

Dynamic Folk Toys

Indian toys based on the application of simple principles of science and technology

Sudarshan Khanna



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New Delhi

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Foreword

Publications on Indian toys and dolls have so far focussed on our tradition of figurative toys. The action toys demonstrated here display a wonderful grasp of the laws of science by artisans many of whom are illiterate and who have had no access to formal training. Their impressive command of physical laws and their ability to translate this into inexpensive play materials capable of endless hours of fascination for the child is astonishing. Their work opens a window on the immense possibilities that exist within our craft tradition for creating play materials for children who cannot afford more expensive toys, and who live and learn in village environments.

This documentation is a pointer to educators on the manner in which they can support and utilise crafts in the classroom. The author also provides us a glimpse of the socio-economic situations in which these skilled craftsmen function.

It is hoped that this monograph will serve to inspire every effort to assist and promote this valuable and so far relatively unnoticed sector of India's craft community. Here, once again, is evidence of the vitality of our crafts in the contemporary situation, and an insight into the craftsman's role in utilising and recycling materials, and in providing economical toys which can delight and educate every child in our land.

Shiromani Sharma

Development Commissioner for Handicrafts

Preface

This monograph is the modest outcome of my interest in the aspect of creativity in Indian design and craft culture. The idea of documenting dynamic folk toys occurred to me many years ago. Being involved in the teaching and practice of industrial design, I have always been fascinated by these popular toys. Many of them stand out as examples of design innovation.

Much of this material was gathered in an informal way from 1974 to 1976 while travelling in connection with other assignments. It was put together in its present form in 1978. The All India Handicrafts Board showed keen interest and the monograph was originally scheduled to be published in 1979 to coincide with the 'Year of the Child'.

I wish to take advantage of this opportunity to thank my organisation, the National Institute of Design, for providing me the time and the facilities to work on this project. I also received much support from many of my colleagues at the Institute, particularly Shri Ashoke Chatterjee, Executive Director and Ms Helena Perheentupa, Chairman Special Projects, who made untiring efforts to resolve the many problems that befell the monograph during the course of its completion and publication.

I am very grateful to Shri Rajesh Vora who provided much appreciated help by undertaking the designing of the book and by photographing the toys. This was done as part of his educational programme under the guidance of Shri Mahendra Patel, Chairman, Faculty of Visual Communication. I am grateful to Shri Patel also for his advice in the matter of printing and graphic design. S/Shri D B Mistry, H Lopez, S N Shinde and the staff of Institute's printing studio have rendered professional service in the production and printing of this work. Shri Raghunath Goswami of Calcutta very kindly gave me a great deal of useful information and many valued suggestions on the folk toys of India's eastern region. S/Shri S Balaram and Augusthy Thomas, my colleagues at the Institute, assisted me by going through the text and offering suggestions. Thanks are also due to Ms Zette Emmons of the USA who shared her research work on the subject with me. Smt Fatima Al-Talib edited the text and gave it the finishing touches.

Most importantly, my deep thanks to the toymakers who willingly gave the information and permitted me to visit them repeatedly. Finally, I would like to record my appreciation for the interest, patience and support that I have received from the All India Handicrafts Board in publishing this monograph.

Sudarshan Khanna
National Institute of Design, Ahmedabad.
September 1981

Introduction

Some years ago I was teaching a course on how to work with materials by making the best use of their properties. The course was devised for new students of design. One of the exercises involved creating an object by combining two or three materials or material forms. The emphasis was not on the utility of the object created, but on the properties of the materials chosen and on the way that they were combined. For instance, a strip of bamboo or plastic can be held in a loop by a piece of wire or string thereby demonstrating the properties of the different materials and their relationship in this combination.

While discussing this exercise, we looked around us for any existing examples that utilized materials in this way. We realized then that many of our popular folk toys are remarkable examples of the intelligent and imaginative use of materials.

I was particularly impressed by a popular toy called *chidia*, sparrow, or helicopter. This toy is made of very simple materials : a thin bamboo stick about six inches long; a piece of paper the size of two mango leaves; about one square inch of sheet metal scrap; and a piece of string. It weighs less than ten grammes and costs twenty-five paise.

When placed on the ground, the toy looks like an unusual but nondescript piece of construction, perhaps even an abstract sculpture. But when manipulated, it is transformed into a *chidia* : a flying, chirping bird. It provides a young child with hours of fun and amusement. The joy and wonder generated by this simple toy are due to the ingenious use of materials, the design concept and the imaginative way in which the laws of motion and sound have been applied.

Some unknown genius must have thought up the original idea, using his knowledge and skills imaginatively. It was a great achievement to create so

much with such few resources. Many succeeding generations of artisans must have contributed towards evolving its present form and its value as a toy. How did these artisans acquire the knowledge ?

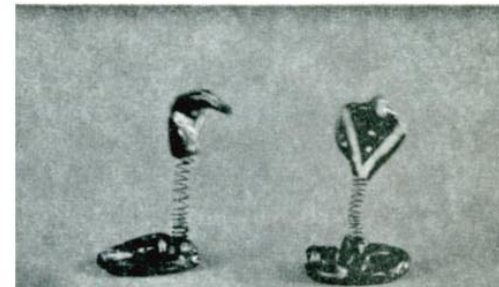
These aspects of folk toys and their makers intrigued me and made me keen to study and document this area of our indigenous design heritage. Through studying these commonplace toys I hoped to know a little more about the work and methods of training practised by these unknown, self-taught designers.

Indian Folk Toys

Toys are familiar, everyday objects. Everyone has some idea of what makes an object a toy. Toys can be classified on the basis of the material used, like wooden toys, clay toys, cloth toys and so on. Or on the kind of play they are used in, like pulling toys, rattles, dolls and mechanical toys. They can also be grouped on their learning/teaching value, or on the age groups that play with them. I have classified traditional toys made by artisans into two categories : static and dynamic.

Static toys are those that are basically representational, like dolls, figures of animals and birds and models representing themes and subjects of everyday life. The 'mother and child' toy (fig. 1) is one such example. Many static toys become just decorative objects while others take on ritual associations.

- | | |
|---|---|
| 1 | 2 |
|---|---|
- 1 Mother and Child
A static toy
- 2 King Cobra
A dynamic toy

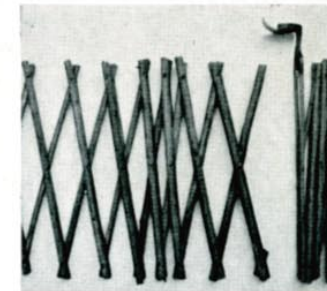
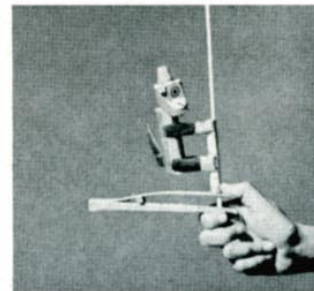


Dynamic toys are action-based play items. They, too, represent aspects of everyday life, but they also create movement and sound. The 'cobra' toy shown here (fig. 2) not only represents the body features of a snake, it also illustrates its character by moving its head as if ready to strike.

India is one of the few countries in the world today with a living tradition of folk toys. She is rich in both static and dynamic toys. A very few studies on dolls and the figurative type of traditional toys have been made. But almost no attention has been paid to dynamic or animation toys. This is so in spite of the fact that dynamic toys are ingenious playthings presenting a wide range of ideas and designs. This monograph is an attempt to fill that gap and deals specifically with the popular dynamic toys made by Indian artisans in different parts of the country.

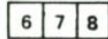
Dynamic Folk Toys

- | | | |
|---|---|---|
| 3 | 4 | 5 |
|---|---|---|
- 3 Bird
Depicts flying action
 - 4 Monkey
Depicts jumping action
 - 5 Snake
Depicts striking action



Dynamic folk toys provide a sensory experience through their actions : they create movement, change form and make sounds. Such sensory stimuli are direct and clearly understood—which is the object of the toy. They illustrate simple themes derived from our physical environment. The flying bird, the jumping monkey and the striking snake shown here (figs. 3, 4, 5) are some examples. Some social contemporary themes, like the man serving himself a drink, or a soldier aiming his gun, are also currently popular. Many scenes from our lives are portrayed in these toys with simplicity, honesty and a sense of humour. The variety of these toys provides ample entertainment and amusement for young children.

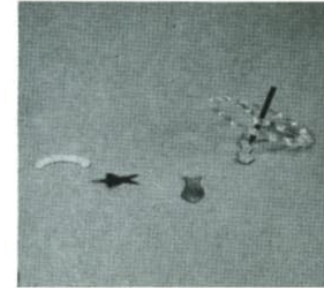
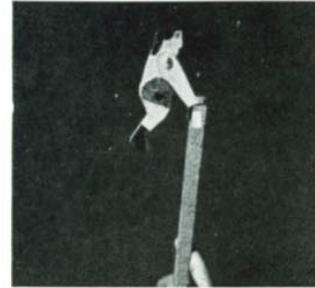
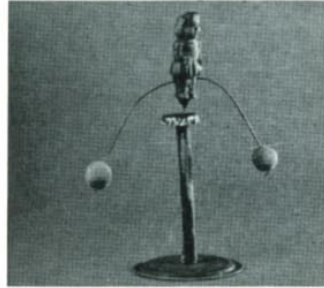
The 'design' of these toys is largely based on the application of one or more of the basic principles of physics. The laws of mass and gravity, centrifugal force, simple mechanics, sound and magnetism are extensively applied (figs. 6, 7, 8).



6 Balancing Doll
Principle of mass under gravity

7 Acrobat
Principle of spring and gravity

8 Magic Toy
Principle of magnetism



Most of these playthings are ephemeral in nature, lasting only for a few days, sometimes just for a few hours. But in relation to their price and the amount of material used to make them, they provide a lot of fun and excitement.

Unlike most craft objects, dynamic toys are basically the products of ideas. The maker's designing and innovative ability play an important part in their creation. The question 'What is design?' can best be answered by an understanding of these simple products which are sold for a pittance at street corners and melas. Like the best examples of good design, they present in their modest way a successful blend of art and technology.

Dynamic folk toys are usually very inexpensive. Most of the toys shown in the monograph were bought within the price range of ten to fifty paise, 1975/76 price index. It is astonishing to see an artisan selling his toy, on which he has spent sometime making out of several materials, for merely twenty paise. Even the poorest can afford this price, and children from all segments of society buy these toys in all parts of the country.

The Current Situation : Some Observations

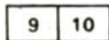
Although a wide variety of folk toys are still made and bought all over India,

many fascinating toys, made as recently as a decade ago, are rapidly disappearing. The culture of dynamic folk toys is on the decline.

Instead, many of the ideas and designs of traditional toys are being reproduced in plastics. (figs. 9, 10). These are increasingly replacing folk toys at rural melas and fairs. Factory-made plastic toys, while costlier, are quite popular and are creating stiff competition for traditional toys. One reason for the popularity of plastic is its durability and, possibly, its association with all things 'modern'.

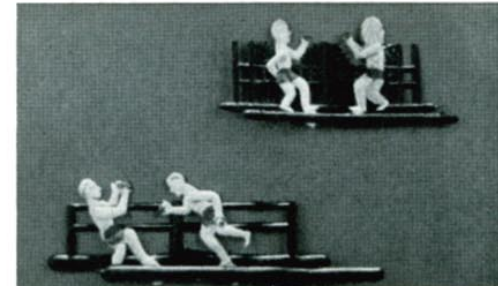
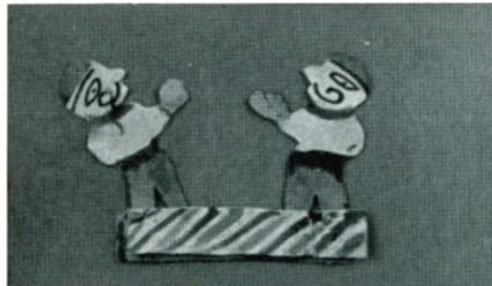
There is very little conscious design development by the makers of traditional toys. Most toys are based on designs evolved generations ago. Many of the toymakers I met over the past few years seem to look upon their work as a routine economic necessity and do not see the need to develop new ideas. Poverty and the lack of appreciation for their work may be responsible for this attitude. Some, who are talented enough and have the ideas and the inclination, are discouraged by the lack of resources and marketing assistance. A few, however, are well aware of the value of their innovative ability. At one place in Gujarat, a toymaker agreed to disclose his secrets to his son who he is training to follow in his footsteps. But he will teach his son how to make only one toy every year.

Toymakers who live in cities and industrial areas now make use of materials that have been used before. This recycling includes newspaper, discarded



9 Boxer
Made of paper

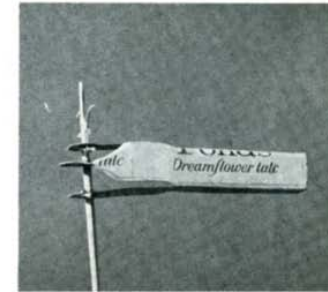
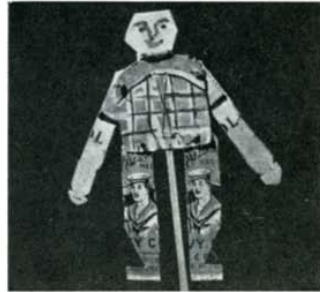
10 Boxer
Imitation of a traditional toy
idea. Made of plastic



cartons, boxes, tins, metal scraps and other odds and ends (figs. 11, 12, 13). Even unburned pieces of bamboo from cremation grounds, and the entrails of animals from slaughter houses are brought into use. Occasionally, bits of discarded machine equipment are used very ingeniously.

11 12 13

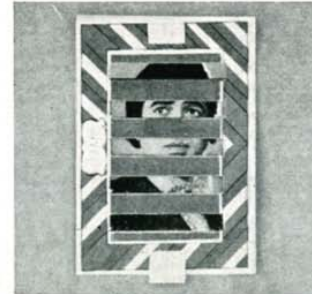
- 11 Jigging Puppet
Made from discarded cigarette packets
- 12 Drum
Made from recycled newsprint
- 13 Soundmaker
Made of recycled metal sheet of a talcum container



As in every other sphere, Hindi films have also left their mark on the toy-making field. Dolls are being made to resemble film stars instead of being given anonymous faces as in the past (figs. 14, 15, 16). One ordinary toy, a ball attached to a rubber string, became very popular at one time because a similar device was used by a villain in a current Hindi film.

14 15 16

- 14 Dancer
Picture of a popular movie star is used
- 15 The Magic Toy
Picture of a popular movie star is used
- 16 Acrobat
Picture of a popular movie star is used



Many toys based on the same ideas and of similar designs are made by folk artisans all over the country. There is, of course, always the local touch which shows in the materials used, the style of dress and the facial features. For example, jigging puppet toys are made all over India, (see pages 11, 12, 13). On the other hand, some toys are exclusively regional like the climbing monkey toy from eastern India (page 14).

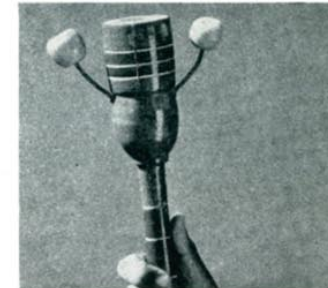
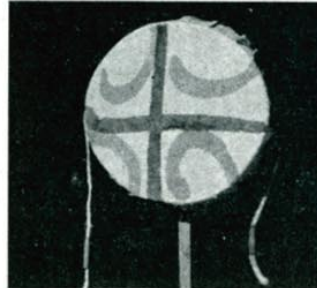
Some folk toys from other countries resemble, in idea and design, a few of our own, although in most cases the ideas seem to have developed separately. The drum toy of Japan is very like the Indian drum toy (figs. 17, 18). Occasionally, good ideas seem to have travelled; the rattle toy (fig. 19) seem to have originated in Mexico. Over the past few years it has been made in thousands by turned-wood craftsmen all over India.

17	18	19
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17 An Indian Drum

18 A Japanese Drum

19 Rattle
Original idea believed to be
Mexican



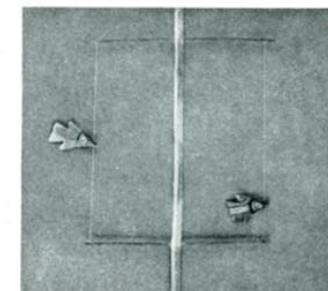
Need for Improvement

Dynamic folk toys still serve as the main source of playthings for most young children in India. These meaningful, purposeful and vital products are still being made and sold in millions by thousands of artisans who earn their living or supplement their incomes through this activity. How can a better deal be given to these toymakers? How can this important sector, which is losing its force, be revitalized? How can the talents of local artisans be identified and tapped in developing new ideas and designs? And how can this unorganised and decentralised sector of craft culture be linked to the organised industrial sector and to education?

20	21
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20 Racing Horse
Used to be made by an artisan
about fifteen years ago

21 Swimming Fish
Commonly made in West
Bengal a decade ago



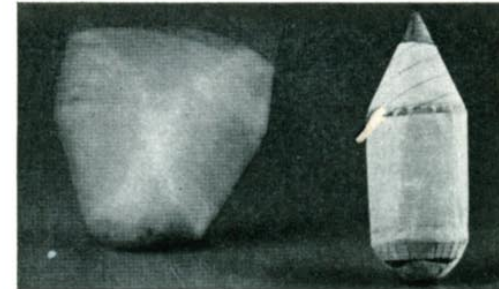
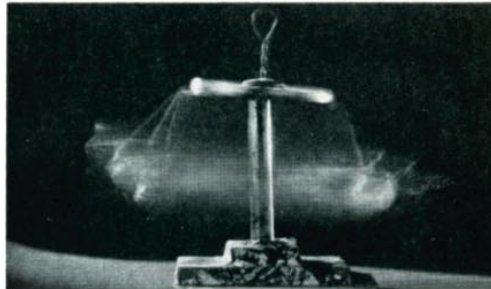
Many existing toys are the result of a high level of innovative thinking. If lost, these designs and ideas will take generations to be redeveloped. For example, the horse toy and the swimming fish toy of Bengal are hardly seen now (figs. 20, 21). There is dire need, therefore, of creating an awareness of this fast disappearing cultural wealth.

One way of injecting new life into the folk toy craft could be by introducing dynamic toys straight into the classroom as teaching aids. Such toys could form part of craft courses, assist children to learn about materials, as well as the importance of measurement and precision in mechanical devices. Toys demonstrating the principles of mass and gravity, friction, sound, centrifugal force and simple mechanics (figs. 22, 23) could even replace some of the expensive scientific equipment. Introducing these toys into the classroom would not only create a new market for them, it would also encourage talented artisans to develop new ideas and improve existing designs. This would help evolve a new role for folk toy designers and makers.

22	23
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22 Merry-go-Round
Illustrates the principle of
centrifugal force and circular
motion through linear
screw action

23 Balancing Toy
Illustrates the principle of mass
and centre of gravity



Many toys being made today need to be improved, especially to make them safer. Rusted metal, toxic paints and sharp edges are common hazards. Channels must be created through which these important aspects could be discussed with toymakers. It is important for design and craft promotion agencies to sit down with the artisans and begin a dialogue that could dovetail the needs of the makers with the educational requirements of the child. However, institutional intervention in this area must be thoughtful and sensitive. The artisans have precious talents and skills that have survived against many odds. These must be encouraged and nurtured, a cultural resource that must be gainfully employed for the benefit of all.

Scope of This Monograph

Much of the information in the preceding section was gathered in the course of attending melas and fairs where inexpensive toys are largely sold and by talking to the toymakers. Hence the views and interpretations expressed here are necessarily subjective.

The next section of the monograph shows a variety of dynamic toys collected from different parts of the country. The toys have been grouped according to the major scientific principle used in their design. The grouping may indicate regional and local distinctions in toys based on similar concepts, and special toys made only in certain places. A few photographs show the environment in which the toys are made and sold.

A number of toys catalogued in this section are not strictly 'folk' in the sense that factory-made parts, mass produced components, printed pictures and re-cycled materials are used in their making. Some of these are bought by vendors who sell both 'folk' and an inexpensive variety of plastic toys. These examples are included to project an overall picture of the existing situation and to focus on the changes that are taking place.

A large number of toys featured are from the states of Gujarat, West Bengal, Orissa and Uttar Pradesh, and from the major cities. However, the reader will get a comprehensive, countrywide view of the subject.

The last section of the monograph concentrates on the life and work of four toymakers.

I hope that the compiled information will be of interest to fellow designers, craftsmen, artists and toymakers. It could also help schools and teachers to know the wealth of inexpensive traditional toys that can be used as educational aids. Further comparative studies on folk toys of different regions of India and of other countries could also make use of this material.

This monograph is not intended to serve as a 'do it yourself' manual on popular toys. But the information provided in the form of photographs, diagrams and notes, may give a better understanding of the processes that go into the making of these traditional folk toys.

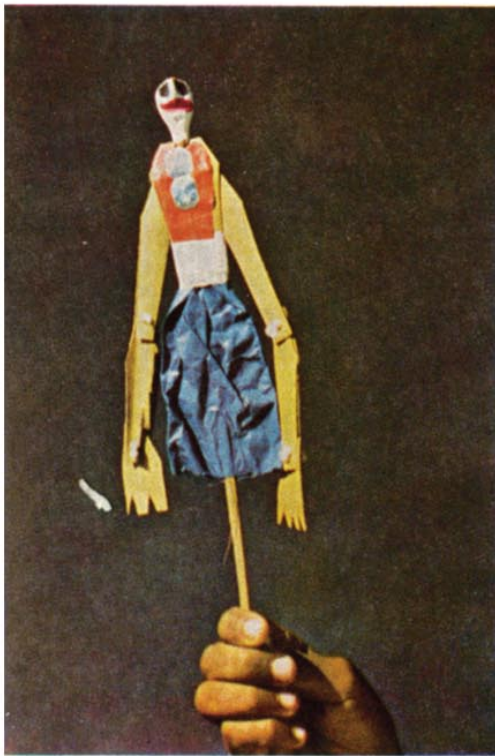
The Toys

The information given against each toy picture has the following sequence :

Name of the toy as used by the toyseller. (The equivalent name in English). Place of purchase.
Material used. Play action. Remarks if any. Credit for collection if not collected by the author. Price

100 paise (P)—one rupee (Rs).

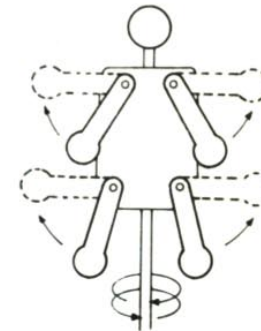
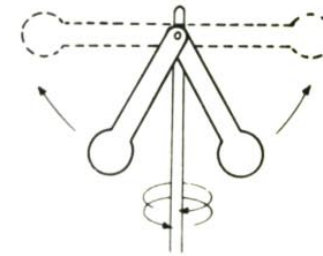
Most prices refer to 1975-76, when the research commenced.



Jigging Puppet Toys

based on the principle of Centrifugal Force

The toys of this group illustrate simple themes such as the dancer, the clown and the warrior. Their characteristics are well depicted by their movements.



The arms and legs of the figure make swift movements when the toy is held by its central support and is given a twist. The simple technology applied is based on the principle of centrifugal force.

Jigging puppet toys are simple to construct and are generally made of paper or palmleaf. A pair of scissors, a knife, and needle and thread are the simple tools used in their construction. They are made all over the country.

1, 2 Bhoot (Ghost). Bolpur, West Bengal. Palmleaf arms, paper body, clay face, bamboo stick, string for hinging. The arms make swift movements when the toy is held in the hand and given a twist. 25 P.

3 A jigging puppet seller in Calcutta.

4 Jigging puppet toys being made in Calcutta.

5 A young toymaker selling his products at a fair in Calcutta.

6 Putul (Puppet), Calcutta. Old magazine paper, bamboo strip. Arms and legs move. 10 p.

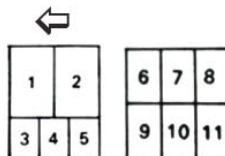
7 Sipahi (Warrior). Calcutta. Paper, bamboo. Arms and legs make movements depicting a soldier in combat. 20 P.

8 Bhoot (Ghost). Calcutta. Paper, bamboo. Arms and legs move. 30 P.

9 Putul (Puppet). Orissa. Palm-leaf, bamboo. Arms and legs move. R. Goswami. 20 P.

10 Putul Raja (Puppet King). Orissa. Palmleaf, bamboo. Arms and legs move. R. Goswami. 25 P.

11 Sipahi (Warrior). Assam. Palmleaf, bamboo. Arms and legs make movements. 25 P.



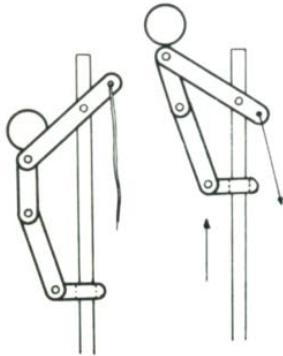
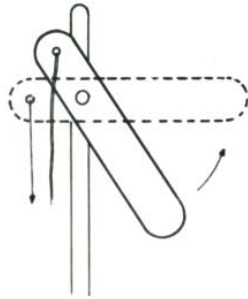


- 12 Manas (Man). Ahmedabad.
Paper, bamboo. Arms and legs make movements. 25 P.
- 13 Pahalwan (Wrestler). Varanasi.
Paper, bamboo. Arms and legs make movements. C. Desai. 30 P.
- 14 Dhinglo (Puppet). Ahmedabad.
Paper, bamboo. Arms and legs move. 10 P.
- 15 Dhinglo (Puppet). Ahmedabad.
Recycled paper, bamboo. Arms and legs make movements. 10 P.
- 16 Joker (Clown). Ahmedabad.
Cigarette pack, bamboo. Arms and legs move. 10 P.
- 17 Joker (Clown). Calcutta.
Recycled packaging board, bamboo. Arms and legs move. 10 P.

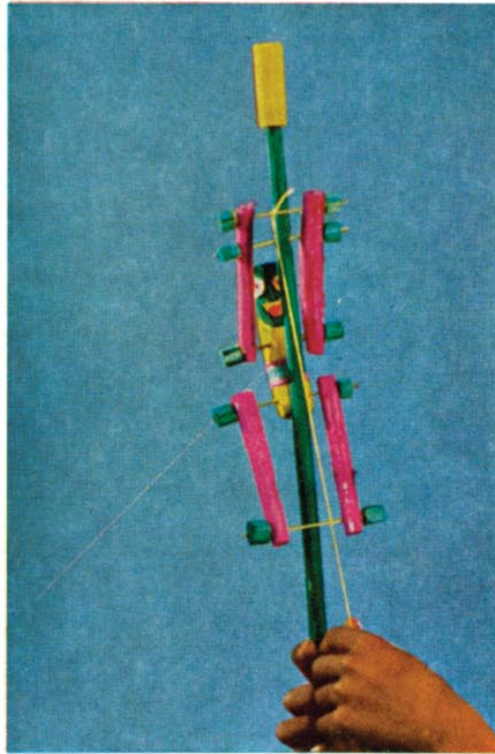
12	13	14
15	16	17

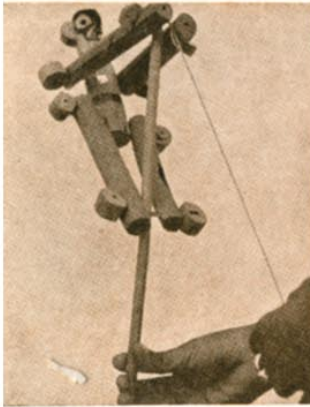
String-Manipulated Toys based on the principle of Lever

A variety of simple themes are illustrated by the toys of this group. The typical characteristics of the figures are well depicted by a change in body posture or position. The movements are generated by applying the principle of lever. The string is attached to different parts of the toy figure. When it is pulled, the parts move against gravity, and on the release of tension, return to their original position.



Cardboard or thick paper is the material most often used for making these puppets. Pith, or 'shola', a plant that grows wild in the eastern region of India, is also used.





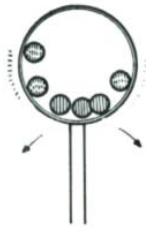
- 1, 2 Bandar (Monkey). Tarakeshwar, West Bengal. Pith, string, broom stick. The monkey-figure goes up and down. 25 P.
- 3, 4 Dancer (Puppet). Delhi. Thick paper, reed stick, string. Arms and legs move up. Printed picture resembles a film star. 50 P.
- 5 Bandar (Monkey). Orissa. Pith, broom stick, string. Figure goes up. R. Goswami.
- 6 Daaku (Dacoit). Orissa. Card-board, wooden stick, string. Arms and legs move. R. Goswami.
- 7 Ravana (A mythological demon). Orissa. Cardboard, wooden stick, string. Arms and legs move up. R. Goswami.
- 8 Pahalwan (Wrestler). Ahmedabad. Cardboard, bamboo, string. Arms and legs move up. 25 P.
- 9, 10 Sharabi (Drunkard). Kanpur, U. P. Cardboard, bamboo, string. Arms and legs move depicting a man drinking liquor. S. Bhatnagar. 40 P.
- 11 Sipahi (Soldier). Kanpur, U. P. Cardboard, bamboo, string. Depicting a gun being aimed. S. Bhatnagar. 30 P.
- 12 Oont Sawar (Camel Rider). Kanpur, U. P. Cardboard, bamboo, string. The camel figure's head and tail and the rider figure's hand move. S. Bhatnagar. 40 P.
- 13 Hathi (Elephant). Kanpur, U. P. Cardboard, bamboo, string. The head and tail move. 30 P.

		5	6	7
1	2	8	9	10
3	4	11	12	13

Rattle and Drum Toys

based on the principle of Sound through Impact

Toys in this group make a sound which is generated by striking the toy body either from the outside or the inside.



Rattle toys are made of different materials such as paper, palmleaf, reed and papier mache (figs. 7 to 12), while the drum type are made by fixing a piece of paper on both sides of a clay ring (figs. 1, 4, 5).

Traditionally, rattles and drums are made and sold exclusively by women. A knife and a pair of scissors are the only tools used to make these toys. (The lacquered wooden rattle in fig. 6 is a very recent introduction. It is made by male artisans, using the turned wood technique).





- 1 A group of drum toys.
- 2 An artisan making drum toys at her residence in Ahmedabad.
- 3 An artisan making drum toys in Ahmedabad.
- 4 Dugdugi (Drum). Ahmedabad. Clay, newsprint paper, bamboo, string. Makes sound. 10 P.
- 5 Damru (Drum). Cuttack, Orissa. Fired clay, paper, string. Makes sound. 15 P.
- 6 Ghughro (Rattle). Idar, Gujarat. Turned and lacquered wood, metal coil spring. Makes sound. A new introduction, said to be originally from Mexico. 75 P.
- 7 Gilli-Gillippu (Rattle). Madras. Palmleaf, pebbles or grains. Makes sound. 40 P.
- 8 Jhunjhuna (Rattle). Gaya, Bihar. Palmleaf, grain particles. Makes sound. 10 P.
- 9 Gilli-Gillippu (Rattle). Madras. Palmleaf, grain particles. Makes sound. Bought at an emporium in Delhi. 50 P.
- 10 Jhunjhuna (Rattle). Jodhpur, Rajasthan. Papier-mache, Pebbles. Makes sound. Moulded in two halves. 10 P.
- 11 Ghughro (Rattle). Ahmedabad. Paper, bamboo, grain particles, string. Makes sound. 10 P.
- 12 Jhunjhuna (Rattle). Agra, U. P. Reedgrass, pebbles. Makes sound. 10 P.

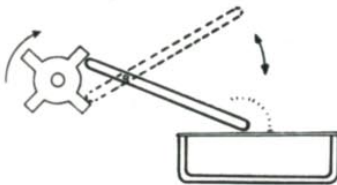
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Drum Toys

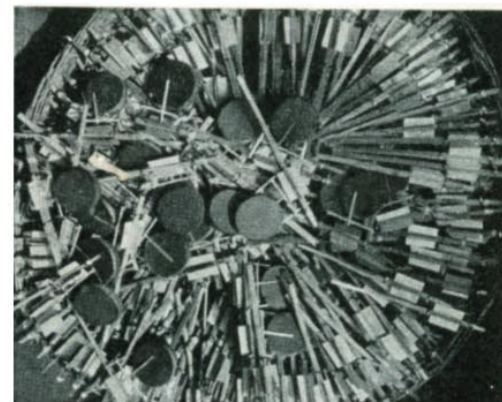
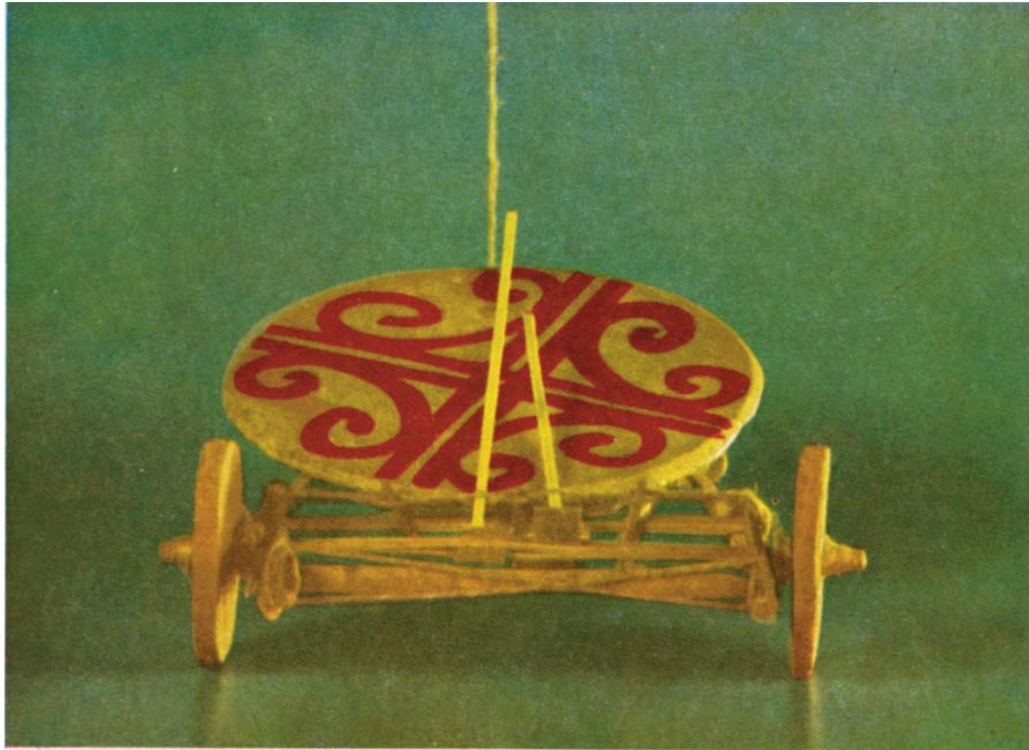
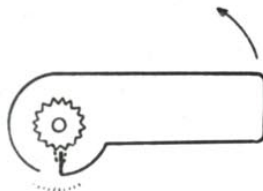
based on the principle of Sound through Impact

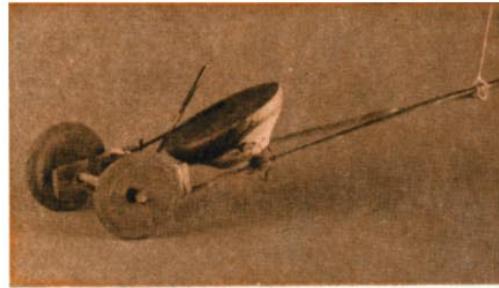
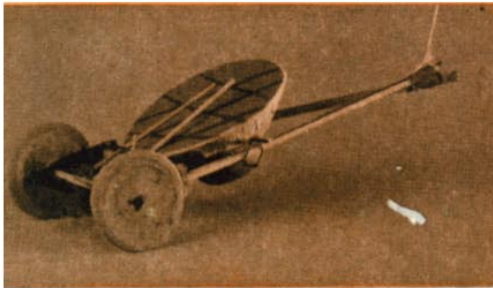
Toys of this group make loud, rhythmic sounds. The drum-cart (fig. 1) when pulled along by the attached string, is tapped by two springloaded sticks. The tapping is guided by the 'ratchet and hammer' device of the toy. The drum is made of a fired clay container which is covered by thin bamboo paper or has a thin piece of intestinal skin stretched over it. This toy is usually made by the male members of communities making drum instruments.

Hand-held drum toys (figs. 6, 7, 8) also operate on the same principle and use the ratchet and hammer mechanism. The drum part is made of a dried clay ring, both sides of which are covered with sheets of paper.



The other toys of this group (figs. 9, 10, 11) use a gear device instead of the ratchet and hammer mechanism.





- 1 Gari bajna (Drum-cart).
Calcutta. Fired clay drum,
intestine skin, fired clay wheels,
bamboo strips, jute string. The
cart moves when pulled by the
string, and the drum is tapped.
40 P.

- 2 Drum-cart toys being sold by
an artisan at a local fair in
Calcutta.

- 3 Drum toys kept in a basket for
sale at a fair in Ahmedabad.

- 4 Gadi (Drum-cart). Delhi. Fired
clay, bamboo, metal strip, jute
string. Makes sound when
pulled on wheels. 30 P.

- 5 Gari (Drum-cart). Darjeeling,
West Bengal. Fired clay,
bamboo, string. Makes sound
25 P.

- 6 Baja (Drum). Ahmedabad. Clay
ring with paper on both sides,
bamboo, cardboard, metal wire,
string. Makes sound. 10 P.

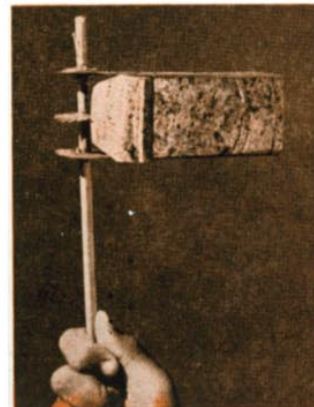
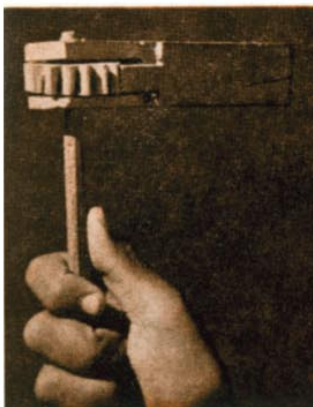
- 7 Bajna (Drum). Calcutta.
Cardboard, paper, bamboo,
metal strips, string. Makes
sound. 20 P.

- 8 Bajna (Drum). West Bengal.
cardboard, metal wire, bamboo,
string. Makes sound. 15 P.

- 9 Tik-tik (Soundmaker). Ahme-
dabad. Wood. Makes sound.
Rs 1.

- 10 Tik-tik (Soundmaker). Ahme-
dabad. Metal sheet, bamboo.
Makes sound. 25 P.

- 11 Charbari (Soundmaker).
Calcutta. Recycled sheet metal,
bamboo. Makes sound. 20 P.

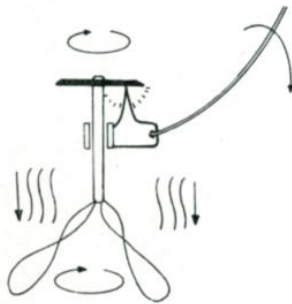


1		4	5
		6	7 8
2	3	9	10 11

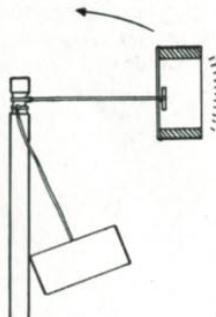
Frictional Toys

based on the principle of Sound through Friction

Conversion of friction energy generates the sound made by the toys in this group (except in the case of the musical instrument toy in fig. 9). When the sparrow toy (figs. 1, 5) is swung in the air, its paper blades rotate depicting a sparrow in flight. Simultaneously, the pointed metallic strip scratches the rotating metal disc, which produces a sound resembling sparrow calls.



In the case of the other sound making toys (figs. 6, 7), when rotated, the drum lifts itself (due to centrifugal force) and generates tension in the string. The motion causes friction between the string (or horse hair) and the surface of the stick. This energy is transmitted in the form of string vibrations and the sound is amplified by the drum-box.





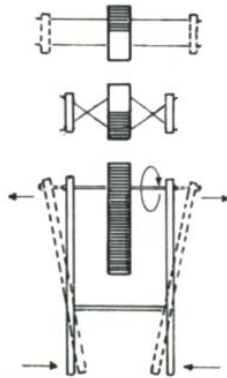
- 1 A group of toys called 'Chidia' (Sparrow) or Helicopter. Toys from Gujarat, W. Bengal & Delhi. Blades made of paper or palmleaf.
- 2 An artisan selling Humming Drums at a fair in West Bengal.
- 3 A toymaker selling 'Chidia' toys in Ahmedabad.
- 4 An artisan selling 'Sarangi' toys in Ahmedabad.
- 5 Chidia (Sparrow), also called Helicopter. Ahmedabad. Paper, sheet metal, bamboo, piece of thread. Makes sound. The blades when in rotation also create an air column which helps sound amplification. 25 P.
- 6 Bhavara or Ghughara (Humming Drum). Ahmedabad. Clay body, paper, horse tail hairs, reed stick. The toy when rotated makes sound. 10 P.
- 7 Bajna (Humming Drum). Calcutta. Clay body, paper, horse tail hairs, bamboo stick. The toy when rotated makes sound. 10 P.
- 8 Sarangi (a musical instrument). Ahmedabad. Clay, paper, bamboo, wire, fibrous strings. Makes sound similar to the classical 'sarangi'. 40 P.
- 9 Ektara (a string instrument). Cuttack, Orissa. Fired clay, paper, bamboo, metal wire. Makes melodious sound produced by string vibration. 30 P.

1			5	6	7
2	3	4	8		9

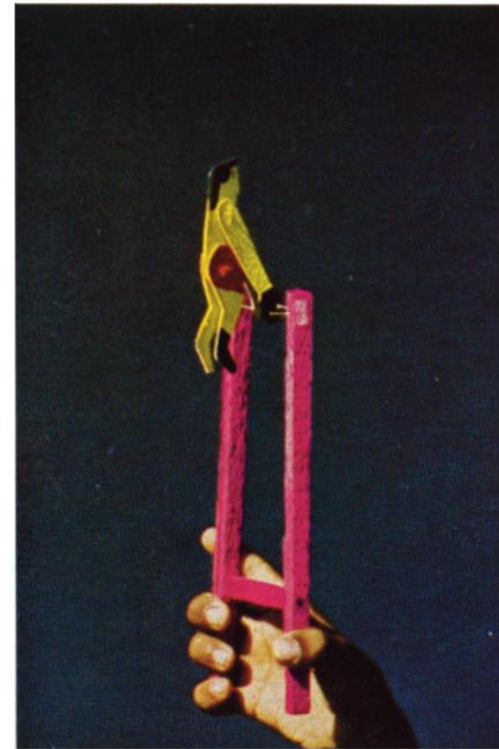
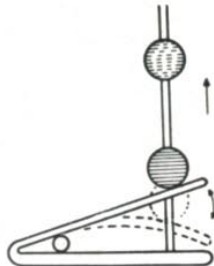
Jumping Toys

based on the principle of
Spring and Gravity

There are two types of toys in this group : the ones that jump across like acrobats (figs. 6,7,8), and others that jump upwards (figs. 9 to 13). The jumping across movement is achieved by storing and releasing energy in the string loop. This is done by grasping the vertical structure members together and, alternately, compressing and releasing the pressure. The structure members also act as levers and help transfer energy to the string loop which unwinds and thus lifts the toy figure against gravity.



In the upwards jumping toys (figs. 9, 10, 11), the movement is achieved by pressing and releasing the bamboo-leaf spring on which the toy figure rests. The figure which is shot up comes down with the force of gravity.





1,2 Nat (Acrobat). Ahmedabad. Cardboard, wooden pieces, nylon string and nails. The toy-figure jumps across. 25 P.

3 Acrobat toys being carried by an artisan for sale in Calcutta

4 A toymaker selling his products at a local fair in Calcutta.

5 An artisan selling jumping toys in Ahmedabad.

6 Darabaj (Acrobat). Calcutta. Thick paper, bamboo, string, nails. The figure jumps across. 25 P.



7,8 Film Star (Acrobat). Calcutta. Paper, bamboo, thread, nails. The figure jumps across. 25 P.

9 Indur (Mouse). Calcutta. Pith, bamboo. The figure moves up. 25 P.

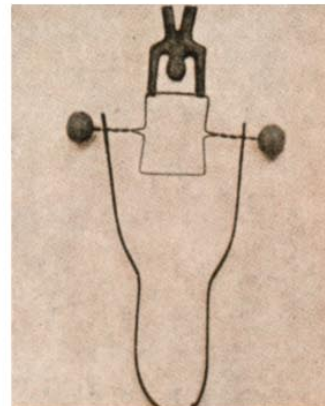
10 Bandor (Monkey). Calcutta. Pith, bamboo. The figure moves up. 50 P.

11 Pari (Fairy). Delhi. Paper, bamboo. The figure moves up. 30 P.

12 Ghodo (Horse). Ahmedabad. Cardboard, bamboo. The figure moves up. 50 P.

13 Vandaro (Monkey). Ahmedabad. Plastic figure, metal wire. The figure jumps up. 50 P.

14 Nat (Acrobat). Ahmedabad. Metal sheet and wire. Mass produced in a small factory. 30 P.



			6	7	8
1	2		9	10	11
3	4	5	12	13	14

- 1 A fair in Calcutta.
- 2 Panchhi (Bird). Ajmer, Rajasthan. Thick and thin papers, brass wire, reed stick, a pin. The bird-figure opens its wings when the wire link is pulled. On releasing the wire-link, the wings fold back to original position. The wire-link also acts as a spring to push back the wings. The paper flower made of transparent wax paper blooms with the wing's opening. The toys in this picture show the open and closed positions of the wings. 25 P.
- 3 A toymaker selling his products in Ahmedabad.
- 4 An artisan making toys in Calcutta.



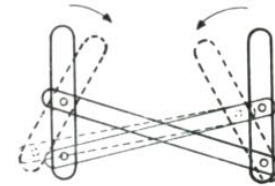
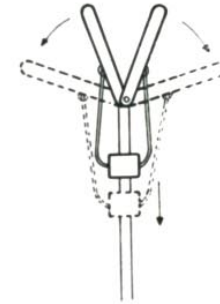
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Link Motion Toys

based on the principle of Lever

Many fascinating themes are depicted by the toys of this group. They are designed primarily applying the principle of lever. The movements illustrating a flying bird, a galloping horse, and fighting men all use this principle of mechanics (figs. 5 to 15)



Thick paper and cardboard are the chief materials. Wire or a piece of string, are used for the linkages. These toys need simple tools but skilled hands to make them.

Some of the toys shown here (figs. 10, 11) are only made in the eastern states of India.

5 Panchhi (Bird) as in Fig. 2.

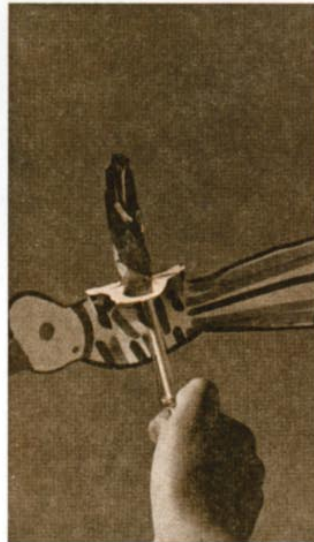
6 Pakhi (Bird). Calcutta. Paper, metal wire, bamboo. The wings open when the wire-link is pulled. 30 P.

7 Tota (Parrot). Kanpur, U. P. Cardboard, string, metal wire, bamboo. The wings open, the head and tail move when the wire is pulled and the parts return to original position when the wire is released. S. Bhatnagar 40 P.

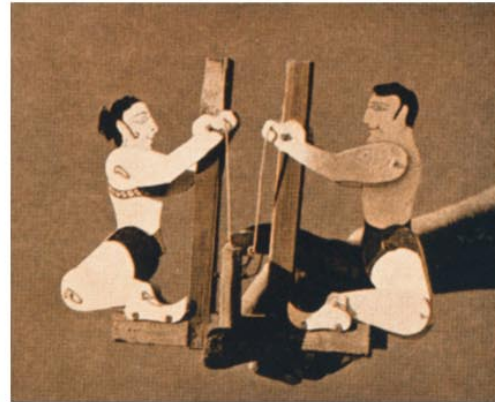
8 Pakhi (Birds). Calcutta. Cardboard, string. Illustrates a bird's pecking action. Both the birds peck simultaneously when the base slide is moved. 40 P.

9 Mushtiyodha (Boxers). Calcutta. Cardboard, string. When one of the two base slides is moved, the boxers move to and fro due to lever linkage. The toy was made by the artisan as a sample piece. 40 P.

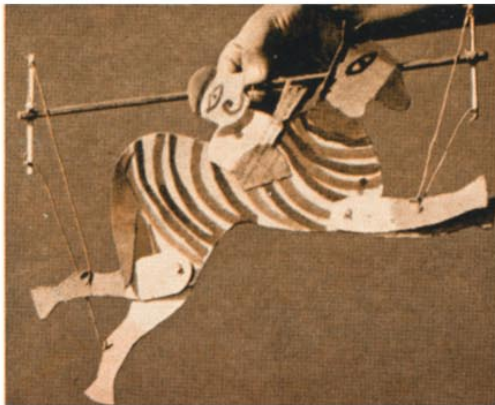
10,11 Pakhi (Bird). Calcutta. Pith, bamboo, string. The head and tail move when the bamboo strip is pressed and released. Mainly found in the eastern region 30 P.



5	6	7
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10	11	

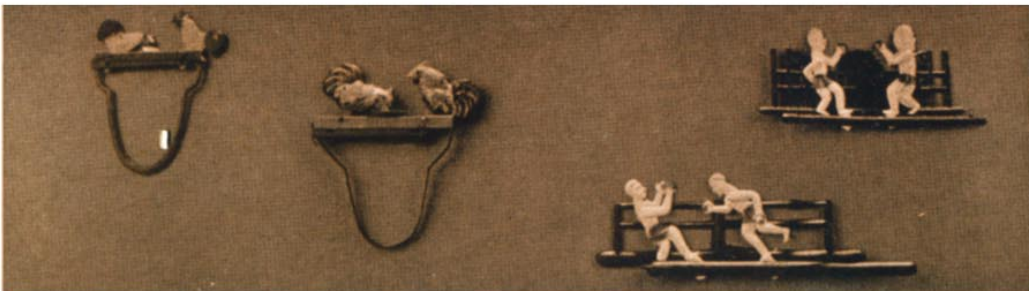


12,13 Bayambir (Healthy Couple).
Calcutta. Cardboard, bamboo,
metal wire, metal nails. On
pressing a specific part of
wire-link, the figure moves up
and on releasing it returns to
the original position. Depicts
two people doing exercise.
Toy made by two school boys
to earn pocket money. The
theme was taken from a
magazine advertisement. 50 P.



14,15 Race Ghora (Racing Horse).
Calcutta. Cardboard, string,
bamboo. The legs move very
swiftly depicting a galloping
horse when a slight twist is
given to the horizontal stick.
This toy was made as a sample
piece by an artisan who used
to make and sell them a
decade ago. 75 P.

16 Imitation of traditional ideas.
Calcutta. Metal and plastic.
Produced by the small scale
Industry. 40 to 75 P.

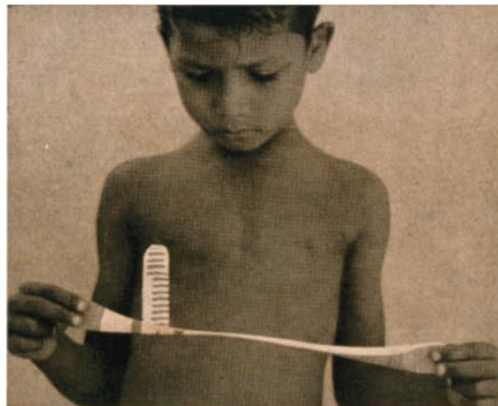
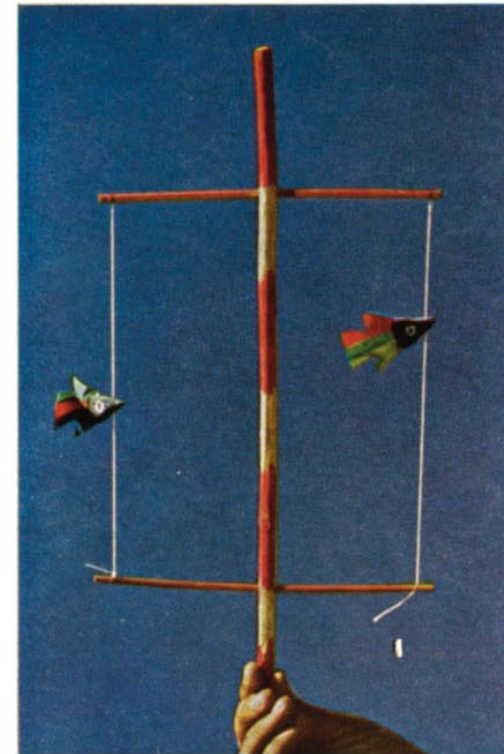
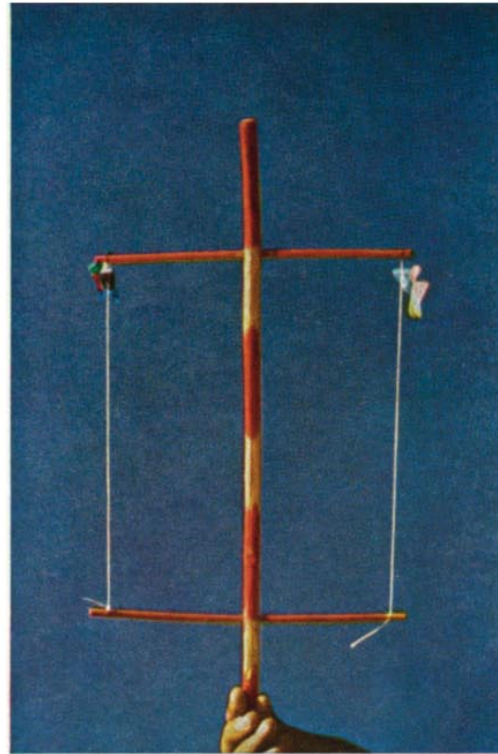
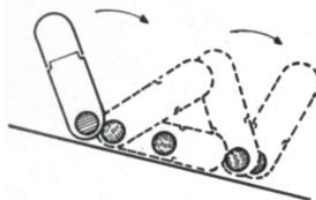
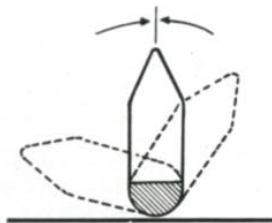
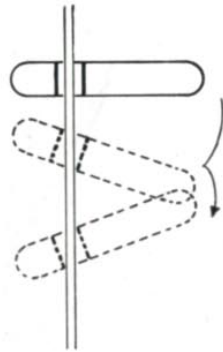


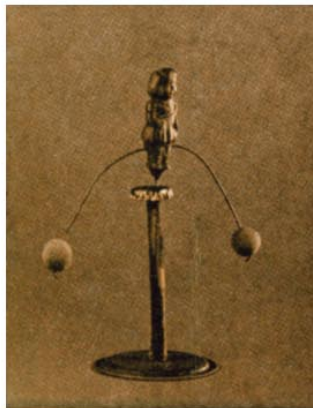
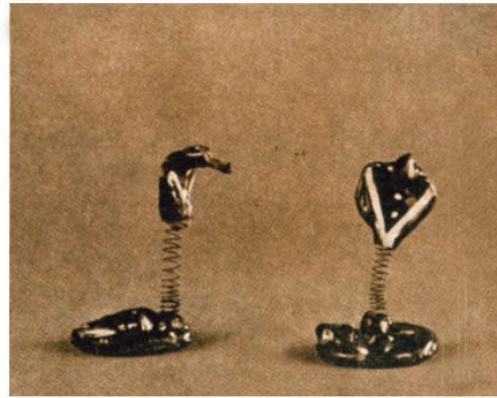
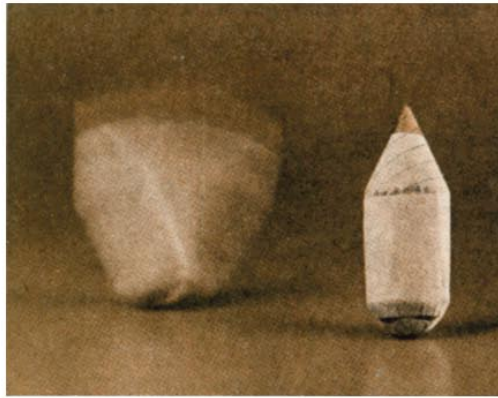
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16	

Gravitational Toys

based on the principle of Mass
under Gravity

Toys of this group are based on the application of the principle of motion due to mass under gravity. The movements depict certain characteristics of particular toys (figs. 7, 8, 9). The variety of movements is achieved largely through the shift in the centre of gravity of a particular mass (except in the case of fig. 6 where the movement happens due to the storage and release of energy in the coil spring).





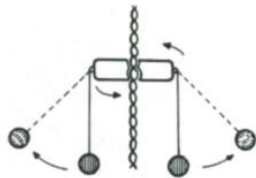
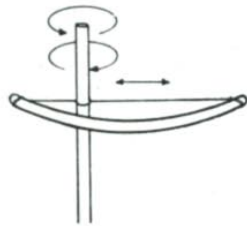
- 1,2 Mach (Fish). West Bengal. Clay, paper, bamboo, reed, string. The fish-figure makes downward movements with jerks illustrating a swimming fish. 10 P.
- 3,4 Gulatia (Somersaulter). Ahmedabad. Paper. Clay ball kept inside the figure. Somersaulting action takes place when the slide is inclined. 30 P.
- 5 Ullu Ka Pattha/Jadu ki Pencil (Balancing Toy). Ahmedabad. Paper, clay. It returns to the original position from any tilt. 10 P.
- 6 Saap (King Cobra). Calcutta. Clay coated with coaltar, wire spring. A little jerk keeps the figure's head shaking for some time. 10 P.
- 7 Haathi, Bagh (Elephant, Tiger) Puri, Orissa. Papier-mache, bamboo, metal wire. The heads shake when given a jerk. Counter balance weight. Rs 1.50 each.
- 8 Sapere ki Pitari (Snake Charmer's Basket). Puri, Orissa. Papier-mache, paper, bamboo. When the basket cover is lifted up, the figures' heads pop up and keep shaking due to counter weight balance. R. Goswami.
- 9 Circuswali (Balancing Doll). Ahmedabad. Clay balls fixed to metal wire, readymade plastic doll, metal caps, wooden stick. Balancing action. 20 P.
- 10 Pakshi (Birds). Idar, Gujarat. Wood, string. Pecking action. Rs 1.
- 11 Vandaro (Monkey). Ahmedabad. Metal wire, metal spring, plastic figure. The monkey figure comes down with a jerking motion. 10 P.

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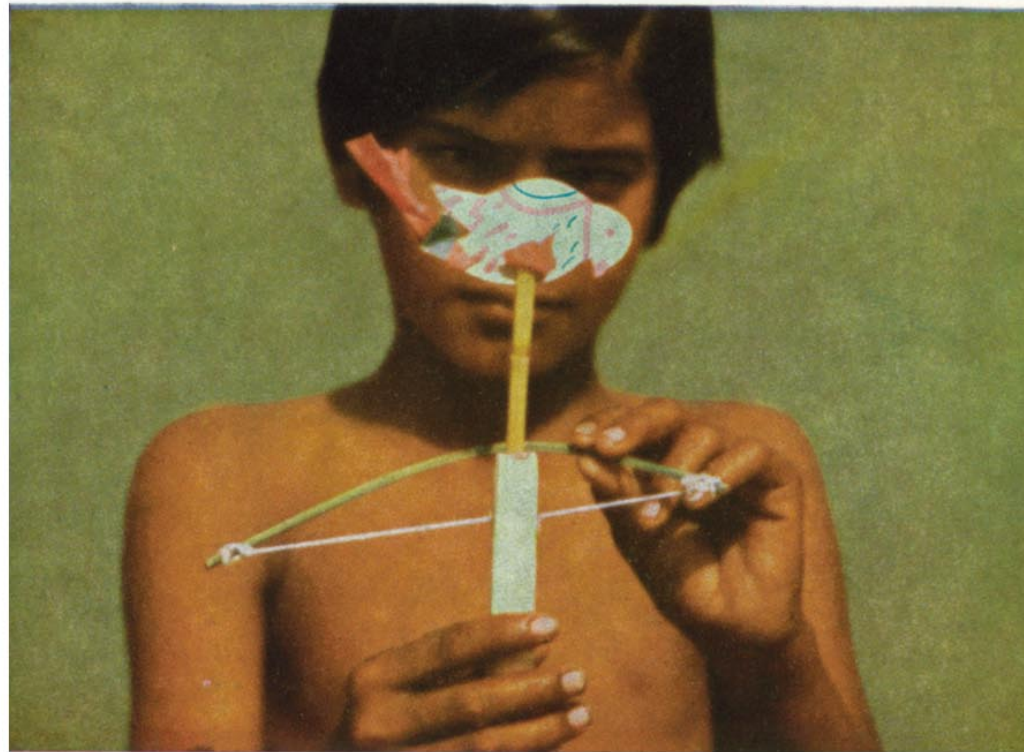
Spinning Toys

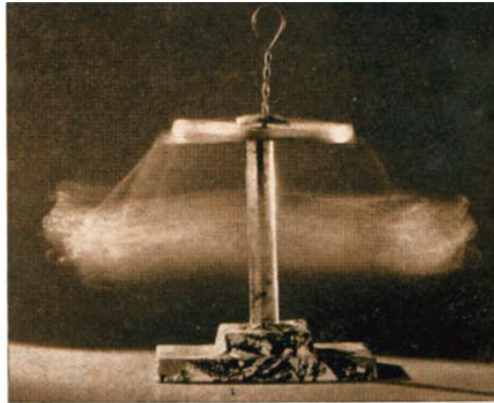
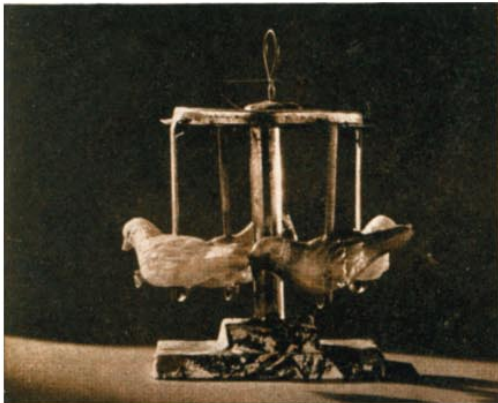
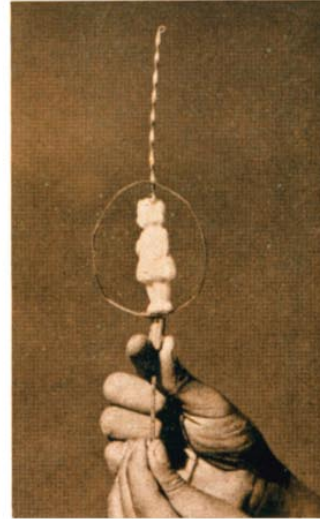
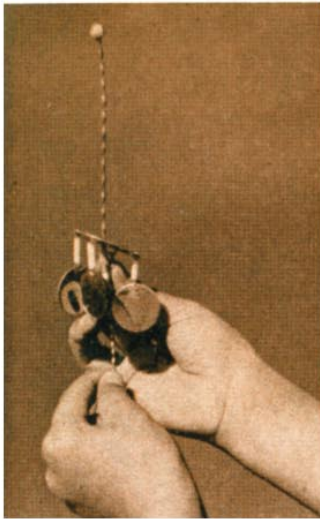
based on the principle of Screw Motion.

Toys of this group make a circular movement which is generated through screw-guided motion. In some toys of the group there is the additional use of the principle of centrifugal force (figs. 4, 5, 6, 7).



Industrial metal sheet scraps and recycled lids of containers are extensively used in the making of these toys. Some of those shown here (figs. 4, 5) are made in bulk by very small-scale but organised industry.





- 1 Chidia (Bird). Varanasi, U. P. Thick and thin paper, reed, bamboo, string. The bird-figure rotates when the bow is moved to and fro. Depicts bird in flight. C. Desai. 30 P.
- 2 Merry-go-round toys being sold in Calcutta.
- 3 Dancing doll toys being carried for sale to a fair in Calcutta.
- 4,5 Helicopter (Helicopter). Ahmedabad. Metal wire screw, sheet metal. When the metal disc is pushed up, the disc rotates and its small hanging discs fly off. The movement depicts a helicopter's blade in motion. 20 P.
- 6 Nachiae Putul (Dancing Doll). Calcutta. Metal wire screw, metal strip, plastic figure bought readymade. The figure rotates around the axis when pushed up. 25 P.
- 7,8 Nagardola (Merry-Go-Round). Calcutta. Recycled metal disc, metal strips, metal wire screw, readymade plastic dolls, cardboard. The figures rotate around the axis and also fly off depicting the movements of a merry-go-round. Earlier, metal or cardboard dolls were used instead of plastic ones, Rs 1.

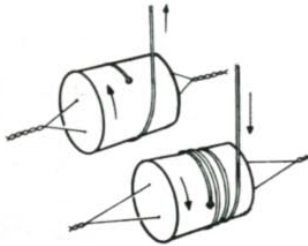
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Snake Toys

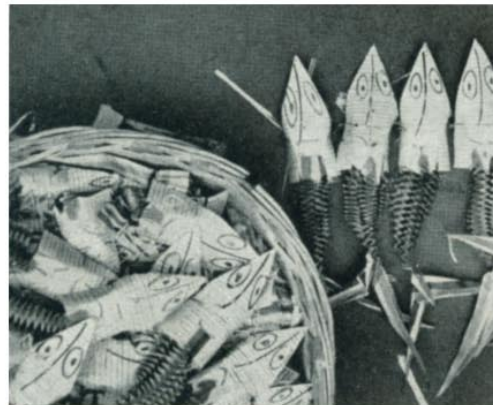
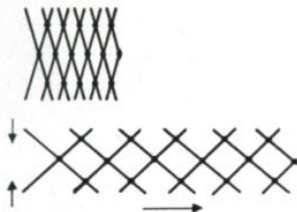
based on the principle of Elasticity
or Link-Motion

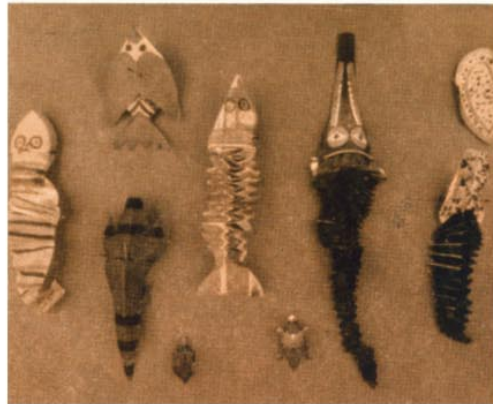
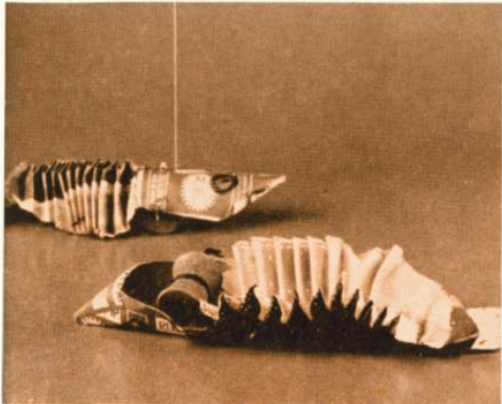
The paper snake makes creeping movements when the attached string is pulled and released (figs. 1, 4, 5). This motion is achieved by storing and releasing energy in the elastic rubber band which is fixed axially to the roller of the toy.

The paper snake is very popular and is made all over the country.



The striking snake made of reed (fig. 6) is constructed in such a way that it swiftly extends its length, capturing the characteristic movement of the reptile. The link construction is shown in the diagram. This toy is made in many parts of the country.





1 Saap (Snake). West Bengal. Paper, clay roller, rubber band, metal wire piece, string. The toy-figure makes a creeping movement depicting a snake in motion, when the string is pulled and released. Discarded computer tape is used. 15 P.

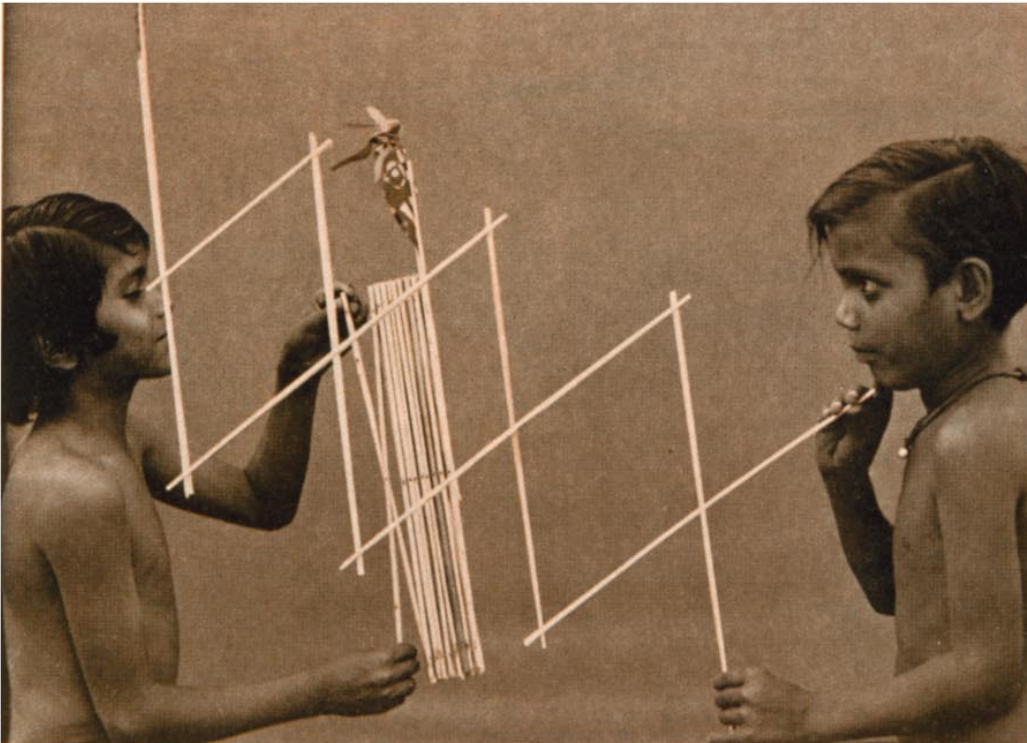
2 Paper snake toys displayed for sale at a fair in Nadiad, Gujarat.

3 Striking snake toys being made at the residence of an artisan in Ahmedabad.

4 Another view of the toy shown in fig. 1 above.

5 A group of paper snakes and bird toys. Toys shown here are from West Bengal, Gujarat, Maharashtra and Delhi. Also shown in the picture are plastic toys using the same action-principle.

6 Saap (King Cobra). Ahmedabad. Reed, metal pins. The snake makes a striking motion by swiftly enlarging its linear dimension. 25 P, 50 P.

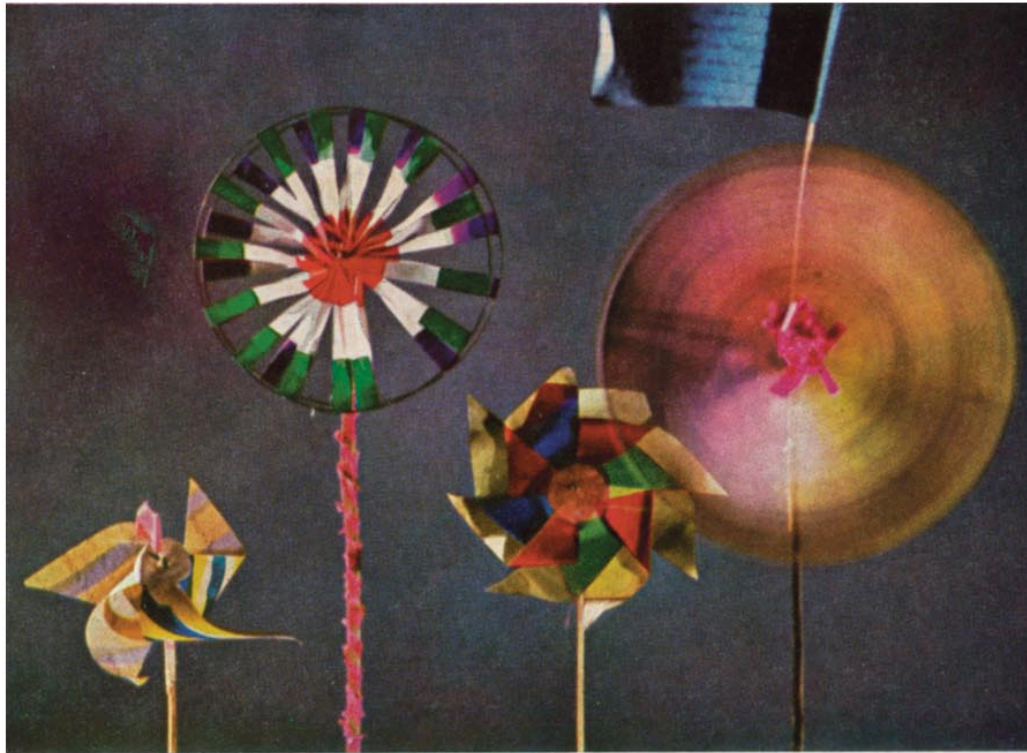


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- 1 A local fair in Ahmedabad.
- 2 Pharakdi/Chakardi (Wind Mills). Gujarat and West Bengal. Paper, bamboo stick, metal pin (in two cases also metal wire). The wind-wheels rotate on the axis when placed in the direction of wind flow. 10 P. to 50 P.
- 3 Paper horns being carried by an artisan to a local fair at Cuttack, Orissa.
- 4 Paper flutes being carried by an artisan for sale at a local fair in Nadiad, Gujarat.
- 5 Flutes and whistles being sold by their maker at a fair in Calcutta.

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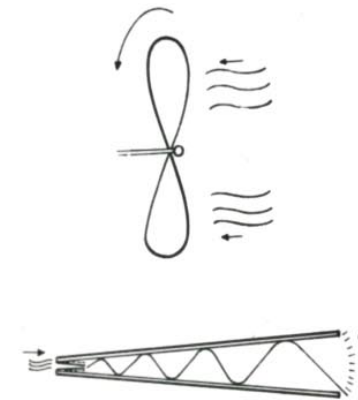


Wind-Wheel and Whistle Toys

based on the principle of Wind Energy

Toys of this group use the force of blown air which is converted into motion, or sound, or both.

There are moving wheels (fig. 2), various types of whistles and horns (figs. 6 to 15) which function on this principle.



Paper, palmleaf, bamboo and clay are the materials generally used to make these toys. They can be made by semi-skilled persons with the help of simple hand tools.

The horn, flute and wind-wheel toys are made throughout the country.

6 Bansi (Horn). Puri, Orissa.
Bamboo, paper. Makes
melodious sound. 15 P.

7 Bansi (Horn). West Bengal.
Palmleaf, paper. Makes loud
melodious sound. The whistle
part is also made of palmleaf.
40 P.

8,9 Bansi (Flute-whistle). Calcutta.
Bamboo, a piece of cloth
fixed on a stick inside to act
as air stopper. Makes a high
pitched sound which changes
its frequency when the position
of the air stopper stick is
changed. 20 P.

10 Nachati Gudia (Dancing Doll).
Delhi. Paper, reed, metal
whistle. When air is blown, it
simultaneously makes sound
and rotates the doll figure. 50 P.

11 Pakhi (Bird in Nest). Calcutta.
Cardboard, paper, metal
whistle, rubber bird figure.
When air is blown, it makes a
sound and the bird figure
gets out of the nest and goes
back. The bird figure is rubber
moulded and bulk produced
at a small industry. 30P.



6	7
8	9
10	11



12 Balloon Bansi (Balloon and Flute). Calcutta. Factory made rubber balloon, bamboo flute, piece of thread. When air is blown, the balloon gets inflated, and on releasing the air a melodious sound is produced. 20 P.

13 Been (Flute). Calcutta. Factory-made rubber balloon, bamboo flute, piece of thread. When air is blown, it first inflates the balloon and then makes a melodious sound. 50 P.

14 Baja (Flute). Patna, Bihar. Cardboard, thin paper. The pipe is closed on one side by a thin sheet of paper. A small hole is made on the pipe. Amplifies human sound. 10 P.

15 Siti (Whistle). Delhi. Fired clay. The form of the toy is such that blown air makes a loud sound. A variety of shapes are made. 10 P.

16 A group of horns and flutes.

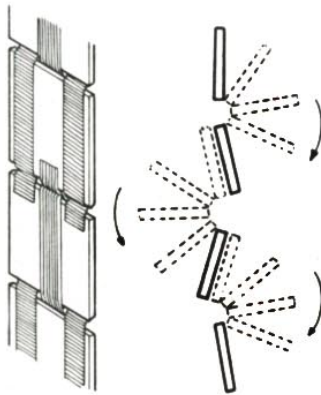
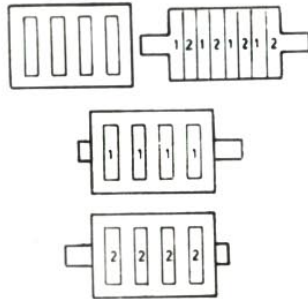
17 Another group of air-blown toys including some made by small industry.

12	13
14	15
16	17

Mystery Toys

based on the principle of
Constructional Tricks

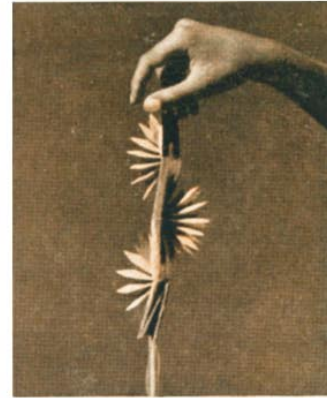
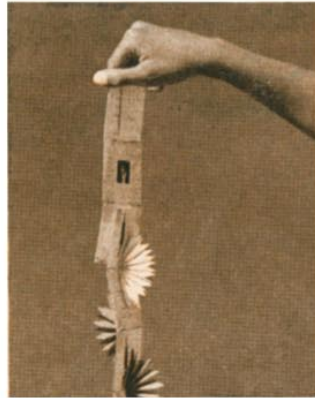
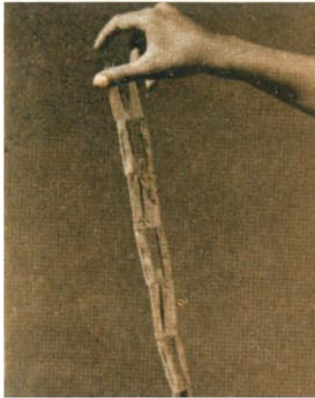
Toys of this group provide an element of surprise and create a magic-like happening. They are based on certain simple tricks of construction. When manipulated, they undergo a surprising change without revealing the trick used (figs. 1 to 14).



Paper and cardboard are the main materials used in the making of these toys.

In the past, the pictures on these toys were made by the artisans. Now they are produced by the printing industry.

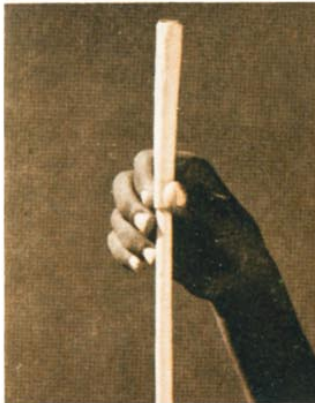




1,2 **Jadu (Magic).** Calcutta.
Printed pictures. The pictures
change from scorpion to snake
and vice versa. 10 P.

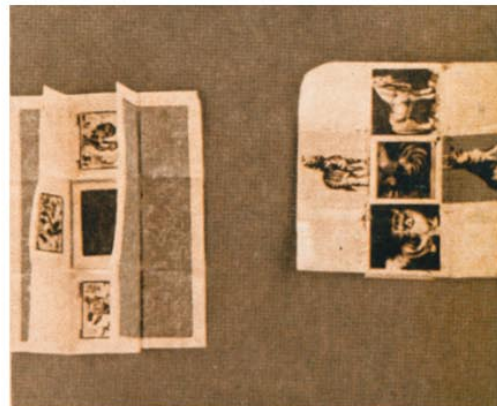
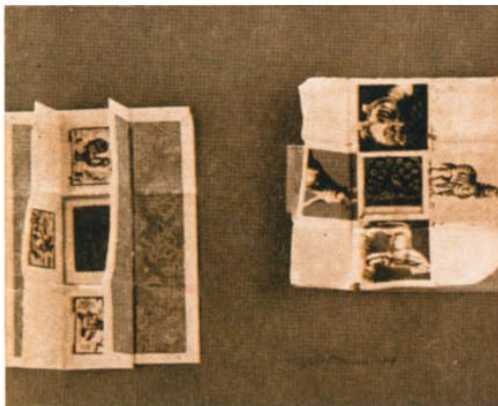
3,4 **Jadu (Magic).** Calcutta.
Printed pictures. Principle of
perception same as in figs.
1 & 2 and explained in the
diagram. Pictures of popular
movie stars. 10 P.

5,6 **Jadu (Magic)** also called
Joker. Calcutta. Printed pic-
tures. The eyelid lifts up and
the tongue comes out. Earlier
the pictures used to be hand
printed. 10 P.



7,8,9 **Jadu (Jacob's Ladder).**
Ahmedabad. Cardboard, thin
coloured paper for flowers,
strips of paper. The construc-
tion of hinging the set of cards
is such that they fold and
unfold with the force of
gravity. The folded paper
flowers also bloom out. The
diagram explains the method
of interlocking. 25 P.

10,11, **Jadu Ka Pankha (Magic Fan).**
12 Ahmedabad. Thin paper for
fan and thick paper for pipe,
a piece of thread. The toy is
constructed in such a way that
the paper fan can be pushed
in and out of the sleeve. 25 P.



13,14 **Jadu (Magic).** Ahmedabad.
Two sheets of the same
printed pictures, a piece of
clear glass plate. The picture
behind the glass plate can
be changed by refolding the
back sheet of paper. 25 P.

			7	8	9
1	2		10	11	12
3	4	5	6	13	14



The Toymakers

A few thousand people may still be involved in the making and selling of dynamic folk toys all over India. This is indicated by their attendance at the major traditional fairs or melas that take place in every region of the country.

Toymaking is both a full-time occupation as well as a part-time or seasonal activity. Some traditional communities are still engaged in making specific toys such as rattles and drums. On the other hand, there are many artisans in every city and town who make and sell a variety of toys, some of whom are first generation toymakers.

People in other professions also turn to occasional toymaking to make a little extra money. I met a mill worker who sells toys every evening to supplement his income. I also met an autorickshaw driver who, because of ill health, had turned to toymaking as an alternative way of earning a living. More recently, at a religious fair at Ahmedabad, I found a number of mill workers and their families, all selling toys made out of discarded textile bobbins. Once I came across two school boys at a mela in Calcutta who had made a new kind of toy and were selling it to make some pocket money. I have often seen children as young as ten-years old independently selling toys which they themselves had made.

The reasons that attract many men and women to toymaking are an almost negligible investment in raw materials, tools and equipment, and direct marketing. But most toymakers do not earn enough. Only at specific times and seasons, like the seasonal melas, do they have definite opportunities to sell their products. Of late, toymakers are trying out new venues like schools, playgrounds and zoos for the sale of their products.

As in other crafts, there exists some sort of division of work in toymaking too. Most of the animated toys are made by men: the acrobats, the jiggling puppets, the flying bird—all these are made by the men in the family, with some help from other members. Rattle toys, on the other hand, are almost always made by women.

Unlike other crafts, however, no one specific caste or community is associated with the making of dynamic toys. We do come across many toymakers who are Muslims or belong to the lower castes among Hindus. But this may be more on account of economic reasons rather than caste distinctions.

The following case studies of four toymakers may provide an insight on aspects of their work and the lives they lead.



Abbas

S. K. Abbas is in his late forties. He lives with his wife in a rented one room house in a 'busti' of south Calcutta. I first met Abbas on a late winter morning of 1976 while he was selling toys in south Calcutta. I was impressed by his polite but matter of fact attitude and later visited him a number of times.

Abbas told me that he had migrated from East Bengal (now Bangladesh) well before the partition of India in 1947. At first, he worked for a few years at Calcutta's Great Eastern Hotel as a waiter. He still recollects that period as 'the good old days' when he earned fat tips from the 'sahibs'. At Independence, the hotel management changed and his services were terminated. He was paid Rs 100 as a parting bonus. With this money, Abbas opened a small shop selling general provisions in north Calcutta. Unfortunately, within a couple of years the shop was gutted in a fire, leaving him destitute. It was in the difficult days that followed, on his frequent visits to a mosque, that Abbas came across an old man who lived near the mosque and made an assortment of toys for a living. Desperate to earn some money, Abbas learned to make a few toys. The old man, with a mysterious past in Burma, became his 'ustad' and taught him his craft.

Abbas makes a variety of paper toys, among them the flying bird, the peacock and, most often, the jiggling puppet. He has also learned to play the shehnai and has formed his own small music group. He carries around printed visiting cards introducing himself as the leader of the party. They play the shehnai at marriage parties to supplement their incomes.

Abbas buys the paper, usually old magazines, from a junk shop. He also buys pieces of bamboo from a shop nearby. He prepares his own colours, however, by mixing ink tablets, and prepares the glue. The toys are very well made.



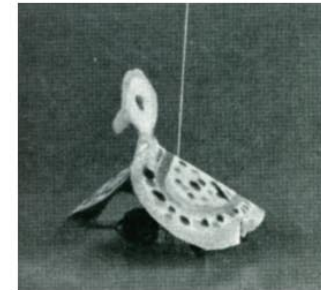
Abbas works in the small veranda adjoining his room. The open courtyard is used for the quick drying of the painted toys. Abbas works on his own. He is not helped by his wife, who devotes her time to cooking and housework, and to prayer. Abbas works for a few hours in the morning making the toys and goes out to sell them on a few afternoons each week. During the marriage season, however, he makes no toys but spends his time practicing the shehnai with his group and performing at marriages.

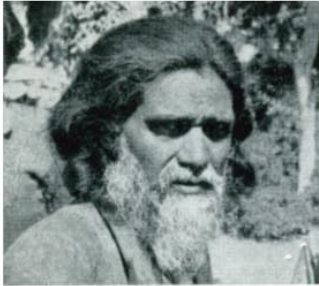
Abbas' earnings from his toy-making activities fluctuate between Rs 2 to Rs 5 on the days that he goes out to sell. He sells toys in the bustis, the poorer areas near his home. He does not go to fairs and melas. His jiggling puppets are very popular and at ten paise a piece he is able to sell all that he makes.

During the marriage season, Abbas earns Rs 30 to Rs 50 for each shehnai performance. But this accounts for only about a dozen evenings in the year. The combined income, from both sources, is barely enough to meet the expenses of his small family. Years ago, his wife underwent an operation after a miscarriage which left her unfit to bear children. They adopted a young child, the son of one of their relatives. But later the boy left them to join his own parents.

Abbas is very good at his work. But he has not tried to design any new toys. In fact, he has stopped making a few of the designs which he had learned from his master. It was difficult to get him to try and make a few samples for me. After some persuasion, he made a galloping horse, a fascinating toy. He had stopped making this toy 15 years earlier. At 75 paise, he felt it was too expensive for his kind of customers.

Abbas is a gentle, sensitive man, very humble and religious. He does not complain about things. When I asked him why he had not tried to evolve new designs, he said : "It needs concentration, a peaceful atmosphere and of course God's blessing."





Yusuf

Yusuf is in his mid forties and heads a small community popularly called 'phoolwale', the flowermakers. I first met him at a fair at Ahmedabad. He was selling the toy *chidia*—the sparrow, also called the helicopter.

Yusuf and his relatives—who number about twenty—live in a few improvised huts erected on a piece of vacant land near a public park in the heart of Ahmedabad city. Yusuf has lived here, on and off, for the past twenty years. His people hail from neighbouring Maharashtra and have been traditionally employed in the making of paper flowers. Other members of his community have settled in other parts of Gujarat and Rajasthan. "We travel a great deal", he said, "and members of the community know each other's whereabouts. Any time a group can come and visit us. All they have to do is erect a new hut".

Yusuf's immediate family is very small. He has an old mother and a son aged ten. His wife died when the boy was very young.

Only occasionally does Yusuf make toys, particularly the *chidia*. The male members of the community concentrate on making wire brushes for bottle cleaning, and decorations for bicycle hubs. They also make colourful garlands made of nylon fibre and metal wire. No longer do any of the community make paper or silk fibre flowers which gave them their name.

According to Yusuf, almost all the male members of his community know how to make toys. However, the wire brush industry provides them with a regular income. Yusuf is a man of varied interests. He keeps a pheasant and participates in the weekly pheasant fight. He usually manages to make some money. Yusuf is well respected by his group and is said to be knowledgeable about herbs and medicines. He also claims to preparing a *taweez* or amulet with a very special combination of metals which, according to him,



cures certain diseases. He earns some money by making these to order. He only makes toys to supplement his income or when he is in immediate need of cash.

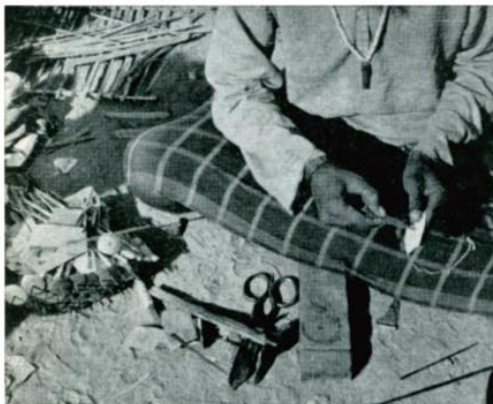
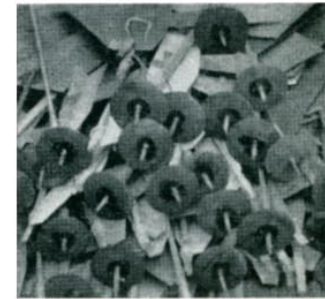
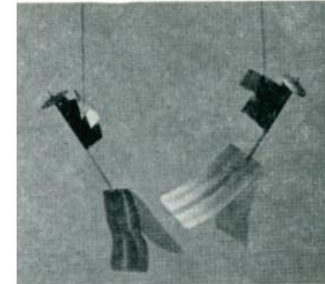
Yusuf works alone. His son is too young to help him. The women, too, help their men-folk. But Yusuf opted not to remarry after the death of his wife. "I have to look after the whole group and remarrying would have distracted me from my responsibilities", he said. Yusuf can make a few dozen toys in a day but he does not work at this regularly. The *chidia*, sold at 25 paise, is very popular and sells well at local fairs and melas. Sometimes Yusuf also sells on the streets and at the local bazars to make some quick money.

Yusuf has no clear idea about his monthly income, let alone the income earned through making toys. Recently, his mother was operated for mouth cancer and was advised a milk diet during the period of recovery. Yusuf found it very hard to accommodate this extra expenditure.

Yusuf claims that he knows a number of toy designs which he learned from his father, and also some that he has developed himself. But he never managed to make any samples and always apologised, pleading lack of time.

Yusuf has not sent his son to school. "Where is the option in our unsettled way of life", he said, adding that his son would do exactly what he is doing now. "It is much better to be self-employed than to do a petty job in which one is often humiliated by the employer".

When I visited Yusuf's place for the last time, I found only one hut and new residents. "Yusuf has gone to south Gujarat with his group and we don't know when he will come back," they said.





Chandrakant

Chandrakant is in his late twenties. I first met him in Ajmer, at the famous Pushkar Camel Fair. He was selling the bird toy which seemed to be very popular with the fair-goers. Later, I met him in Ahmedabad, where he has now settled. He lives alone, and sleeps in the open on the pavements in the heart of the city, like so many other poor immigrants.

Chandrakant studied up to the eighth standard. Now toymaking has become a profession for him. He does not know of anyone else in the city making his kind of toys. These require a fair amount of skill and precision. Chandrakant works by himself. "My father taught me all about toys. He has not yet taught me all that he knows, but every year he teaches me how to make one new toy", he said. Chandrakant also mentioned that his father worked as an expert mechanic in a factory in Bombay, and evolved many toy designs on his own. He stopped working many years ago when he made a 'deal' with a 'foreigner'. According to this deal, Chandrakant's father had to pass on all his knowledge about toys to this person in exchange for an assured royalty. Chandrakant does not know the details, but believes that his father is still receiving some money periodically. When I showed interest in meeting his father, he said his father does not like discussing toys with strangers.

Chandrakant mostly makes the flying bird toy. Occasionally he also makes the jigging puppet and the horse rider. His flying bird is a very impressive toy. When manipulated, it becomes a bird in flight, folding and unfolding its wings. A paper flower also blooms between the wings when they unfold (details on page 25).

Chandrakant buys all the simple materials he requires from the local shops and uses homemade brushes and coloured inks to paint the toy. He works at a convenient place on the city pavements. He keeps all his tools, raw materials and personal belongings in two shoulder bags which he carries around all the time.



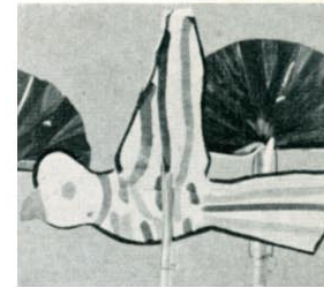
Chandrakant is quite organized in his work. He gets up early in the morning and goes to the Sabarmati river nearby for his toilet and a wash. After tea and a snack at the road-side stall, he begins work. By mid-day he is usually able to complete about a hundred toys. He eats at a nearby vegetarian place and rests until 3 p. m. In the afternoon he sells his toys and by seven in the evening he is usually able to sell them all. Later, he goes back to the same place for his evening meal.

Chandrakant sells his toys regularly at street corners or at melas wherever they take place. He attends all the major fairs in Gujarat, Rajasthan and Maharashtra. He has travelled as far as Delhi, Punjab and Uttar Pradesh to sell his toys. "My father wanted me to travel and to stand on my own feet", he says. When in Ahmedabad, Chandrakant sells at a fixed place in the crowded marketplace in the city area. He has no problems selling his toys at 25 paise each.

According to Chandrakant, his income is about Rs 500 per month. During melas, he is able to earn more but he has to work much harder. Part of the money he sends to his parents who live in a town near Ahmedabad.

Chandrakant is a proficient toymaker. He has introduced the horse and rider and other toys. He is aware of the safety factor and the likes and dislikes of customers. He uses brass wire because it will not rust and he paints his toys very colourfully. His details are well worked out and he makes his toys with a neat finish.

Chandrakant is also aware that customers tire of one toy and that one needs to introduce new ideas. He is not afraid of others copying his ideas. "I sell toys at very reasonable prices. It would be hard for a newcomer to compete with me". Chandrakant enjoys his work and has confidence in his own abilities. He wishes to travel, to see places and to expand his business. Recently, he engaged an old retired man to help him sell his toys on a commission basis.





Abdul

I met Abdul and his family at the observance of the Muharram Festival in Ahmedabad. All of them, including the eight year old son, were busy selling the toy drums which they had made.

For the last twenty years, Abdul has been making his living as a toymaker. His parents, too, were toymakers in Sholapur, Maharashtra. When he was very young, Abdul's father died and his mother continued to support the family by making toys. Abdul and his mother came to live in Ahmedabad city about 25 years ago. He started working as a waiter at a wayside stall. He does not remember how long he worked as a waiter before turning to toymaking. He remembers it was some time before he was married.

Abdul seems to be in his early forties. His wife, though younger, looks much older. They have a fourteen-year old daughter who lives with relatives at Sholapur. They have three other children: a boy of eight who has already started helping them, a girl of four and a one-year old baby.

The family lives in a small rented hut, one of many in a row, near a mosque in the congested central area of Ahmedabad. The dwelling has a small enclosed space and a small courtyard. Abdul's only source of livelihood is toymaking. He has been making the drum toy for the past twenty years, a skill he learned from his parents who made the same toy.

Abdul collects his toymaking materials as cheaply as possible. He brings clay from a nearby spot, free of cost. He buys bamboo poles at the rate of Rs 1 per pole. These are the unburnt pieces that are collected by the seller from cremation grounds. He buys discarded textile reeds from the mills which provide the wire required for the toy. His wife makes the glue from flour and also prepares the clay and the colours. His young son gives them a hand in doing odd jobs like fetching water, cutting paper and so on.



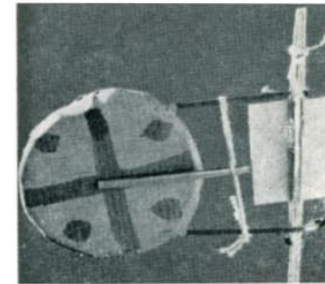
The work is carried on in the courtyard of the house. It becomes difficult in the rainy season when they cannot work in the open and the roof leaks. Moreover, the room does not have enough space for toymaking. Although toymaking is a permanent professional occupation for Abdul, he does not work at it regularly. When he works, he can make about 100 toys in a day.

Abdul goes to almost all the major local fairs and melas to sell his wares. He does not travel to other cities. Once or twice a week he also sells his toys at street corners in the main city. Selling a toy at ten paise a piece is never a problem and he can dispose of 100 toys in a few hours. He has no exact idea of how much he earns or of his monthly expenditure. However, he manages to make ends meet most of the time. Only in the monsoon, when it is difficult to work, does he feel the pinch of not having enough money.

Several other artisans in the city make toys like Abdul's. But he thinks his toys are of a better quality and emit a louder sound compared to the others. It has never occurred to him to evolve another toy design. "This sells", he says. Abdul does not give the impression of being involved in his work. Toymaking is just one way of earning a living.

Abdul and his family remain poor. He seems to do just enough work to meet their minimal needs. With better organisation and harder work, he could certainly improve his living standard. When I asked him why he did not try to improve his lot, he just smiled and said, "It carries on".

"What" I asked, "would you like your son to do?" "I would like him to be a mechanic. This trade provides a fair sum of money. But all depends on God's wishes. If nothing else turns up, he can always earn his bread by making these toys. Just like we are doing", he concluded.



Sudarshan Khanna is an industrial designer and teacher at the National Institute of Design, Ahmedabad. A graduate of the Institute's post-graduate programme in 1970 after completing his studies in Mechanical Engineering, his interest in craft and toy design was stimulated during an assignment at NID's Calcutta Cell in 1976, where this project was initiated. Part of the collection featured at the Aditi exhibition (New Delhi) in 1978 and later at the Volkenkundig Museum (University of Groningen) in the Netherlands. Sudarshan Khanna is presently engaged in an NID project on the development of craft toys based on this research effort.

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