 pc. 1"x1"x4 1/2" white pine (spreader)
"E"
- 1 pc. 1/2"x1"x9" white pine (cross brace for legs)
"F"
- 1 pc. 1/2"x1"x11" white pine (cross brace for legs)
"G"
- 1 pc. 1/2"x1"x7" white pine (cross brace for legs)
"H"
- 1 pc. 1/2"x1"x8 1/2" white pine (cross brace for legs)
"J"
- 2 2" round-head screws
- 2 2" flat-head screws
- 2 3/16"x2" stove bolts with 3 washers each
- 18 blue lath nails
- 2 5-penny finish nails

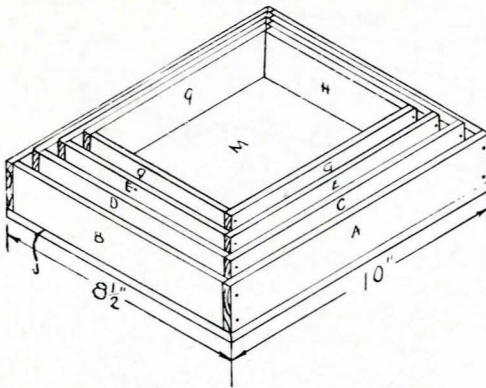
Construction Directions:

1. Cut 1"x8" top board to shape and sandpaper all edges.

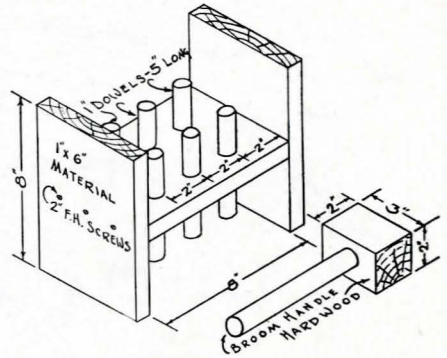
2. Round top ends of all leg pieces, and top edge of spreader "E."
3. Fasten top ends of 2'-10" legs to 5 1/2" leg anchor "C" with round-head screws.
4. Spread legs to correct dimension and secure by fastening 9" and 11" brace strips to them with blue lath nails.
5. Fasten top ends of 2'-3" legs to spreader "E" with 5-penny finish nails.
6. Spread legs to correct dimensions and secure by fastening the 7" and 8 1/2" brace strips to them with lath nails.
Caution: To permit this board to fold, the dimensions shown must not be changed.
7. Fasten leg anchor "C" to bottom side of top board with flat-head screws.
8. Fasten the two pair of legs together with stove bolts, using a washer under the head, under the nut, and between the leg pieces. These prevent binding when the board is folded. Holes must be bored straight through both pieces to permit easy folding. It is important to insert the bolts at points which will assure the top board being level.
9. Fasten stop block "D" to under side of top, with finish nails, to act as a stop for top end of short legs "B."
10. Cut bottoms of legs at correct angle to assure level bearing.

BLOCKS

Blocks may be made from cigar boxes, cheese boxes, or other boxes with covers attached. Mill ends may be obtained from a local lumber yard at small cost. Carefully sand and smooth sharp edges. Blocks may also be made at home from scraps of lumber. It is better if the blocks are sawed to uniform size, so that they fit together well.



NESTED BOXES



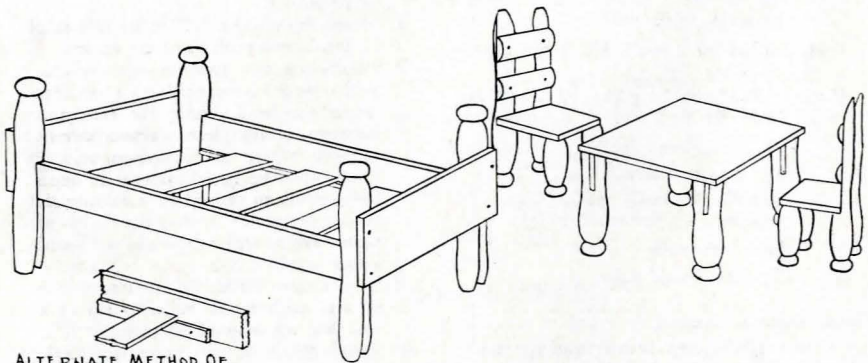
POUNDING BOARD
(No directions included)

Materials Needed for Nested Boxes:

$\frac{1}{4}$ " 3-ply is recommended. If not available, $\frac{1}{2}$ " material may be used.

- | | | |
|-----------------------------|--------|---|
| Box No. 1 | | |
| 2 pcs. $1\frac{1}{2}$ "x10" | sides | A |
| 2 pcs. $1\frac{1}{2}$ "x8" | ends | B |
| 1 pc. $8\frac{1}{2}$ "x10" | bottom | J |
| Box No. 2 | | |
| 2 pcs. $1\frac{1}{2}$ "x9" | sides | C |
| 2 pcs. $1\frac{1}{2}$ "x7" | ends | D |

- | | | |
|----------------------------|--------|---|
| 1 pc. $7\frac{1}{2}$ "x9" | bottom | K |
| Box No. 3 | | |
| 2 pcs. $1\frac{1}{2}$ "x8" | sides | E |
| 2 pcs. $1\frac{1}{2}$ "x6" | ends | F |
| 1 pc. $6\frac{1}{2}$ "x8" | bottom | L |
| Box No. 4 | | |
| 2 pcs. $1\frac{1}{2}$ "x7" | sides | G |
| 2 pcs. $1\frac{1}{2}$ "x5" | ends | H |
| 1 pc. $5\frac{1}{2}$ "x7" | bottom | M |
| 68 $\frac{3}{8}$ " brads | | |



ALTERNATE METHOD OF
SUPPORTING SLATS.

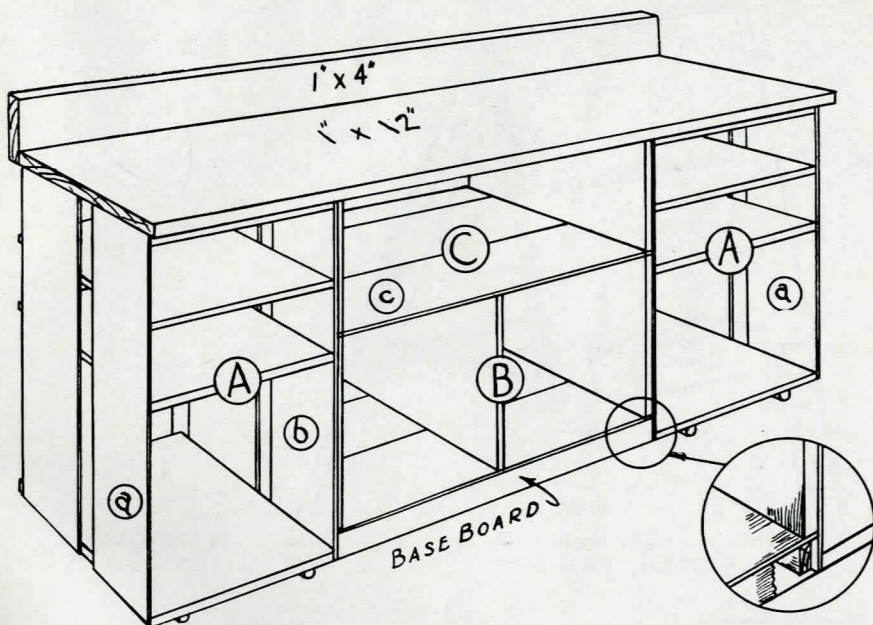
DOLL FURNITURE

Materials Needed:

- 1 5-lb. cheese box or 2 cigar boxes
- 16 wooden clothes pins (not pinch type)
- 48 $\frac{1}{2}$ " brads or wire nails

Caution: A fine-toothed saw should be used for all of this work, since the pieces

will be small, and cigar box or cheese box material splits easily. A coping or back saw is recommended. A small tack hammer is suggested for driving the nails, and a pair of tweezers to hold the nails will prevent mashed fingers.



TOY CUPBOARD

Materials Needed:

- 5 orange crates (use only softwood crates)
- 1 pc. 1"x12"x5'-0" white pine
- 1 pc. 1"x4"x5'-0" white pine
- 2 pcs. 1"x2"x12" white pine
- 8 6-penny finish nails

Construction Directions:

Note: The 5 crates will be used as follows: 2 for "A", as shown; 1 for "B", 1 for "C" and 1 for extra material.

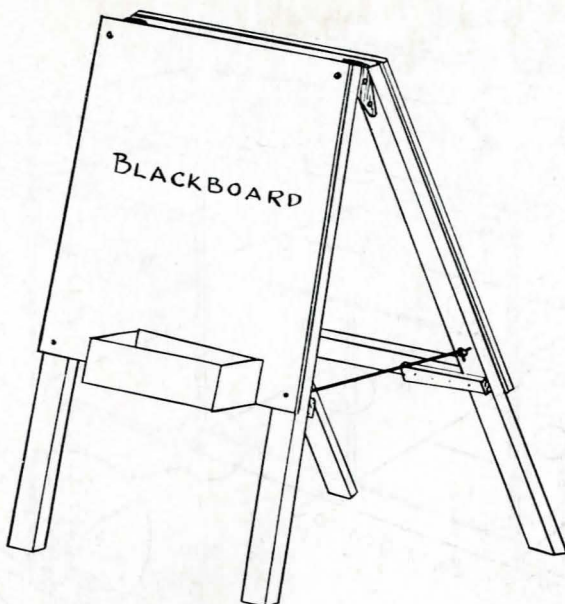
1. Remove top side-boards "a" from crates "A", and re-nail so top edges will be flush with top of crate. If boards "a" carry advertising, turn them over. Do not turn board "b" over.
2. Remove all side-boards from crate "B", being careful not to split or damage them.
3. Re-nail side-boards so bottom edges are flush with bottom edges of end pieces. Other side-boards should be tight against these, so there are no spaces between. Board "c" on one side should be turned over. Use some side-boards from one side of the fourth crate "C" to provide enough material.
4. Remove center from crate "C", leaving bottom-boards, and side-boards on

only one side, intact. This side will be placed just under the top board.

5. Stand crates together as shown in drawing. Do not nail.
6. Turn entire assembly upside down on floor or level table to assure a level top.
7. Nail 1"x2" cleat material to side of crates "A" at such a position as will keep center crates at correct height.

Caution: The front ends of these cleats should be back far enough to provide a flush front surface when a base-board of crate side-material is fastened to them, as shown in detail.

8. Fasten crates together with salvaged nails.
9. For extra strength drive 6-penny finish nails through ends of crate "B" into central partition of "A".
10. Extra shelves in vertical crates may be obtained from fifth crate.
11. Cut 1"x12" and 1"x4" to provide approximately 1½" overhang on each end.
12. Nail 1"x4" to edge of 1"x12" as shown.
13. Nail 1"x12" to top of finished cupboard, flush with back.
14. If bottom of cupboard is rough, skids of half-round may be used as shown.
15. Sandpaper all rough surfaces and paint if desired.



EASEL
AND
BLACKBOARD

Materials Needed:

- 1 pc. 24"x28" $\frac{1}{2}$ " insulation board
- 1 pc. 24"x28" hard-board ("Presd-wood," "Tuffwood," etc.)
- 4 pcs. 1"x2"x6'-0" white pine (legs)
- 4 pcs. $\frac{1}{2}$ "x1"x6" white pine (cleats)
- 2 5 lb. cheese boxes
- 1 pr. 3" strap hinges with $\frac{3}{4}$ " screws
- 2 pcs. No. 9 wire 15" long (for hooks)
- 4 $\frac{5}{16}$ " screw eyes (for hooks)
- 12 10-penny finish nails (for frame)
- 22 blue lath nails (for cleats)
- 12 blue lath nails (for insulation board)
- 10 blue lath nails (for cheese boxes)
- 4 $\frac{3}{4}$ " flat-head screws (for hard-board)
2. Nail legs and cross pieces together making frames, and fasten together at top with hinges.
3. Fasten insulation board to face of one frame with blue lath nails.
4. Fasten hard-board to face of other frame with $\frac{3}{4}$ " flat-head screws.
5. Make two 15" hooks out of No. 9 wire, and attach to frames with screw eyes.
6. Coat hard-board with blackboard paint. One pint is enough for 12 easels. This paint should be thinned before applying: 1 part benzine to 2 parts paint. Apply with a common paint brush, 2-inch size or larger, to avoid streaking. Allow paint to dry overnight before attaching cheese boxes.
7. Fasten cheese box with 5 blue lath nails. Stagger to avoid splitting.

Construction Directions:

1. Cut one 44" leg and one 20" cross piece from each piece of 1"x2"x6'-0".

RECIPES FOR HOMEMADE MODELING CLAY AND PASTE

Clay

- 1 cup flour
- $\frac{1}{2}$ cup salt
- 3 teaspoons alum

Water enough to hold together
(Vegetable coloring)

When not in use keep in a covered container. A little additional water kneaded into the clay when the surface dries will keep it in good condition.

Paste

- 1 cup sugar
- 1 cup flour

1 tablespoon alum

Sift, then add 1 quart boiling water. Cook until clear. Add a few drops of oil of cloves.