

DOCUMENT RESUME

ED 043 083

24

CG 005 906

AUTHOR Guilford, Joan S.
TITLE Development of a Values Inventory for Grades 1
Through 3 in Five Ethnic Groups. Progress Report.
INSTITUTION General Behavioral Systems, Inc., Torrance, Calif.
SPONS AGENCY Office of Education (DHEW), Washington, D.C. Bureau
of Research.
BUREAU NO BR-0-0196
PUB DATE 15 Jul 70
CONTRACT OEC-0-70-2673
NOTE 191p.

EDRS PRICE MF-\$0.75 HC-\$9.65
DESCRIPTORS *Early Childhood Education, Elementary Education,
Instructional Materials, *Material Development,
Primary Education, *Primary Grades, *Values

ABSTRACT

The bulk of the report was an outline of the steps taken to accomplish stated project tasks. These tasks included: (1) identifying the dimensions of value, which involved reviewing the literature and formulating a model based on Maslow's hierarchy of needs; (2) constructing the item pool, all of which were to be pictorial; (3) developing a test format; (4) developing instructions; (5) pretesting items; (6) scheduling the final testing; and (7) preparing the test in final form. Two major problems were encountered to date: (1) a lack of cooperation of Indian subjects in time for pretest; and (2) the effect of the essentially unstructured cognitive processes of small children on the validity of the items. Other areas reported on were: (1) significant findings to date; (2) staff utilization; and (3) future planned activities. Materials which have been developed were appended. (TL)

ED0 43083

BR 0-019

BA 24

CC

PROGRESS REPORT

Project No. 0-0196
Contract No. OEC-0-70-2673

DEVELOPMENT OF A VALUES INVENTORY FOR GRADES
1 THROUGH 3 IN FIVE ETHNIC GROUPS

Joan S. Guilford
General Behavioral Systems, Inc.
Del Amo Financial Center
Torrance, California 90503

July 15, 1970

U.S. DEPARTMENT OF HEALTH, EDUCATION
& WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED
EXACTLY AS RECEIVED FROM THE PERSON OR
ORGANIZATION ORIGINATING IT. POINTS OF
VIEW OR OPINIONS STATED DO NOT NECESSARILY
REPRESENT OFFICIAL OFFICE OF EDUCATION
POSITION OR POLICY

U. S. DEPARTMENT OF HEALTH
EDUCATION AND WELFARE

Office of Education
Bureau of Research

06 005 906

Progress Report

Project No. 0-0196

Contract No. OEC-0-70-2673

Development of A Values Inventory for Grades 1 through 3
In Five Ethnic Groups

Joan S. Guilford

General Behavioral Systems, Inc.

Torrance, California

July 15, 1970

The research reported herein was performed pursuant to a contract with the Office of Education, U. S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Research

OE Bureau of Research No. 0-0196 Contract No. OEC-0-70-2673

Period: February 1, 1970 to January 31, 1971.

Date of Submission: July 15, 1970

Name of Institution: General Behavioral Systems, Inc.

Title of Institution: General Behavioral Systems, Inc.

Title of Project: Development of a Values Inventory for Grades 1 through
3 in Five Ethnic Groups

Name of Principal Investigator: Joan S. Guilford

Office of Education Division or Staff Office:

Division of Elementary and Secondary Education Research

L. Major Activities and Accomplishments During This Period

Although no progress reports are required by this contract, the midpoint of the contract year has been reached and the tasks to be accomplished in this period have been duly completed. The manner in which they were carried out deviates slightly from that proposed and is, in general, superior to the original conceptualization. The project has in no way deviated from its original objectives, however, and is on schedule.

The purpose of this report is to outline in detail the steps taken to accomplish the tasks proposed and to inform the Project Officer of the current status of the project. Materials developed to date are appended to this report.

Task 1. Identify Dimensions of Value

A. Review the literature.

The first step in identifying underlying dimensions of values to be elicited from small children called for a review of existing information and instruments used for this purpose. In reviewing instruments and literature, the term "value" was not rigidly defined. All information pertaining aspects of the affective domain was gathered together and intensively studied. This search was not limited to studies relating to early childhood (which are few in number), but covered the full range from child through adult. Much of the most helpful information came from review of Headstart evaluation instruments.

B. Formulate the model.

As proposed, construction of items was to be on the basis of Maslow's hierarchy of needs using a rationale which affirmed that any person, object, or activity will be valued on the basis of needs felt by the valuer (i. e. , the evaluator). The theory also postulates that the individual is free to express needs at higher levels once needs at lower levels have been satisfied. The

primary need is physiological, defined as the satisfaction of needs for food, air, warmth, physical well-being, etc. Next in the hierarchy is the need for safety, defined as avoidance of pain, fear, and death. As one proceeds up the hierarchy, succeeding needs are for belongingness and love; importance, respect, and self-esteem; information and understanding; beauty (aesthetics); and, finally, self-actualization. Needless to say, at any given moment in time one need may predominate and this need may be at a lower level than the person has previously attained (e. g., the self-actualizing person, when faced with the threat of danger, will have a predominant need for safety). Nevertheless, an individual's responses in the absence of predominant emergency needs, will reflect his value system.

Another point which should be made is that it takes a great deal of maturity (probably interpreted by Maslow who, unfortunately, is no longer here to question the point, as the successful fulfillment of all lower needs) to become self-actualized. Small children cannot be expected to reach adult self-actualization. They can, however, be expected to exhibit varying levels of maturity.

After reviewing current affective domain research it was concluded that the model proposed encompassed all positive aspects of the domain. It did not, however, account for negative aspects. According to Maslow, those whose needs are persistently ungratified develop deviant (sociopathic, neurotic, etc.) behavior. In other evaluation systems such behavior is accounted for.

Taking into consideration the previous research information, it was decided that the following categories of values were of greatest importance and were feasible for testing at the grade levels proposed:

- (1) **Physiological Values:** These included choices of healthy vs. unhealthy habits pertaining to food, sleep, care of self when sick, bathing, brushing teeth, and smoking. They also included attitudes toward health personnel (doctors and nurses).
- (2) **Safety Values:** These included risk-taking and fears (of people, objects, places, animals, and the unknown).
- (3) **Love Values:** These included matters relating to physical closeness to adults and peers, feelings about parents, feelings about religion, feelings about helping others, feelings about sharing, and feelings about home.
- (4) **Esteem Values:** These included feelings about assuming roles of leadership, pride in own productions, willingness to participate and compete, and level of aspiration with respect to achievement.
- (5) **Aesthetic Values:** These included aspects of sensory experience and creative production.
- (6) **Self-Actualization Values:** This large category was designed to incorporate knowing, understanding and maturity. As such it included interest in complex problem - solving, curiosity,

willingness to assume responsibility, independence, academic interest, honesty, obedience to authority, and persistence in carrying out tasks. In this category the individual was generally depicted (in test items) as carrying out the activity alone for its own sake rather than for social reasons.

- (7) **Aggression Values:** This category was added for several reasons. First, it appeared in most evaluations done by other investigators. Second, it is extremely important in understanding the child. Third, it is a characteristic which might be expected to differentiate between ethnic groups as well as between sexes. Fourth, it was necessary to include items to which negative responses could be made above and beyond those included in the preceding categories. The inclusion of the Aggression category was the first departure from the proposed scheme but was considered essential to a total evaluation of the subjects' values.

Task 2. Construct the Item Pool

The construction of items required an approach not originally conceived in the proposal but suggested by the new Project Director. This approach consisted in the adoption of a method of validation of test items, to be described in the next paragraph. All items were to be pictorial. Their format was initially undetermined although it had been proposed that they be single-stimulus-pictures to which the subject would respond by selecting a facial expression indicating how he felt about the situation represented. Experience of research staff with previous formats also suggested that items might be two-part choices (two pictures -- subject selecting the one he "likes best") and three-part (given a stimulus, the subject selects one of two responses which he "likes best"). A large number of items was generated by staff to measure each of the dimensions of value in the model.

At this juncture, it was decided to try out a new validation method which would test items against the expressed values of children. Selected samples of children from a racially mixed day care center (Little Citizen's Village) and the Jewish Congregation of Pacific Palisades Nursery School (including 4 and 5 year olds) were used in the try-out groups. Interview forms were devised and children questioned as to how they felt about all aspects of the dimensions. For example, with respect to the Safety Value dimension, they were asked: "What things might hurt you?" and "What things are people afraid of?". Their responses were recorded and the protocols transcribed. Pictures were then drawn to represent situations which they considered "dangerous" or "fearful". These pictures stimuli were then administered to the same children and their responses compared to their initial interview responses. If the child's responses were consistent, the item was considered "valid" for that child. By this process of using taped and transcribed records of feelings to validate subsequent item responses, it was possible to obtain an initial pool of items for administration to a broader and more representative sample of children. This method is far from conventional but is one which ought to be seriously considered, particularly as it applies to young children. It coincides with Gorsuch's approach in asking such open-ended questions as "What is a good person like?" in so far as questions (or items) are then developed on the basis of responses. It goes beyond this, however, in constructing items and predicting responses on the basis of individual protocols.

As might be expected, construction of items was dependent not only on selected children's responses and the review of the literature, but also upon the subjective judgment of project personnel. A very large number were constructed, tested on the samples of children from day care and nursery school, redrawn, readministered, and either accepted or rejected for further testing. Acceptance was based on consistency of response as well as universality of understanding of the item. The entire process was a continuing one and was necessarily extended into the formal pretest phase. Items included in pretest appear in the Appendix.

Task 3. Develop Test Format

It was found very early in testing selected children that the one stimulus-two response items were not feasible. The subjects tended, almost unanimously, to interpret these as three-picture sequences in a "story" and, therefore, chose the second response (i. e., the end of the story as they saw it). This response form was, therefore, eliminated.

The remaining types of items were labeled "X" and "Y" items, for the purpose of identification. X items were those to which the subject was expected to respond by pointing to the face which expressed his feeling -- ranging from negative through indifferent to slightly or very positive -- about the picture stimulus. Y items were those in which the subject chose which he "liked best" of two pictures.

Forms were developed separately for girls and boys. In the boy form, the subject was introduced to the picture of a boy in a striped shirt, called the "picture-subject" who was to represent himself. This boy was drawn to appear as ambiguous with respect to race as possible. In the girl form, an equally ambiguous girl in a striped dress represented the picture-subject. For the X form, the faces appearing at the bottom of each picture were the same as the face of the picture-subject himself (or herself).

Considerations of item presentation order were not finalized at this time because there was no way to know what the final pictures would be. However, two "warm-up" items were placed at the front of the X book. The first was a generally pleasant stimulus to which most children could be expected to give a very positive response. The second was essentially unpleasant. Beyond this, effort was made to order items so that the answer to one would in no way affect the answer to the one following. Thus, no positive or negative "set" was introduced and content varied from one picture to the next. An additional help to subjects with respect to order consisted in an attempt to keep those pictures in which the picture-subject appeared separated from those in which he did not.

Scoring for the X items was on a scale from "1" through "5" with "3" representing "no response". Scoring for Y items was from "1" through "3" with "2" representing "no response". Misunderstanding resulted in a score of "0", (this feature used only with children in the pretest). Since pretesting was done on an individual basis, there were few "no responses" scores. This system will be maintained for final testing. Score sheet samples appear in Appendix C.

Task 4. Develop Instructions

Instructions required the preparation of a training session for X items. In this training, the subject was first introduced to himself (picture of boy or girl in striped clothing) and told "This is you". He (or she) was then introduced to the faces. For the broadly smiling face, the subject was asked to think of something that he "liked very much" and to point to the face which meant he really liked it. He was then asked to think of something he "didn't like at all" and point to the negative face. His third instruction was to think of something he "didn't care about" and point to the indifferent face. Finally, he was asked to think of something he "liked a little bit" and point to the slightly smiling face. In the preliminary form all faces appeared on the same page and were colored. Instructions then informed the subject that if he "really liked the picture" he should point to the "red" face, etc. (Instructions appear in Appendix A). In the final form it is proposed that since testing is not to be individual, a picture will be given to represent each of the feelings, called for and only the face which goes with that picture will appear with it. For example, for the negative face, the picture-subject getting hurt will be accompanied by the negative face.

Training for pretest worked very well in almost all cases. Also, as far as pretest was concerned, there were no language difficulties. For final testing, instructions will be written to overcome such problems if they occur.

Instructions for Y items (which will be administered in a separate session) only require that the child understand he is to choose between two stimulus pictures. Children were able to do this very well in initial testing although pictures often had to be redrawn to eliminate extraneous cues. In each case (item), the two Y pictures were designed to be identical with the exception of the one difference the child was to identify.

Task 5. Pretest Items

An initial pool of items was developed with every item prepared (by the artist) for at least one sex. Time limitations did not permit preparation of all items for both sexes.

As pretesting proceeded, over a period of five weeks, items were revised on the basis of children's comments. New items were prepared to substitute for those which were not successful. For this reason, not all items were pretested on all subjects.

Pretesting was individual and relied heavily upon prompting by the tester since the purpose was to ascertain the subject's understanding of the item in each case. The child was trained to respond. Then he was asked "What's going on in the picture?", "Where are you?" (for those pictures in which he appeared), etc. When the item was not understood, a zero score for identification was given.

As a result of pretesting, the following conclusions were drawn:

- (1) It is impossible to develop a test at this level which contains only items with zero misinterpretations. There are some children who simply cannot comprehend everything or are

erratic in their interpretations.

- (2) Although a large proportion (approximately 95 percent) of the children respond to directions for test-taking, there is a remainder of five percent who cannot respond consistently because of inability to follow directions for the task. Such children may not find "themselves" in the picture because they forget to look or may think they have found themselves when they do not appear in the picture.
- (3) A five percent misunderstanding per item level is acceptable and it can be anticipated that five percent of the subjects will not be able to follow directions for this task (and, perhaps, for any other task).
- (4) The consequences of this level of unreliability can be tolerated in the proposed analyses.

Items were pretested in eight schools: (1) Japanese Institute of Sawtelle (a private Japanese language school); (2) Bandini (Montebello); (3) El Marino (Culver City); (4) Linwood E. Howe (Culver City); (5) Augusta A. Mayo; (6) Stephen C. Foster; (7) Laurel Street and (8) Frances Willard (the last four from Compton). These school districts were selected because of their ethnic mix.

Table 1 shows the total sample of 235 children used for pretest with respect to characteristics of sex, ethnic group and grade level.

Table 1. Characteristics of Pre-test Sample (N=235)

Ethnic Group	Male			Female			Sub-total	Total
	1st	2nd	3rd	1st	2nd	3rd		
Oriental	10	5	7	5	12	5	44	
Negro	16	9	5	16	7	6	59	
Caucasian	14	8	4	20	9	5	60	
Mexican-American	22	9	8	18	10	4	71	
Indian	1	0	0	0	0	0	1	235
Grade	1	63		59			122	
	2		31		38		69	
	3			24		20	44	235
Sex	M	63	31	24			118	
	F			59	38	20	117	235

It can be seen from Table 1 that the preponderance of children pre-tested came from the first grade. This was by deliberate design since all

items had to be understandable at the lowest level for which they were intended. Smaller samples of second and third graders were tested in order to identify possible discrepancies in their mode of interpretation of instructions and/or items. A number of original items which were very successful at higher grade levels did not succeed when administered to first-graders, particularly in the more culturally deprived areas.

The pretest sample is almost equally divided between males and females. Ethnically, Mexican-Americans predominate (N=71) while Orientals are in shortest supply (N=44). Negroes (N=59) and Caucasians (N=60) are almost equally represented. As can be seen, only one Indian was included in the pretest and he was unexpected. He is not included in the analysis of pretest results which appears in Appendix E. The absence of Indians in the sample will be discussed in the section on Problems.

Task 6. Schedule Final Testing

Although Indians are not included in the pretesting, the project has a commitment from the Papago Indian Reservation to accomplish full testing of Indian children in three schools (one B. L. A., one missionary, and one public) in September. The Papago Reservation is located 60 miles south of Tucson, Arizona, and is one of the two largest reservations in the nation.

With respect to Mexican-American children, previous association with the Oxnard school district has established a firm commitment for testing the second week in September. The school within which all subjects in the group will be obtained is situated in a barrio in which 98% of the pupils are of Mexican-American extraction. This particular school is oriented toward the maintenance of the ethnic values of the culture, unlike the pretest Mexican-Americans who were almost uniformly middle-class socio-economically as well as with respect to values.

The extreme acculturation of Chinese and the difficulty in obtaining segments of their population led to the choice of Japanese as candidates to represent the Oriental group. The Alhambra school district is 25 percent Japanese and has agreed to provide a sufficient number for fall testing. Caucasians will be tested simultaneously within this district. The two schools with the heavily weighted Japanese populations are the superior schools in the district. This by no means distorts the sample since the Japanese in Los Angeles tend to rise to the upper middle classes and are academically oriented.

The Negro sample will be obtained from the Compton school district in which pre-testing was performed. This district is heavily populated with Negroes and cooperation has been extremely good.

There is no claim made that these children are by any means randomly selected representatives of the ethnic groups involved. They are as representative as possible within the constraints of school board cooperation which has, to date, been excellent. One of the major impressions gained by pretest personnel was that the differences in values found between groups tested were based in socio-economic rather than ethnic differences. These differences appeared between schools rather than between subjects within schools.

Task 7. Prepare Test In Final Form

This task includes an analysis of the results of pretesting which appear in Appendix E. Items to be included in the final test are designed to meet two basic criteria: (1) they should be understandable to at least 95 percent of the children, and (2) they should have sufficient variability of response for subsequent factor analyses.

An important constraint on testing involves the limited time available within the school setting and the endurance of children of this age in undergoing testing. Preparation of the final form will be such that no testing period will be longer than 20 minutes (including pre-test training session time). X-item booklets will be used in one testing session; Y-item booklets in a second session. In order to meet this time limit, the number of items will be reduced. Those to be eliminated will be chosen on the basis of their level of comprehensibility, variability, importance in measuring the dimension in question, and lack of excessive overlap with more than one additional item.

The final form of the test will be printed in half-standard or half-legal size sheet booklets, stapled at the corner for ease in turning pages. The pretesting was accomplished using standard size sheets reproduced by Xeroxing. These appear in Appendix B. Further refinement of items is expected and not all those appended will necessarily appear in the final form which is scheduled to be printed by mid-August.

II. Problems

The first major problem encountered in carrying out the first phase of the study had to do with the inability of project staff to obtain cooperation of Indian subjects in time for pretest. Although contact was initiated at the outset of the project year, reservation personnel are slow to commit themselves to anything and have a generally negative attitude toward being "tested". This has been overcome but there is no way at this time to conclude that items which are understandable to urban children will be meaningful to reservation children. The final outcome depends upon the extent to which the Indian sample shares similar experiences with the sample pretested. Inspection of sample items by reservation educators, however, indicates that little difficulty should be expected.

A second problem pertains to the essentially unstructured cognitive processes of small children. They are ingenious at making creative and unique responses to stimuli and tend to "zero in" on irrelevant cues. This was particularly noted in the Y pictures and often bore no semblance to reality. For example, in the item where the picture-subject is (a.) having his painting "admired" by friends or (b.) having it ignored, choices were made on the basis of perceived quality of the painting or, on the basis of such way-out interpretations as (in b.), "They're going to get some more paint for him". Another problem emerged in connection with X pictures. Subjects, in some cases, tended to match the face response with the expression on the face of the subject in the picture. Extra effort had to be made to render the picture-subject expressionless but not indifferent (lest the indifferent face be used). In those cases where face match affected

responses, it was often necessary to turn the picture-subject away from the viewer so that his face could not be seen. Most of these problems could be resolved by redrawing. In cases where almost all children understood the item and one or two gave deviant interpretations, the item could be considered acceptable.

These were the two major problems encountered during the first six months. No further problems are anticipated.

III. Significant Findings and Events

The only "findings" thus far obtained are those resulting from the analysis of pretest item responses. These appear in Appendix E.

The most interesting aspects of the project thus far are anecdotal and pertain to children's uninhibited responses and interpretations. Subjectively, it is the distinct impression of the project staff that the test (in its preliminary form) is quite diagnostic. Children express reactions consistently and it is possible to predict their response to many items on the basis of their response to other items. It also seems to be useful in identifying children with problems of one kind or another. On several occasions the examiner has been queried by the teacher concerning children tested. Upon giving interpretations based on extensive experience with the items, after only a 20 minute session with a child, the examiner has been able to supply information to the teacher which has, in every case, been confirmed. After one such interpretation, the teacher remarked, "That's just what the psychometrist said."

IV. Dissemination Activities

None to date.

V. Capital Equipment Acquisitions

Two Norelco Cassette tape recorders.

VI. Data Collection

The data collected for pretesting were obtained from eight schools (one private; seven public) in four different districts. Results of analysis appear in Appendix E. Pretest in public schools was conducted by the Project Director who has had considerable experience in testing children under the Headstart evaluation program. She was assisted by a similarly trained individual. Private school (Japanese) testing was done by a trained member of the project staff who also assisted in the preparation of items.

There was no consideration given during pretest to race of tester (all were white). During final testing, monitors will be selected from among the appropriate ethnic groups.

VII. Other Activities

Plans are being prepared for data analysis. Computer facilities available are being tested for efficiency in employing the proposed programs.

A proposal for a follow-up cross-validation of the instrument and subsequent use in analysis of teacher-student and parent-student value differences and value perceptions is being prepared for submittal in the fall.

VIII. Staff Utilization

The following professional personnel have been employed in the designated positions during the period covered by this report.

Joan S. Guilford, Principal Investigator

Willa Gupta, Project Director

Lisbeth Goldberg, Data Analyst and Research Associate

Clay Young, Artist

Juanita Bryson, Test Administrator

Barry T. Jensen, Project Technical Monitor

IX. Future Activities Planned for Next Reporting Period

The next report will be the Final Report. During the interim period the final test will be prepared and printed. Visits to schools where testing is to take place in the fall will enable staff to locate individuals to help with testing and to establish the days on which testing will take place. Test administrators and monitors will be trained and compensated for their time.

Once all children (N=900) have been tested, item responses will be punched onto IBM cards and submitted to the computer for the factor analyses proposed. Other analyses may also be performed if there is time within the contract period.

Mrs. Gupta is preparing a paper related to the validation aspect of the project for presentation to the American Educational Research Association (AERA) in February of 1971.

Correspondence with Dr. Richard L. Gorsuch has aroused mutual interest in the application of this instrument to fourth-graders. Since many of the pictorial items created for this project seem to overlap with the questions included in Dr. Gorsuch's questionnaires, and since his categories (or dimensions) of value also overlap, such a cooperative effort seems desirable. Plans for this await completion of the test.

X. Certification

David A. Joseph
Signature of Contract Officer

James S. Guilford
Signature of Principal Investigator

7/8/70
Date

7/8/70
Date

APPENDIXES

- A. RESPONSE TRAINING FOR "X" BOOKLET SINGLE STIMULUS PICTURES WITH FOUR FACES (PRE-TEST)
- B. TEST BOOKLETS (PRE-TEST)
- C. SCORE SHEETS AND ELIMINATED ITEMS FOR PRE-TEST
- D. ITEM NUMBERS AND DESCRIPTORS BY CATEGORY FOR REMAINING PRE-TEST ITEMS
- E. ITEM DISTRIBUTIONS (PRE-TEST)

APPENDIX A

RESPONSE TRAINING FOR "X" BOOKLET SINGLE STIMULUS PICTURES WITH FOUR FACES (PRE-TEST)

Instructions "point to" when individually administered are "put a circle around" when group administered.

"Look at the cover, this is you.

In my picture book you have a striped shirt (or dress.)

Some things you like and some things you don't like.

In this book you are doing many things. You can find yourself because you have on a striped shirt (or dress.)

You can tell me how much you like something by pointing to a face.

TURN PAGE

When you like what you are doing, point to the red face. That face says I like it very much.

When you don't like something point to the blue face. That face says I don't like it.

When you don't care, point to the green face. That face says I don't care.

When you like something a little bit, point to the orange face. That face says I like it a little bit.

Point to the face that says I like it a lot. .

Point to the face that says I don't like it. .

Point to the face that says I don't care. .

Point to the face that says I like it a little bit. .

TURN PAGE

Remember, you have a striped shirt (or dress) and you are in most of the pictures.

Look at the picture at the top of the page; see what you are doing.

Point to the face that tells how you feel about that picture.

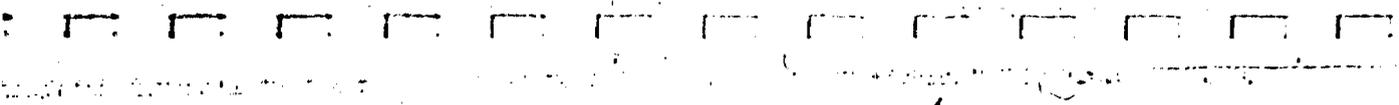
Look at every page, and point to the face that tells how you feel about that picture. "

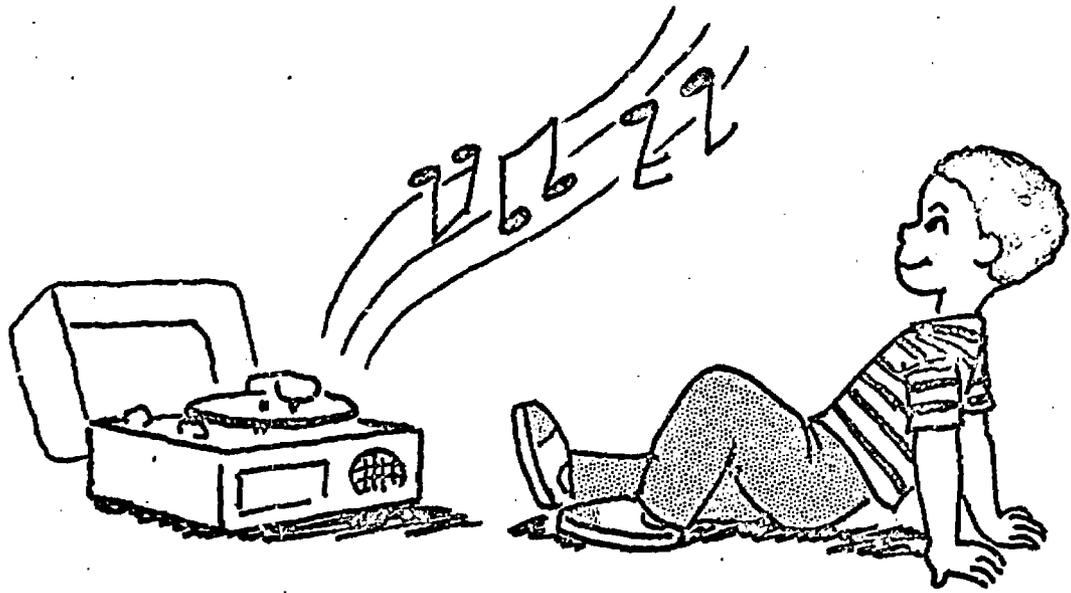
APPENDIX B

TEST BOOKLETS (PRE-TEST)

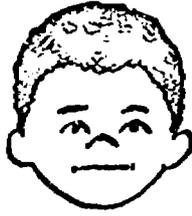
- 1) "X" Booklet --Boy
- 2) "X" Booklet--Girl
- 3) "Y" Booklet--Boy
- 4) "Y" Booklet--Girl

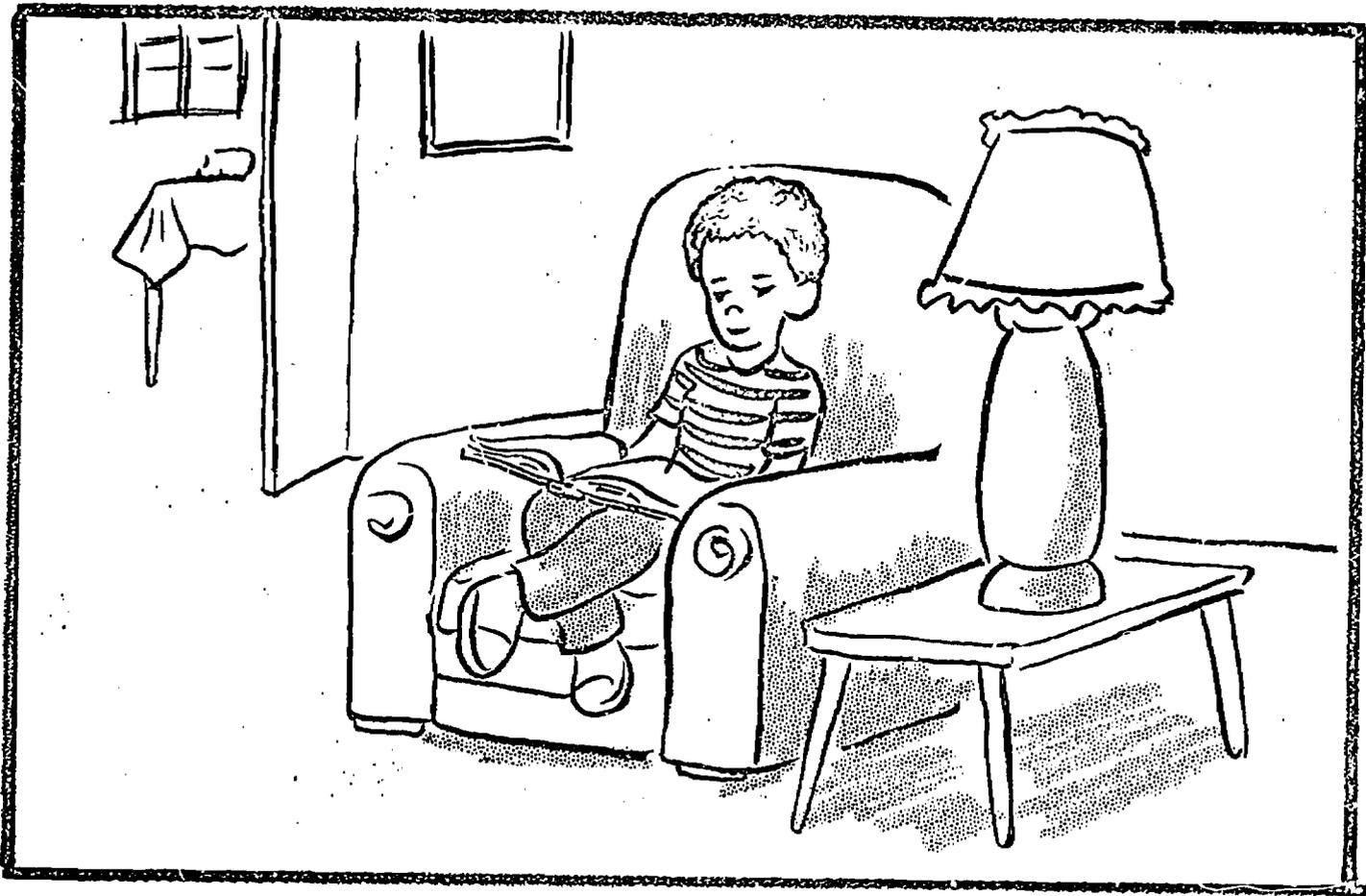


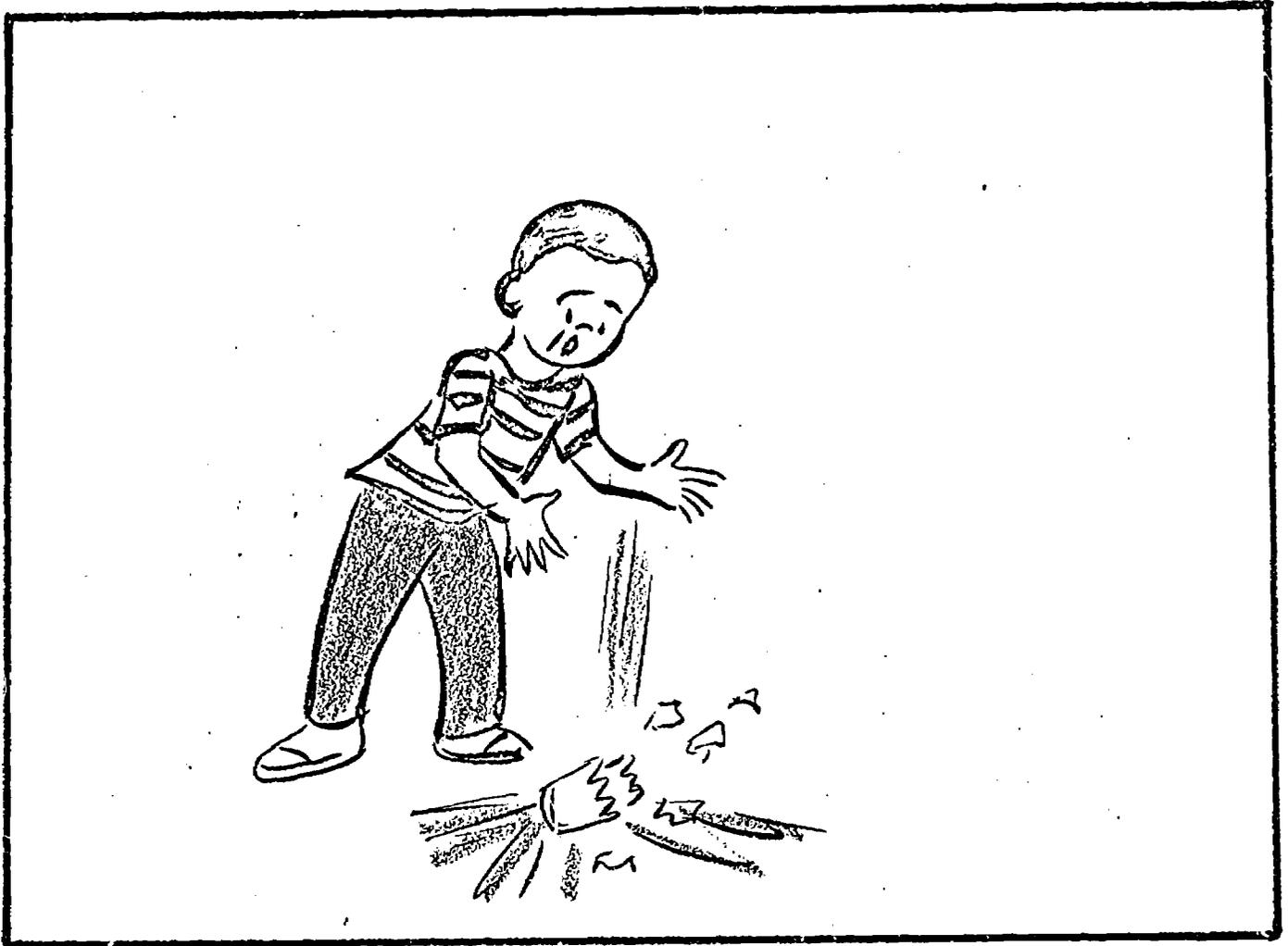


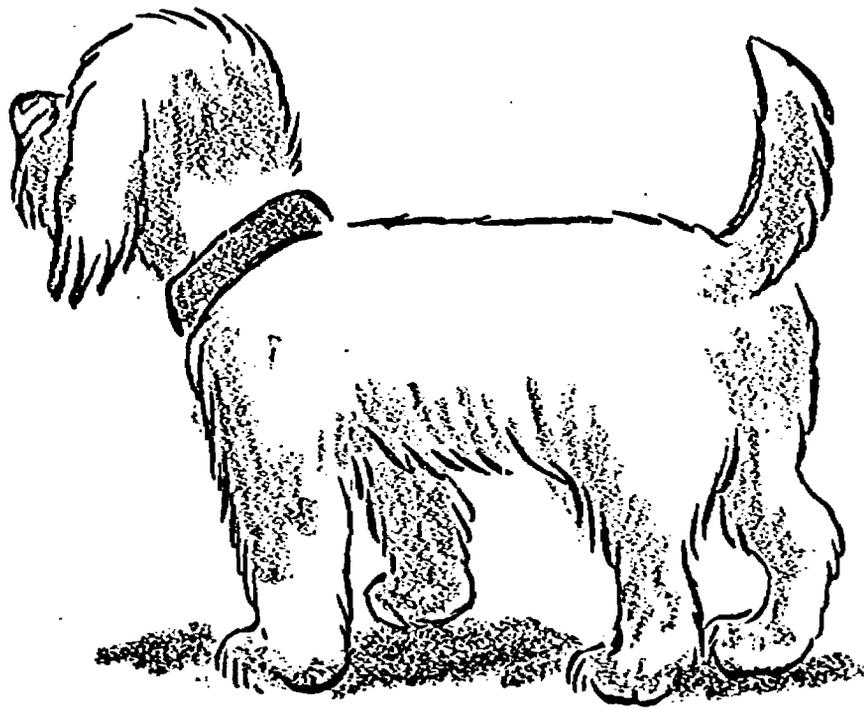


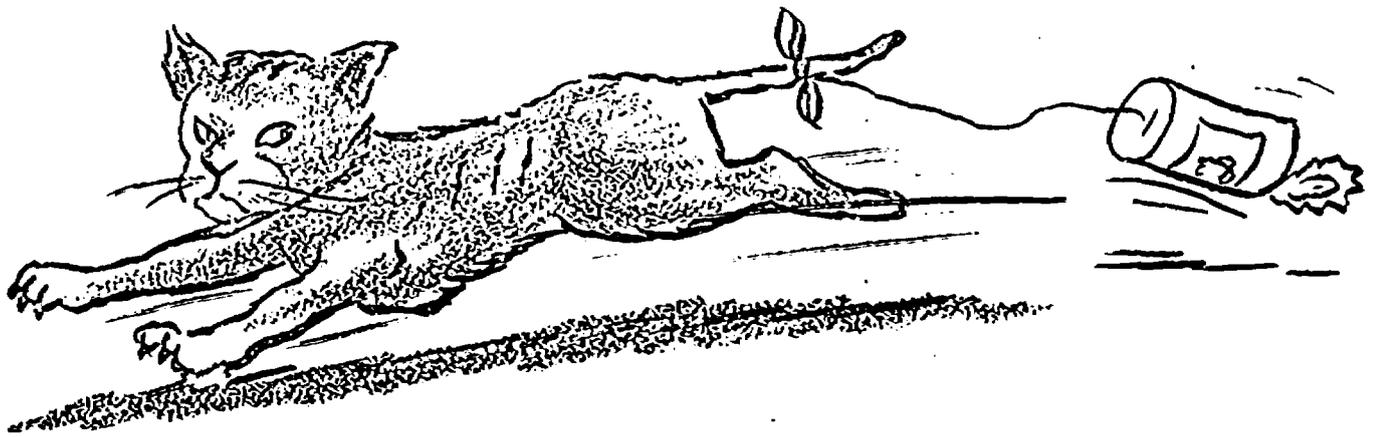
61x



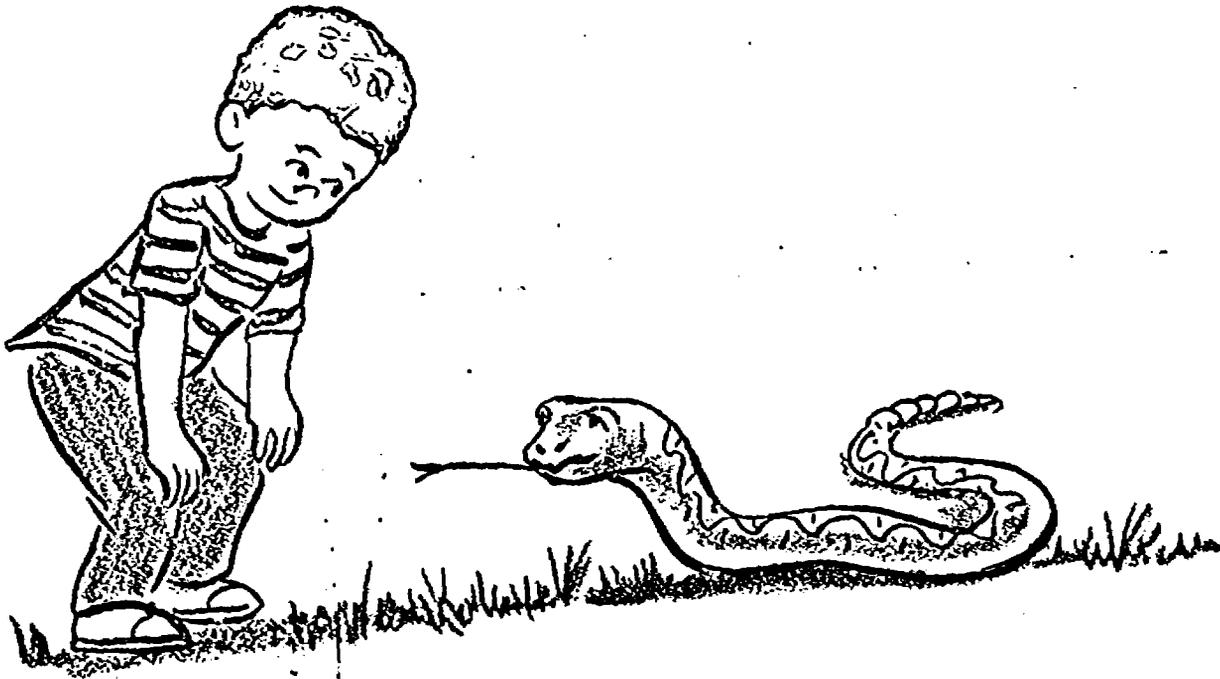




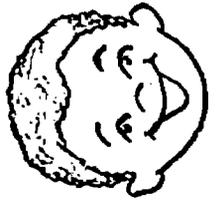
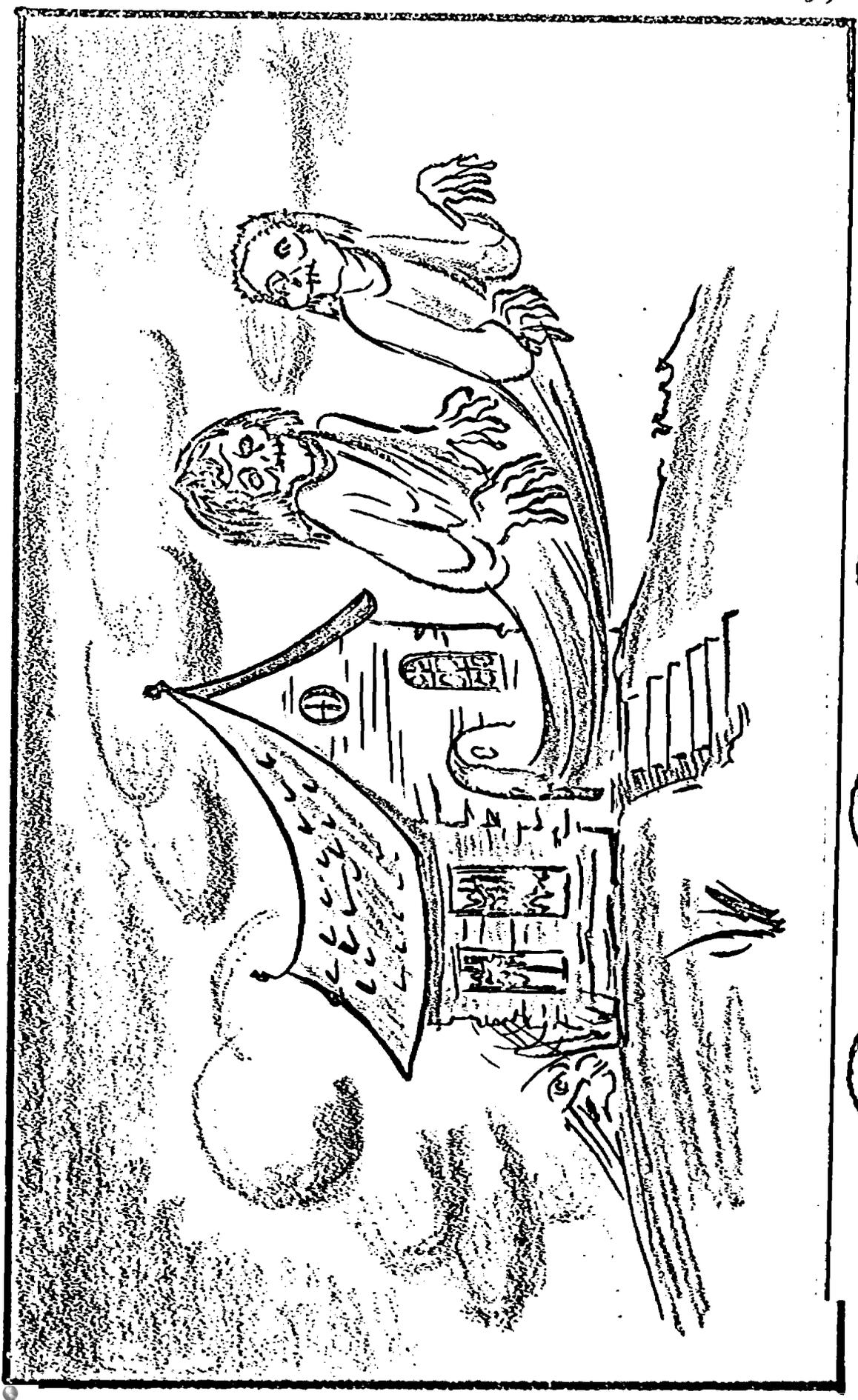


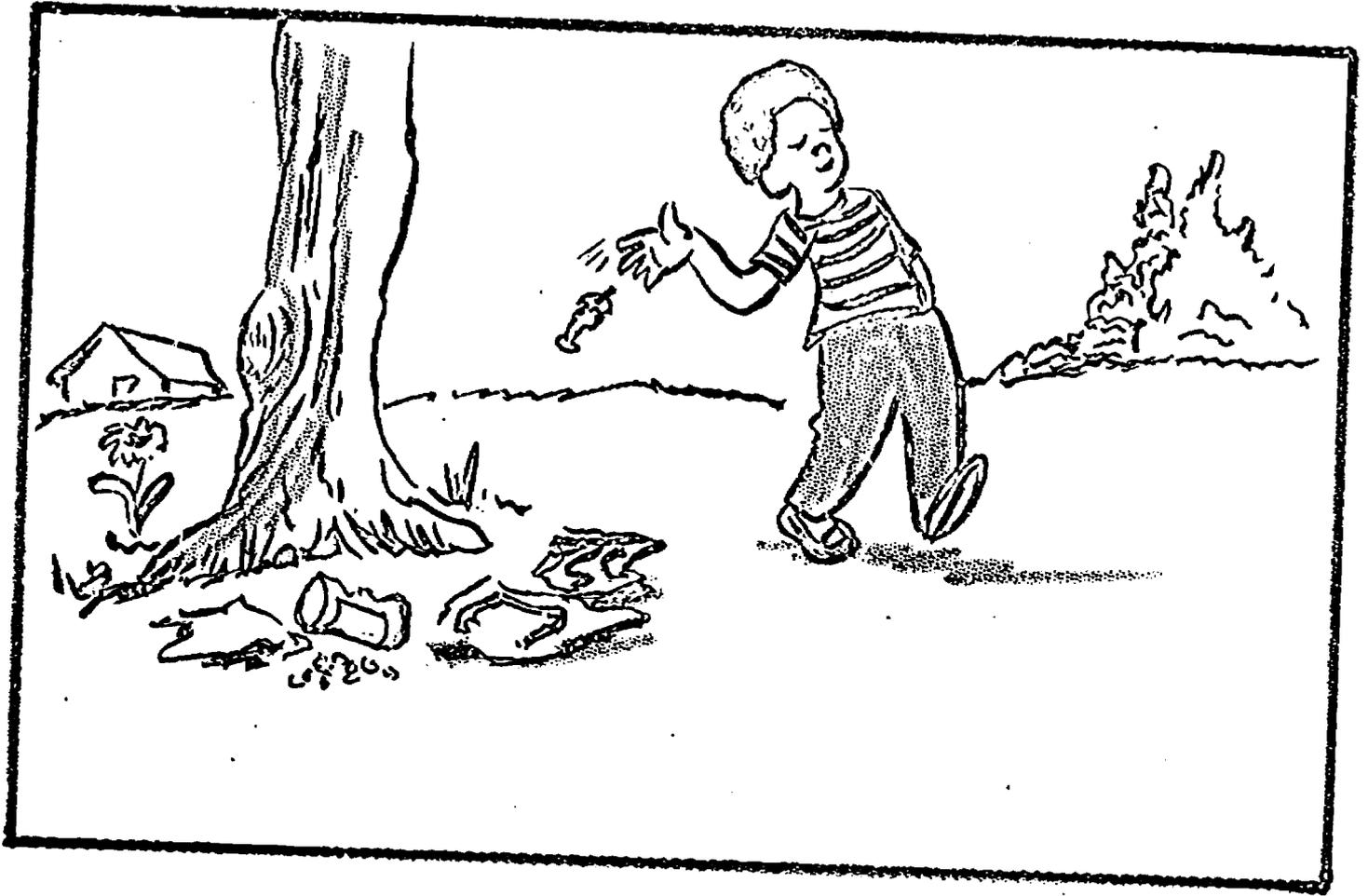


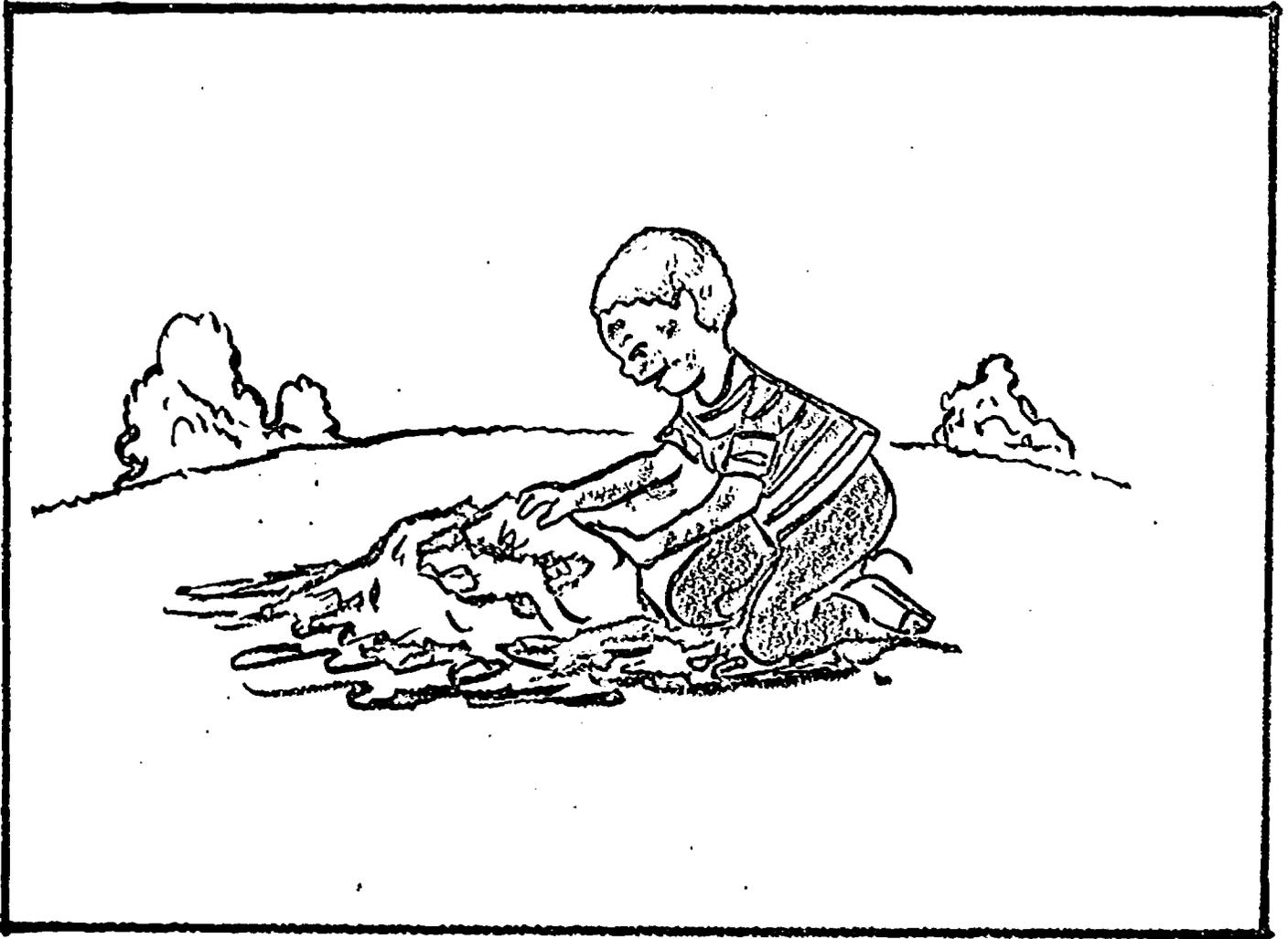


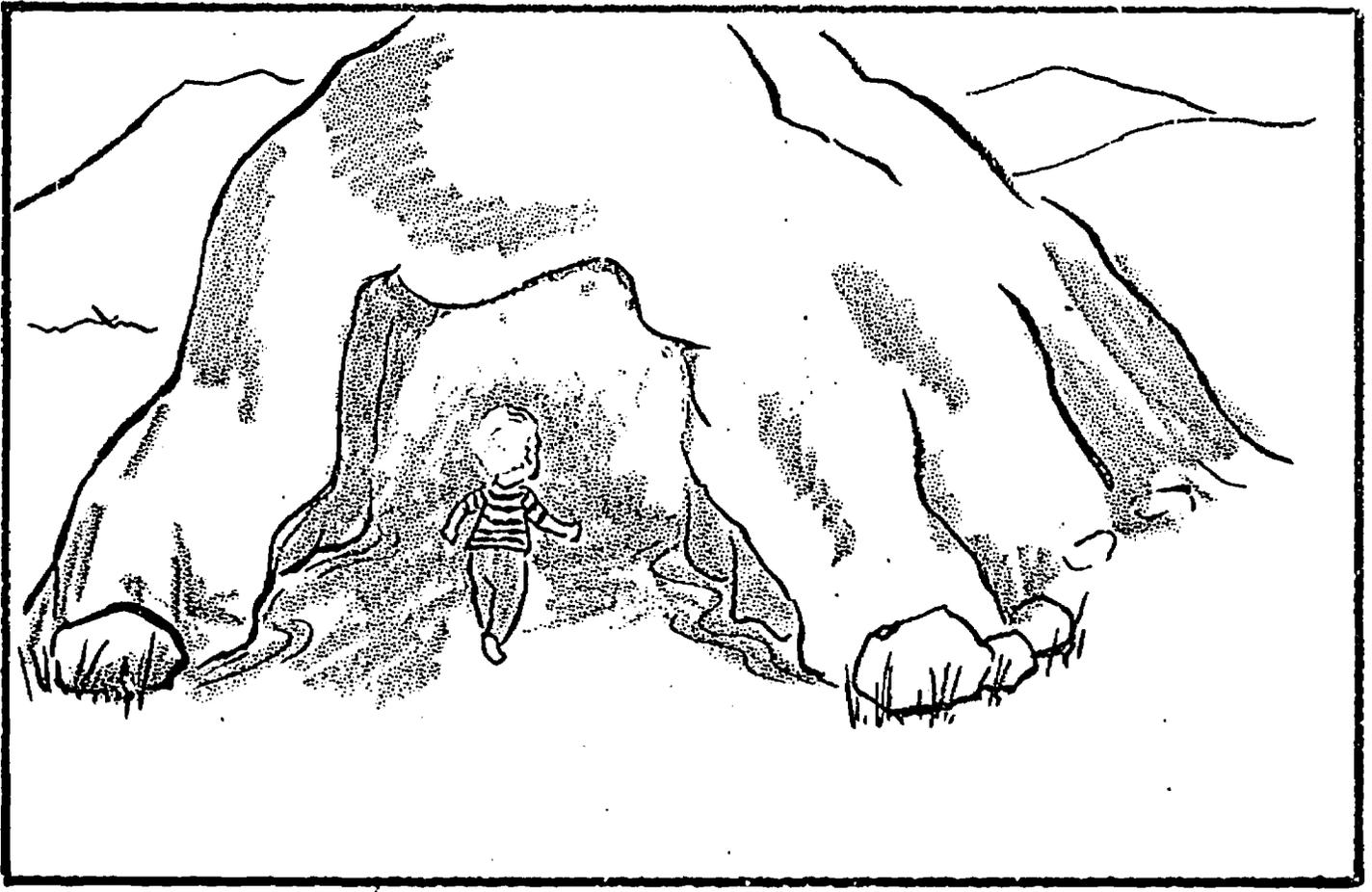


Sax



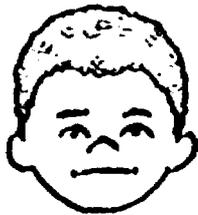




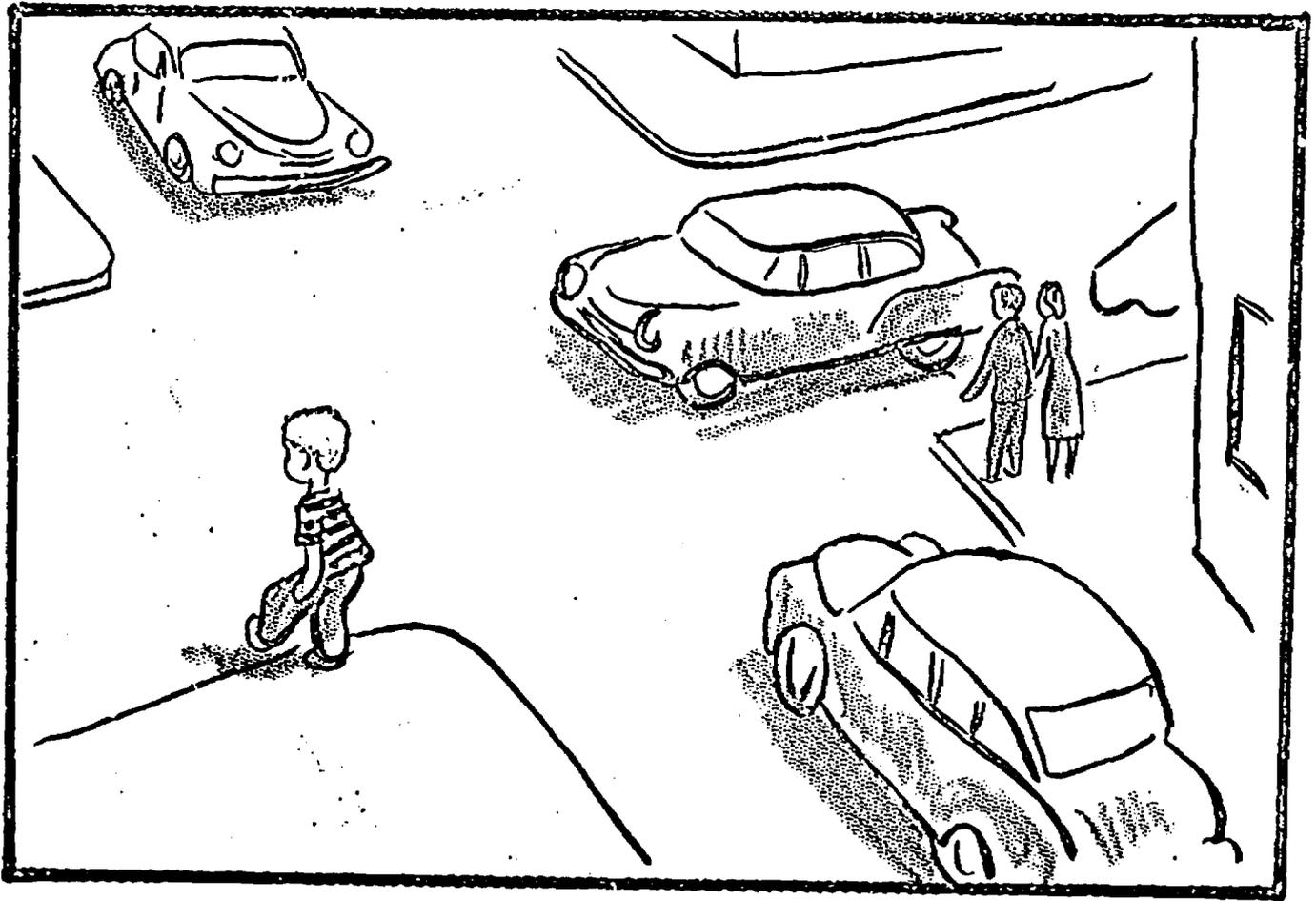


57x

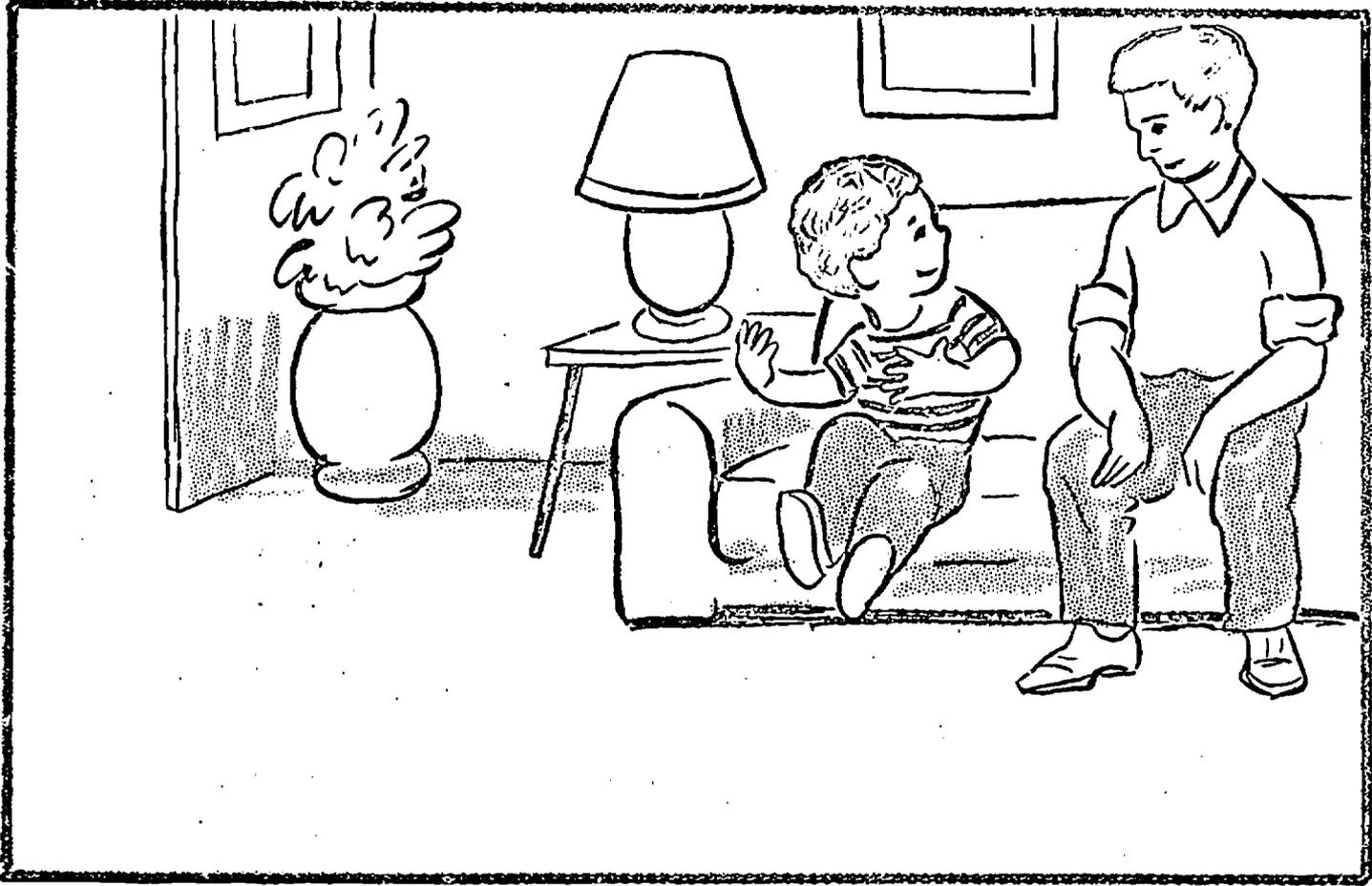


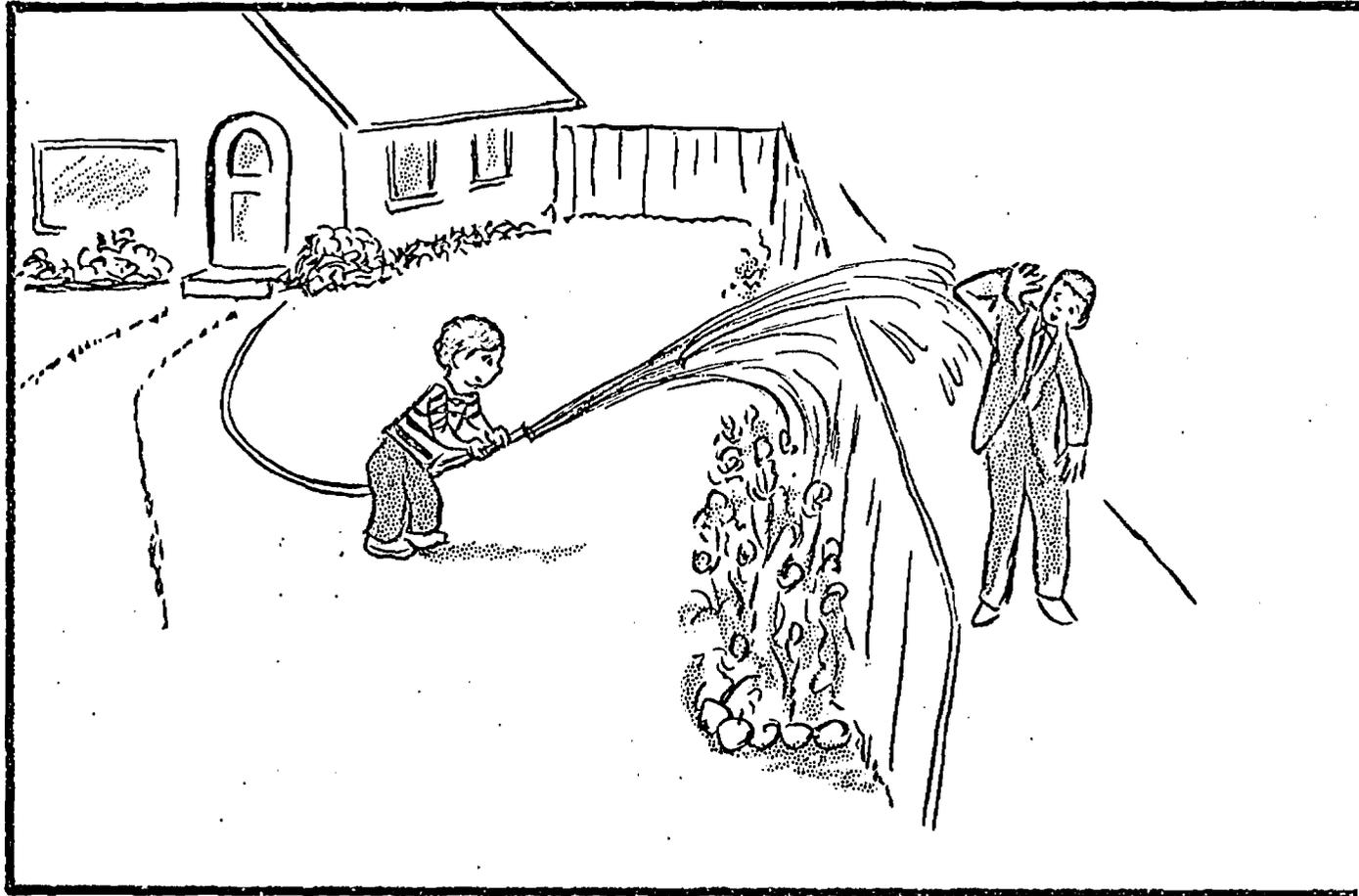


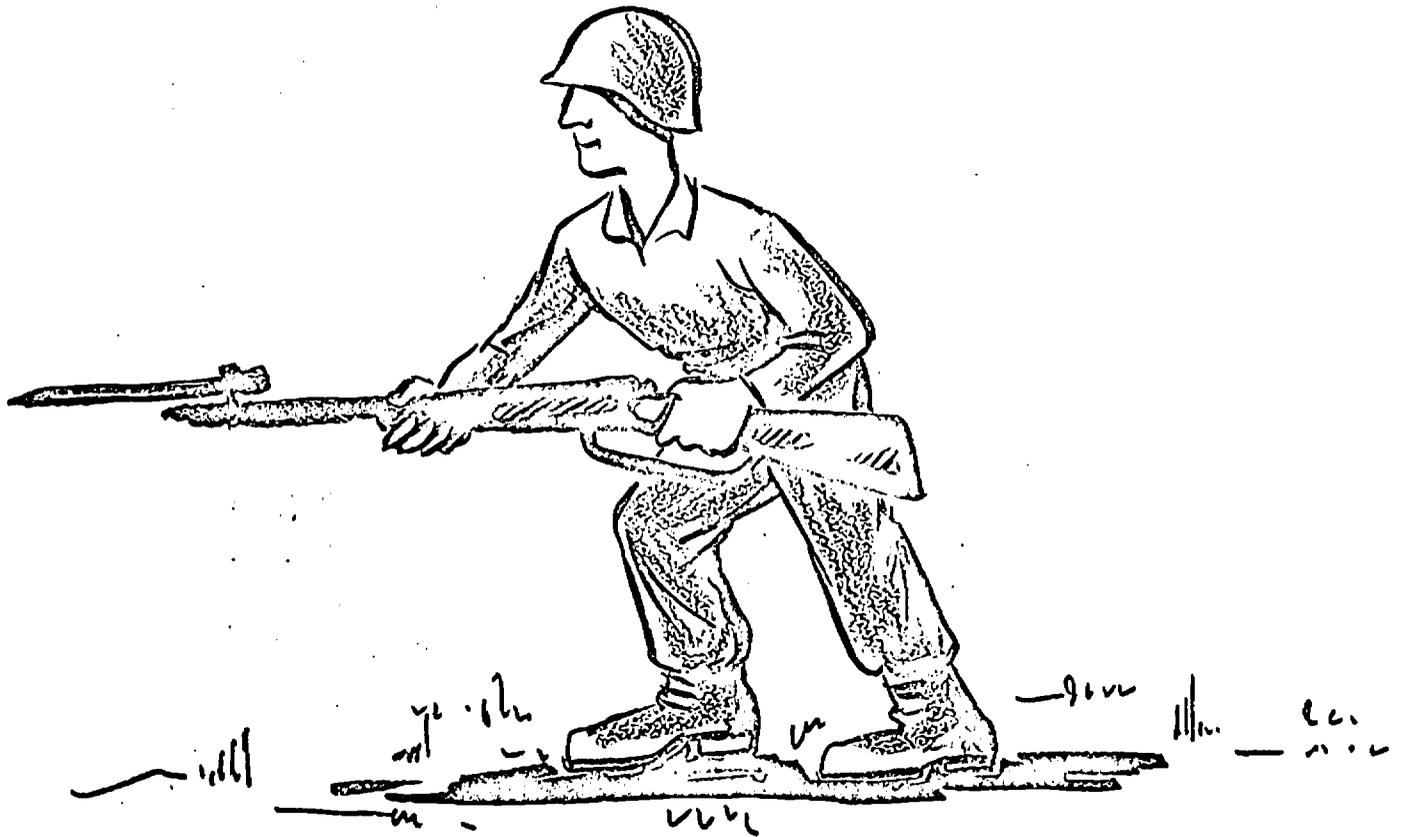




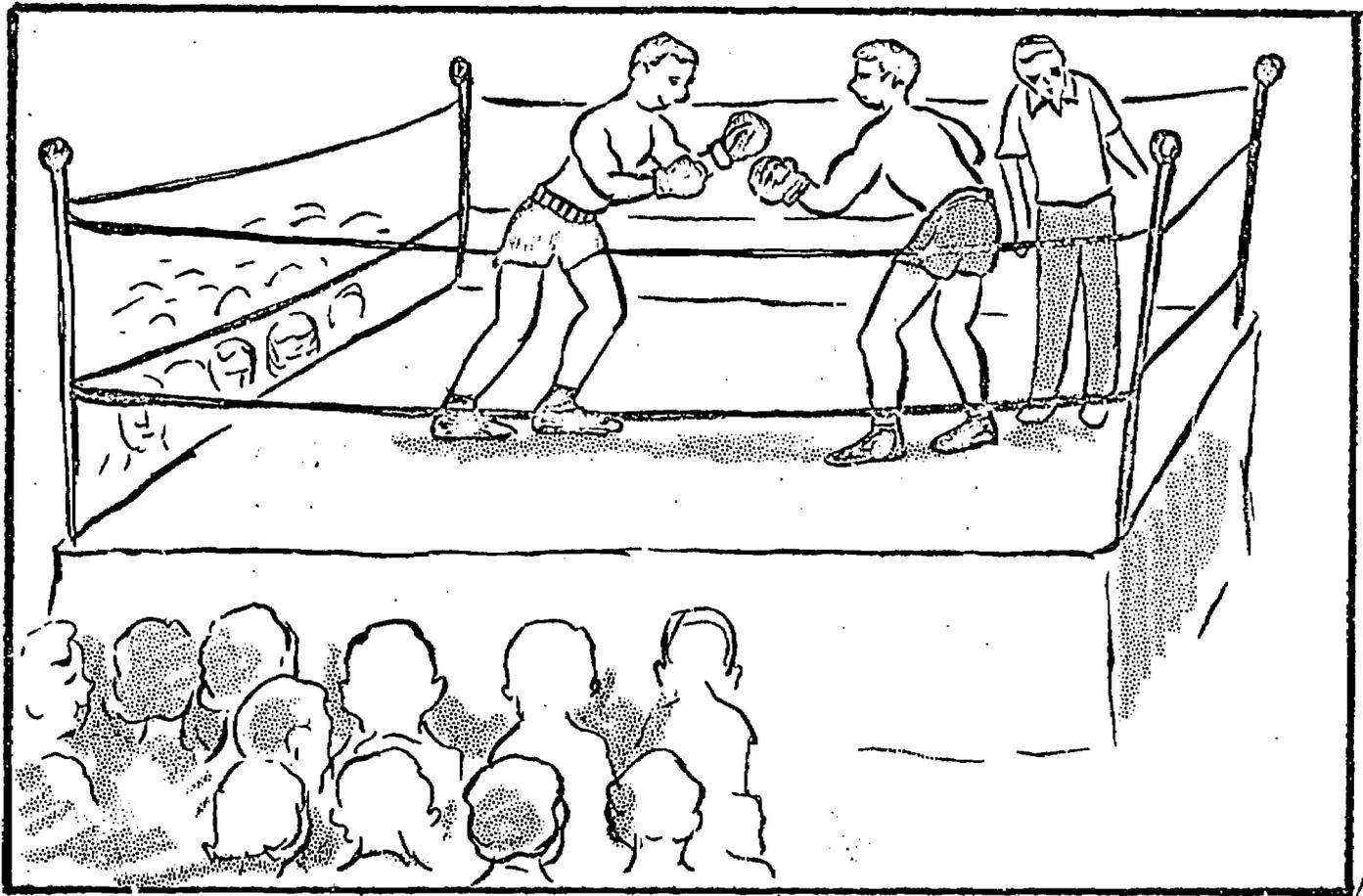




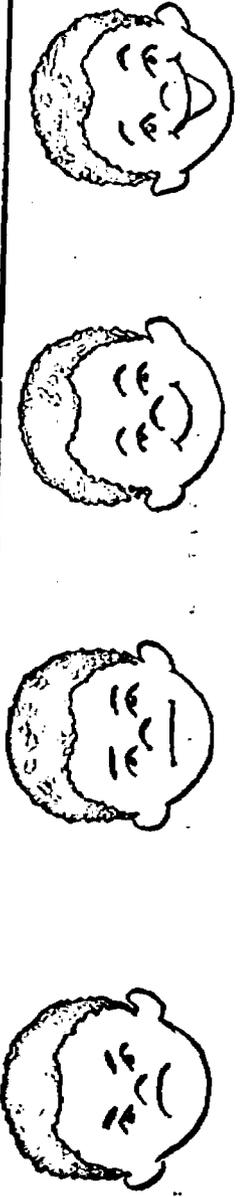
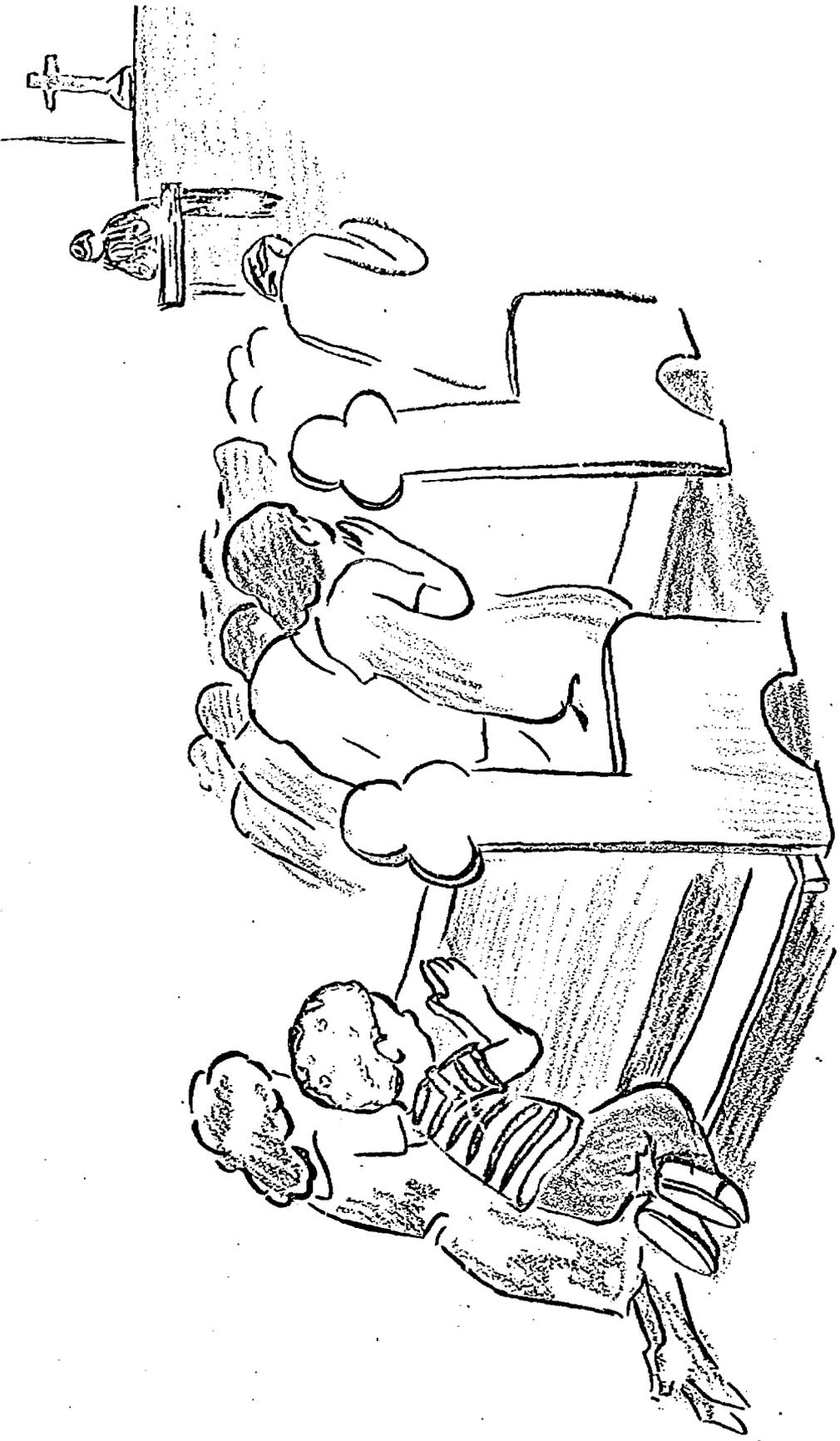




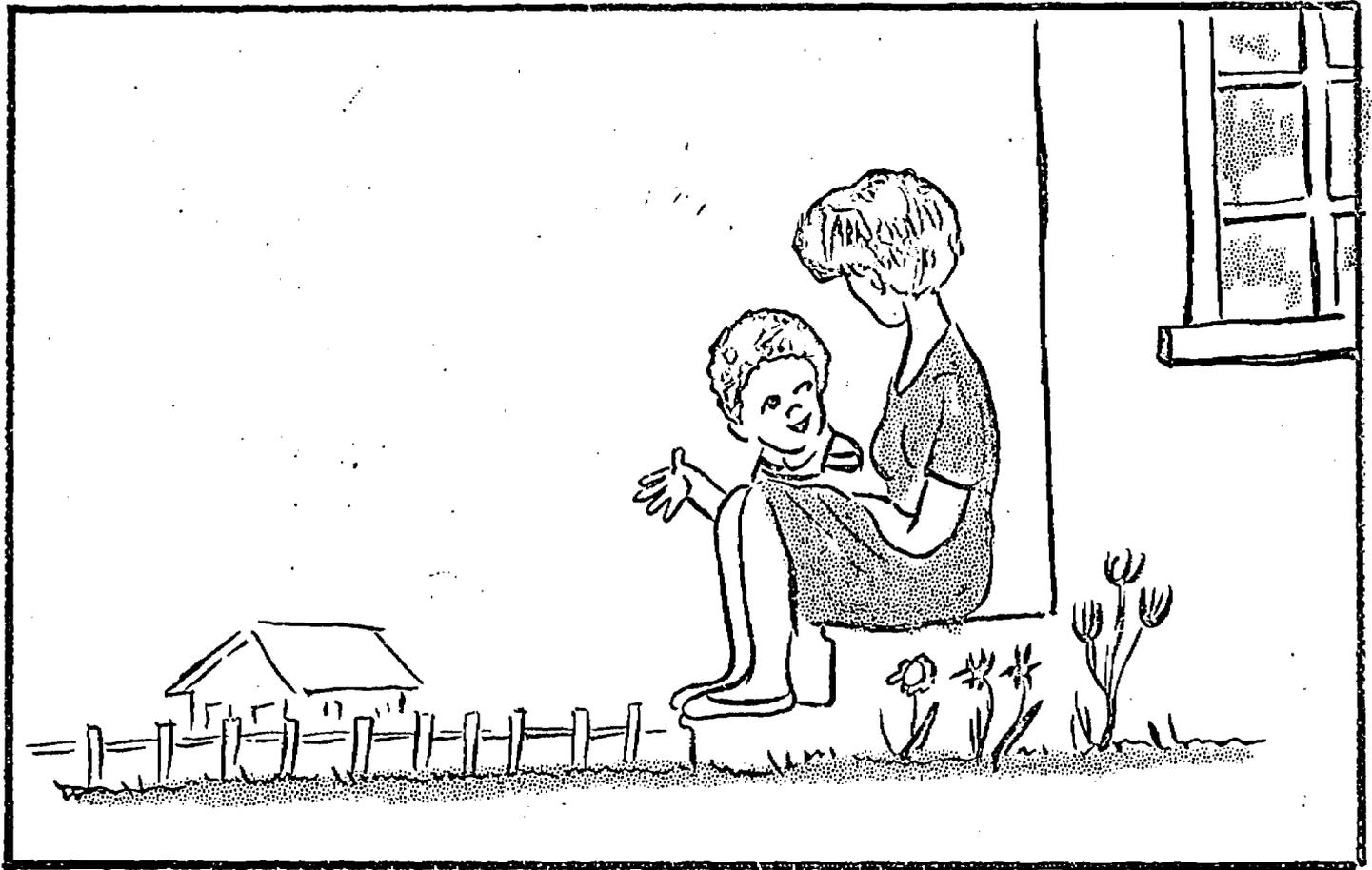






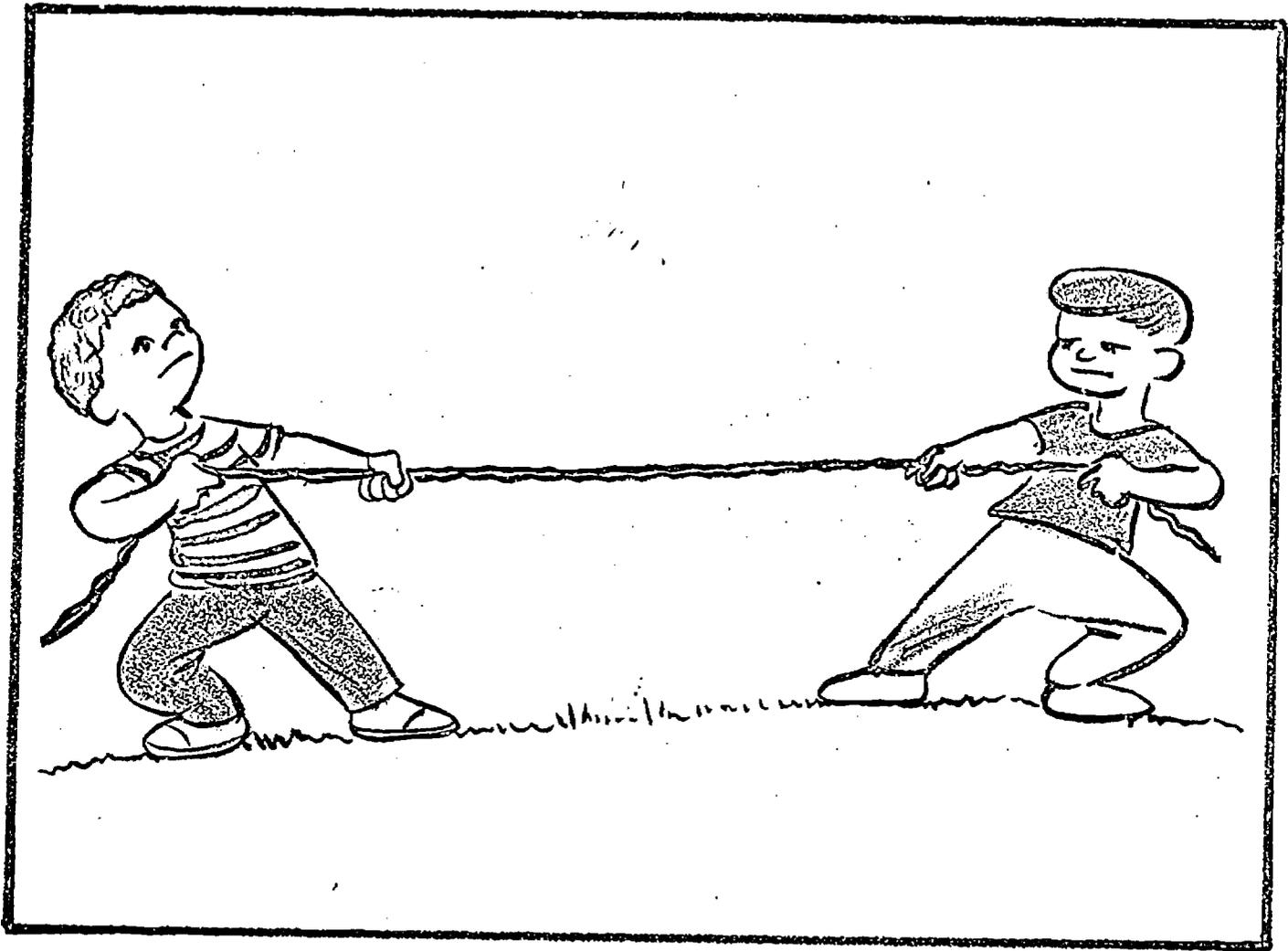




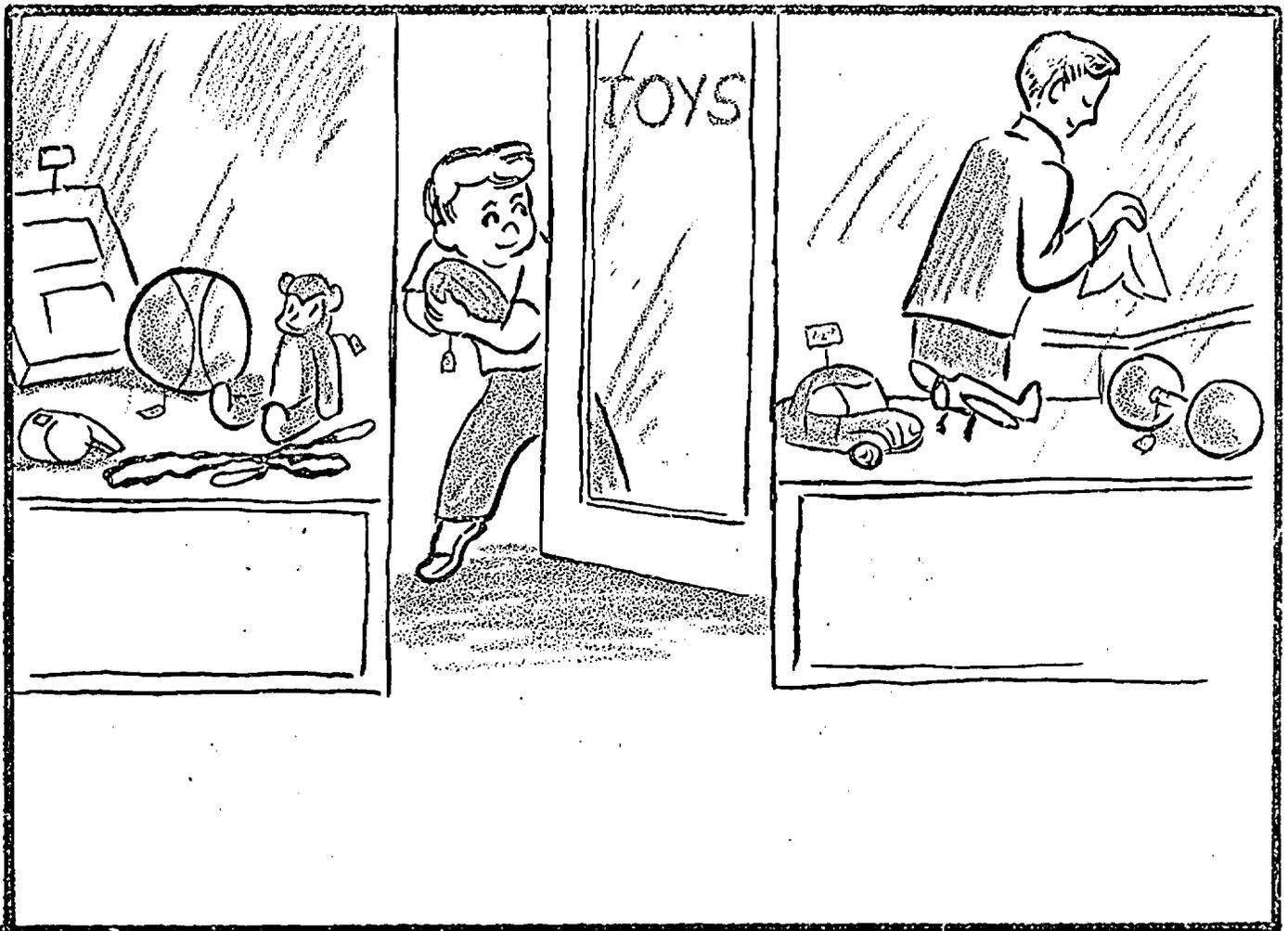


L6x

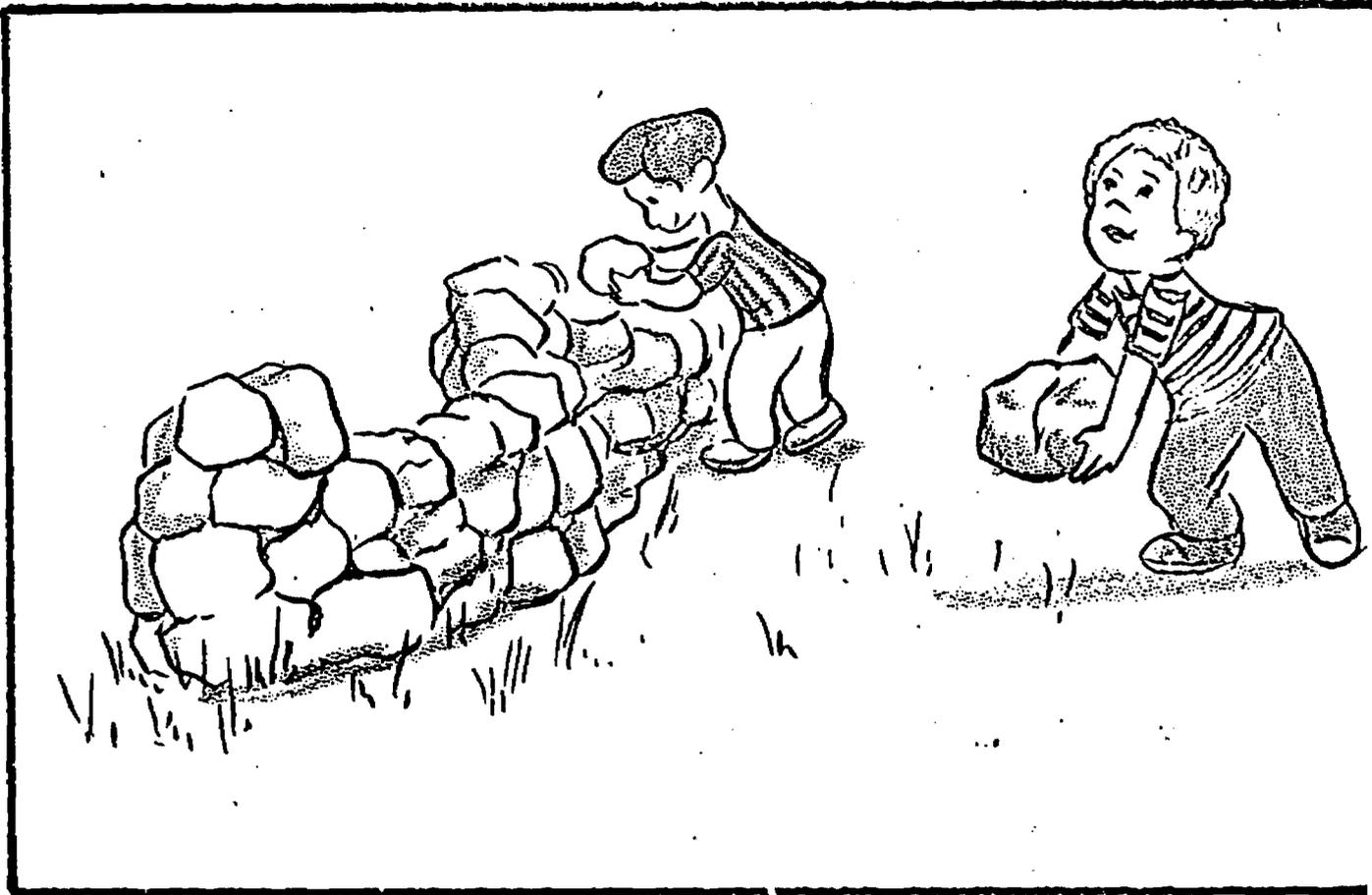












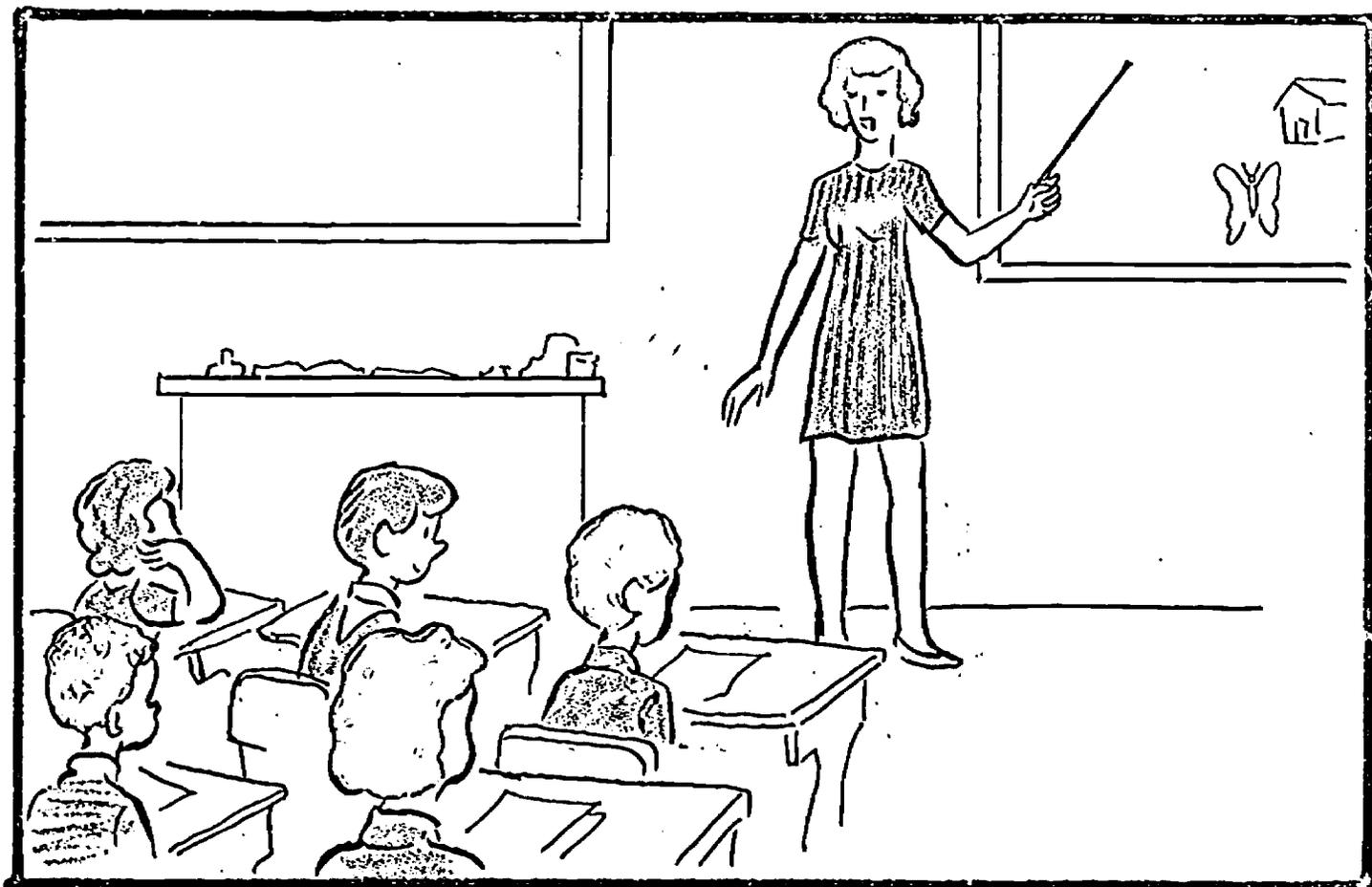
5



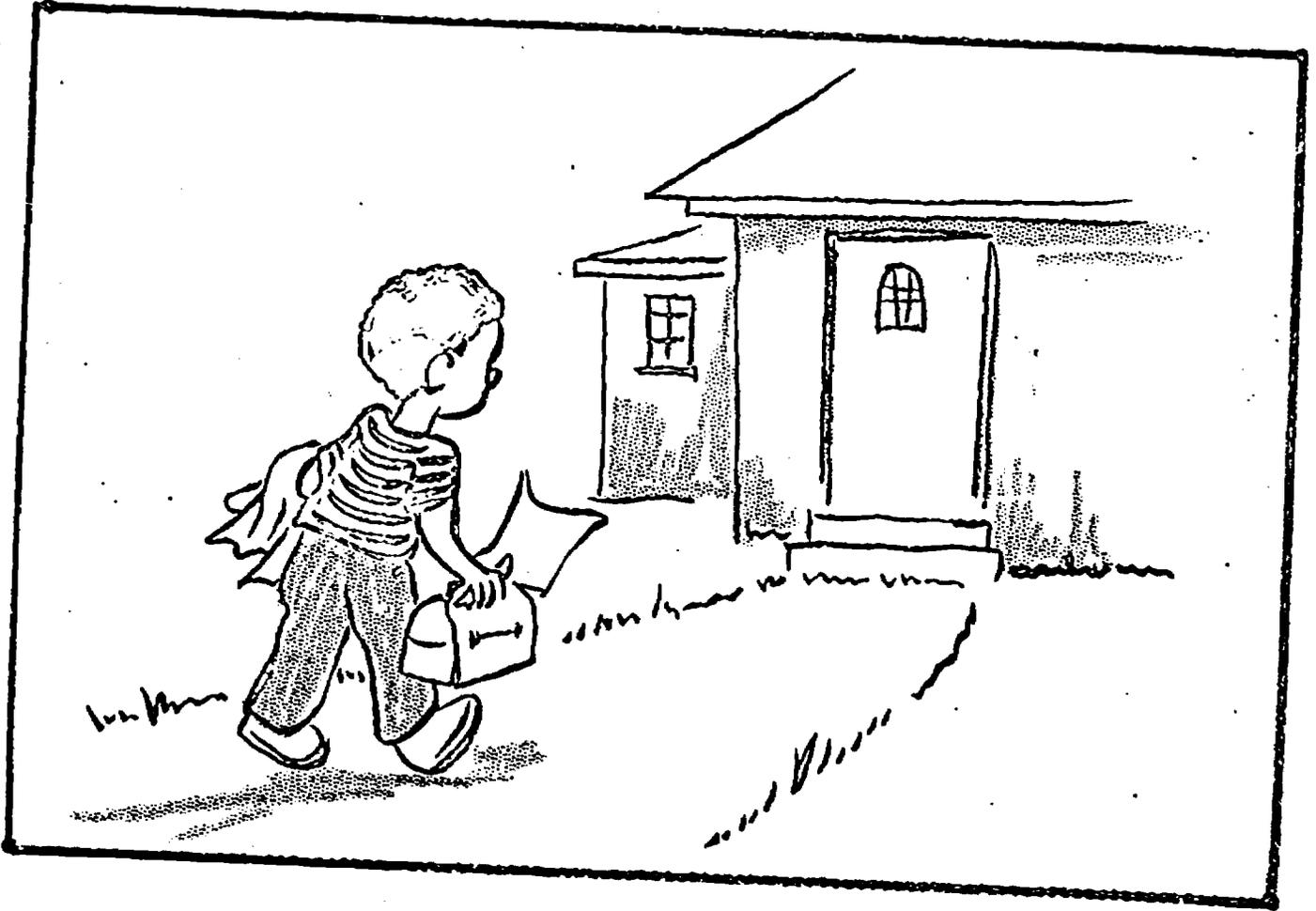


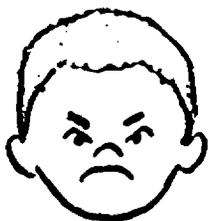
B

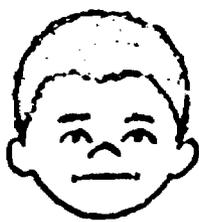
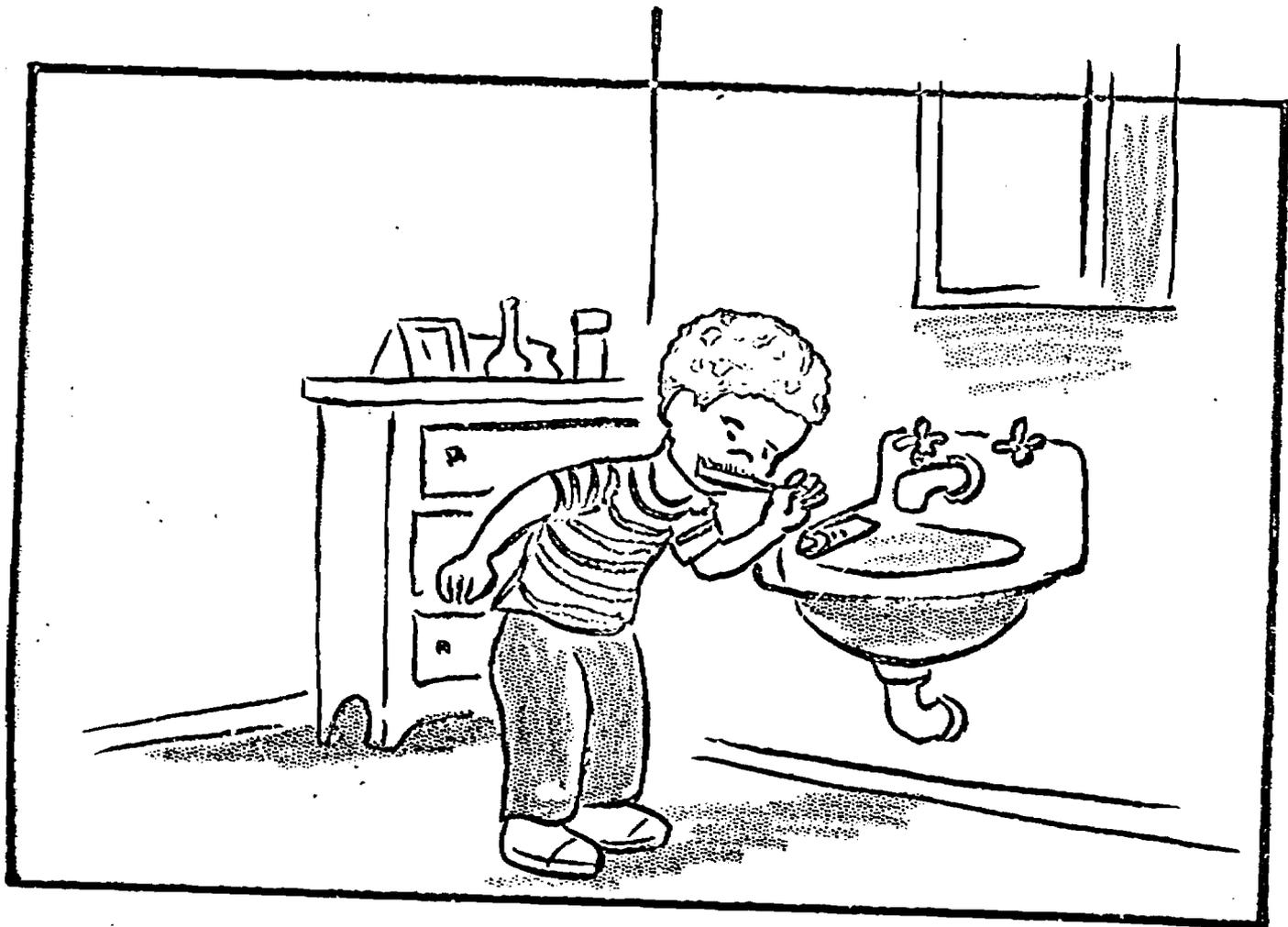


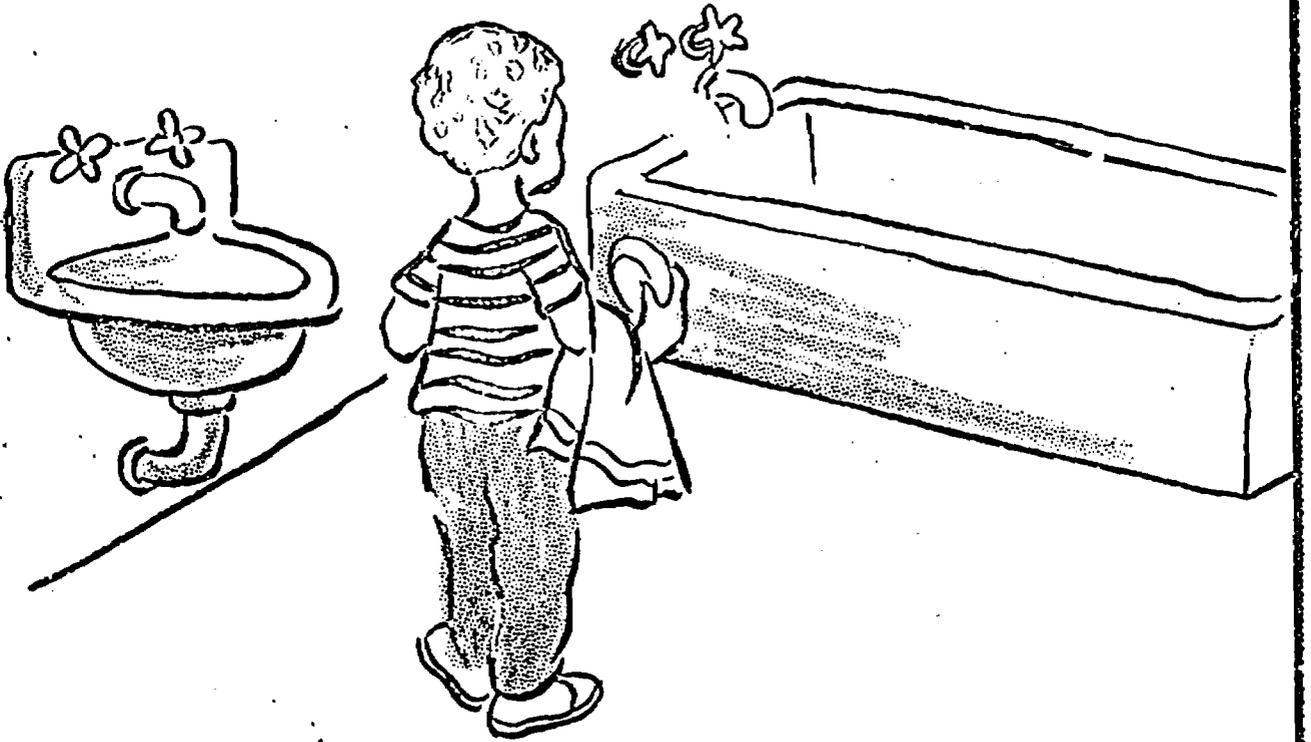






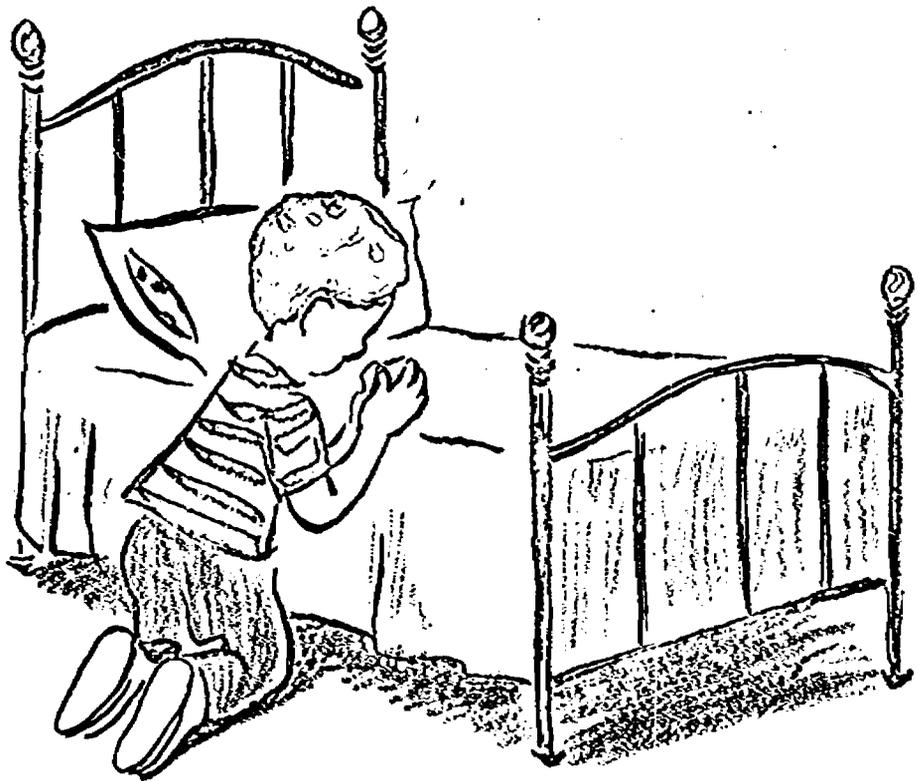


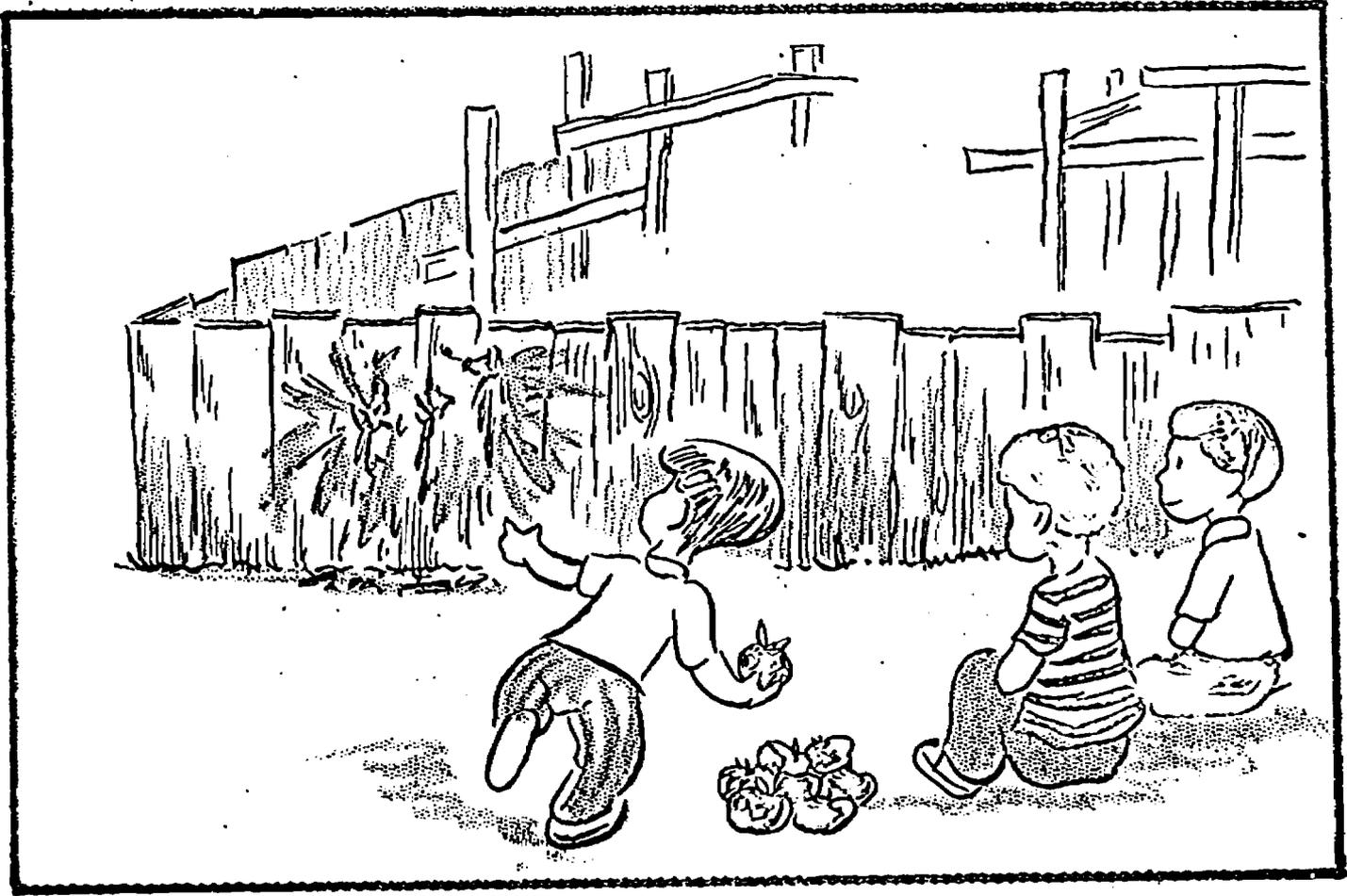


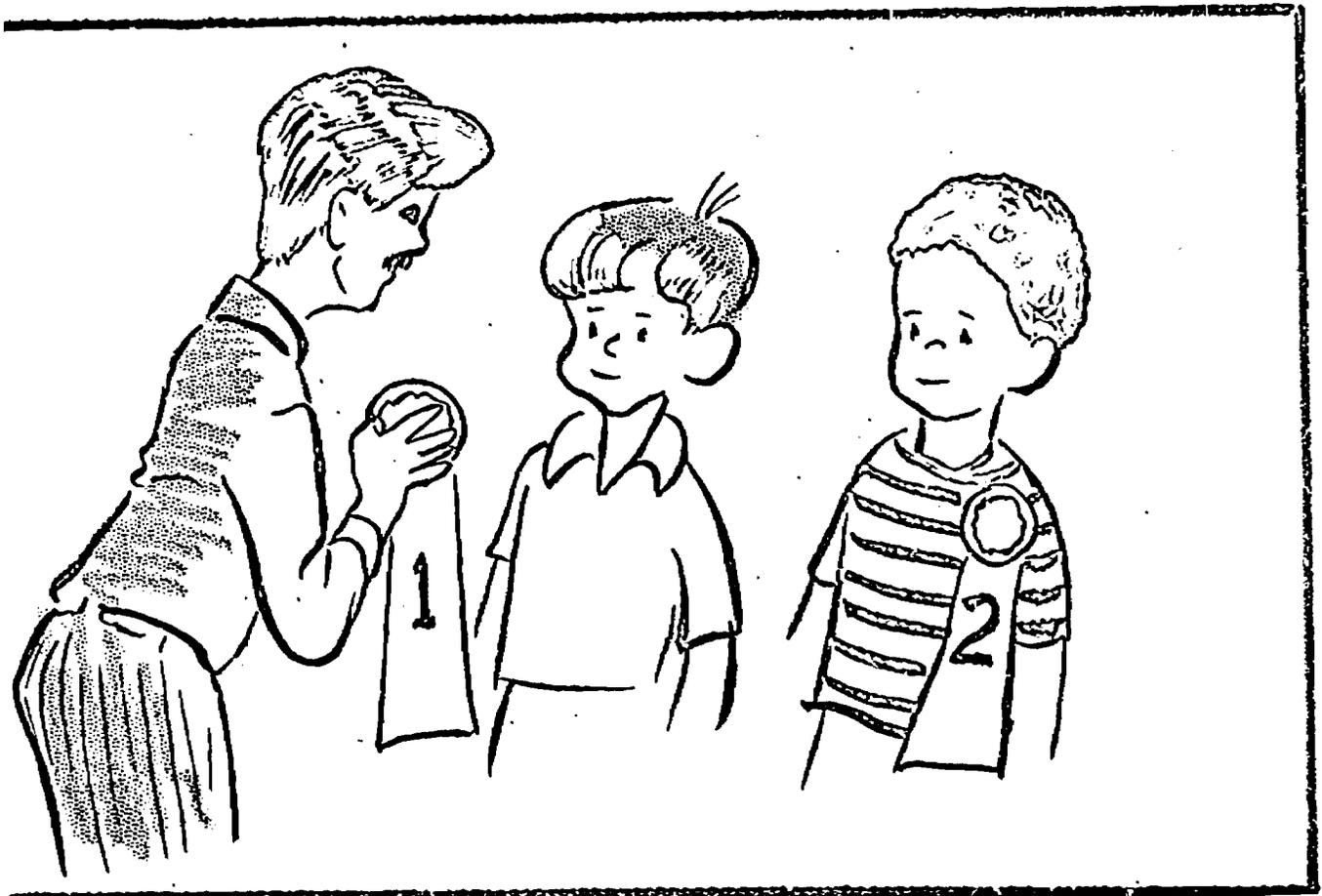


P5x

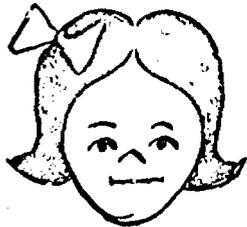


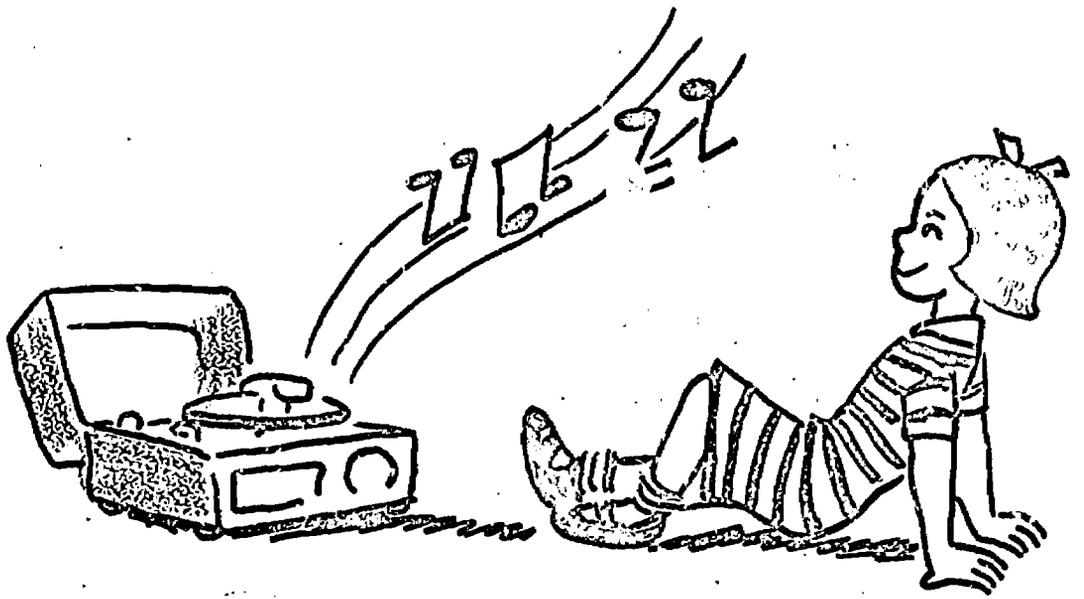


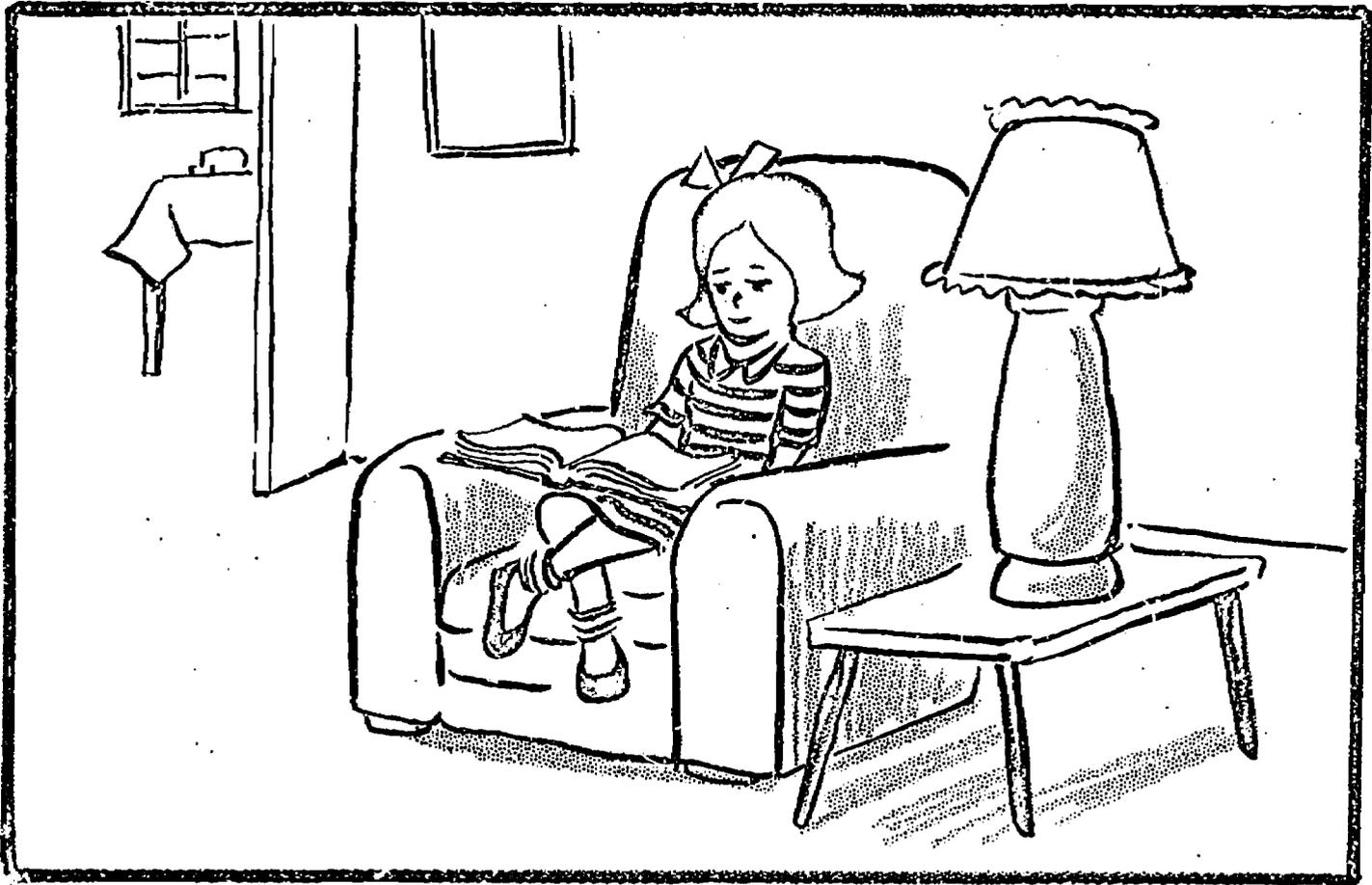


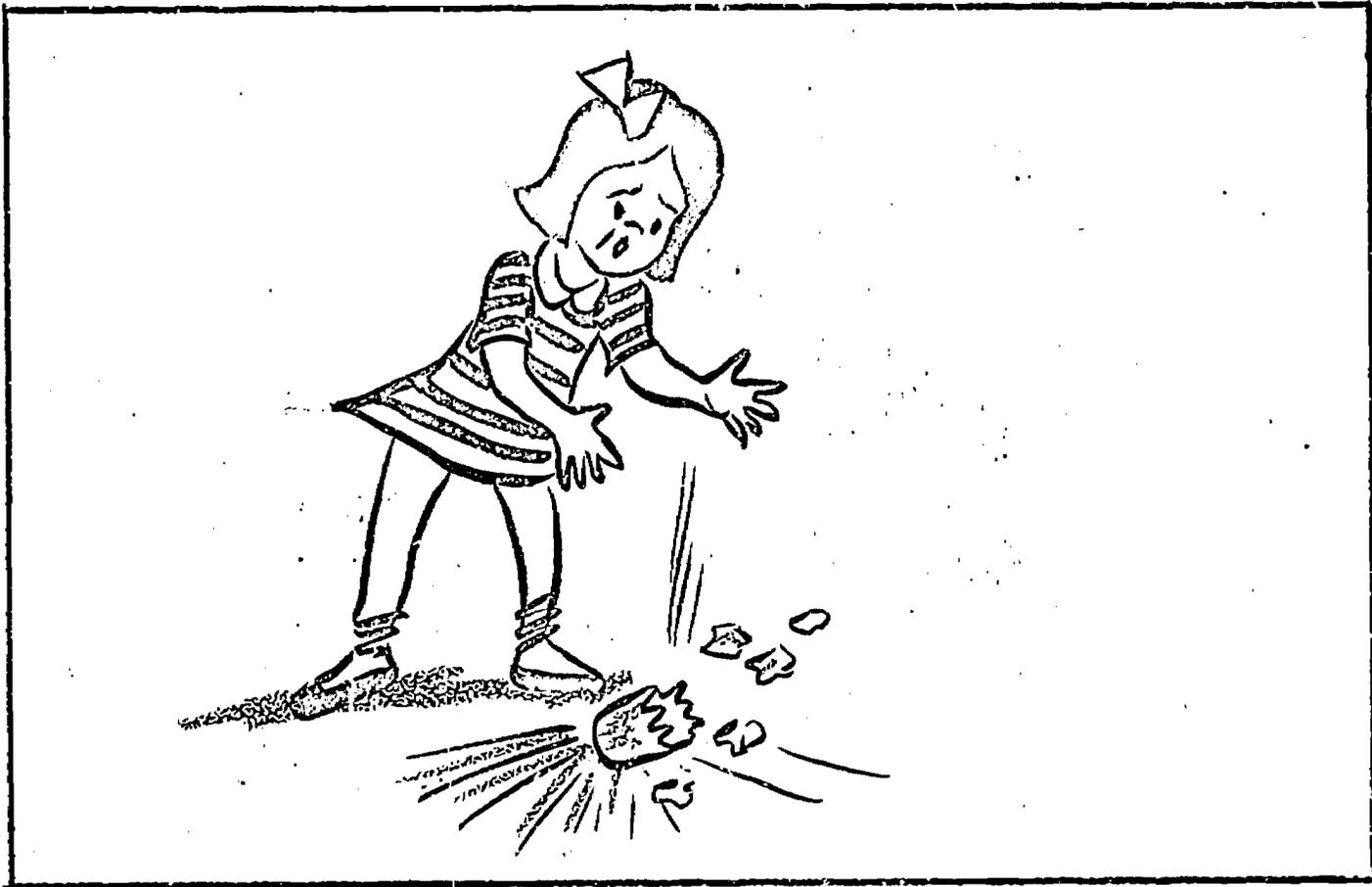






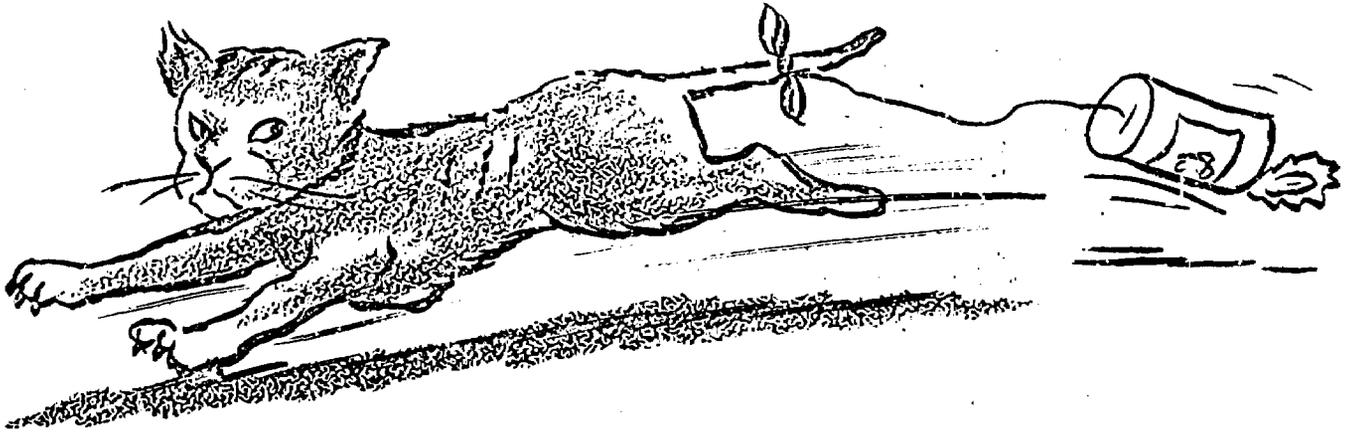


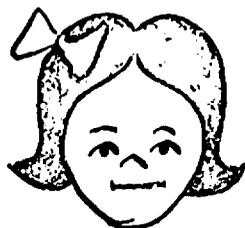


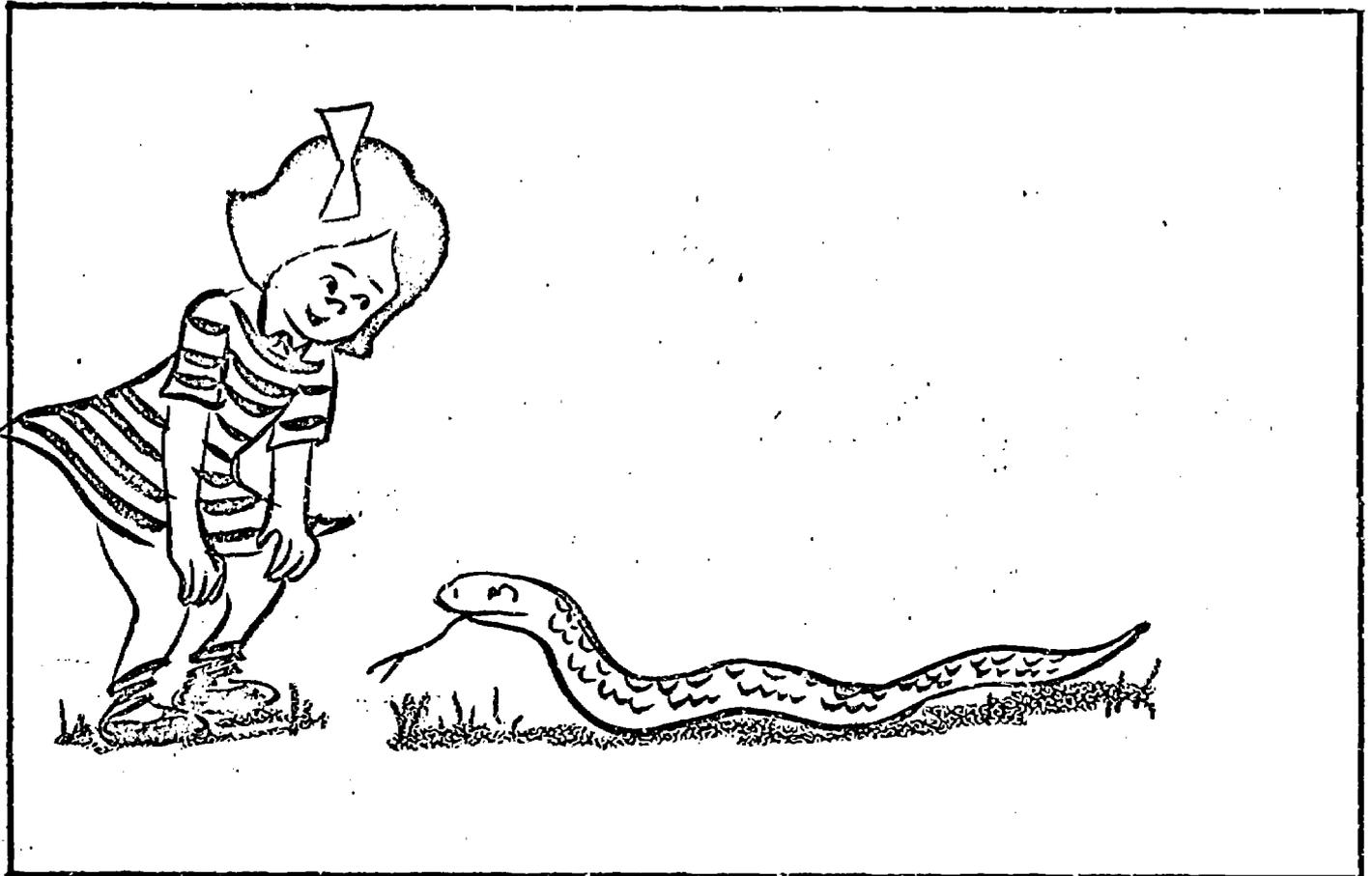


54



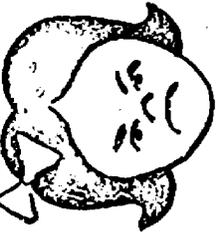
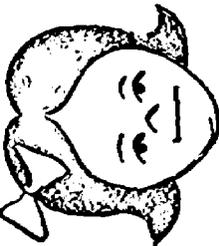
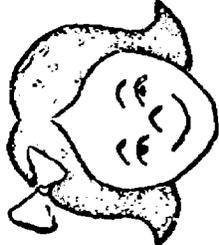
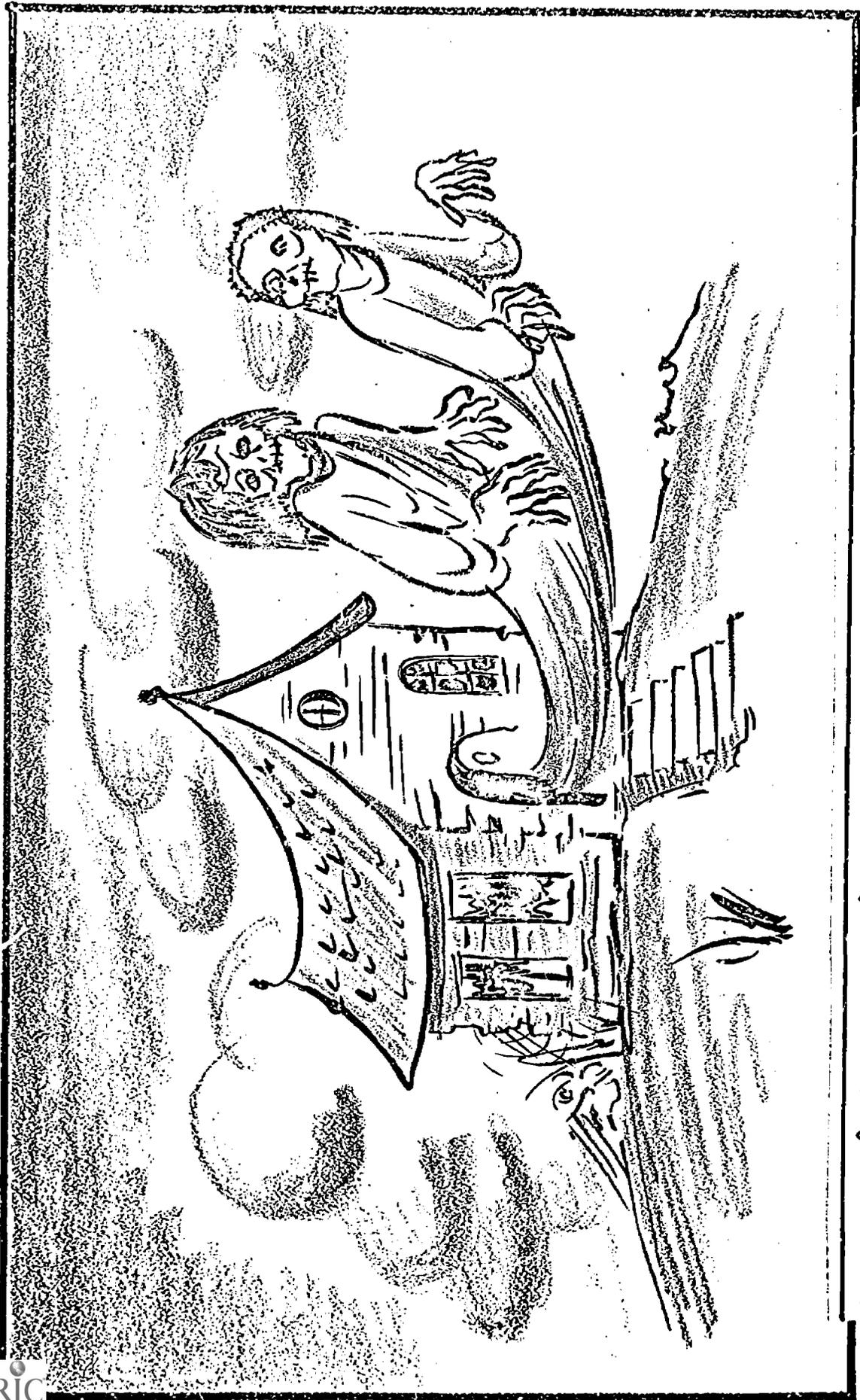






59x

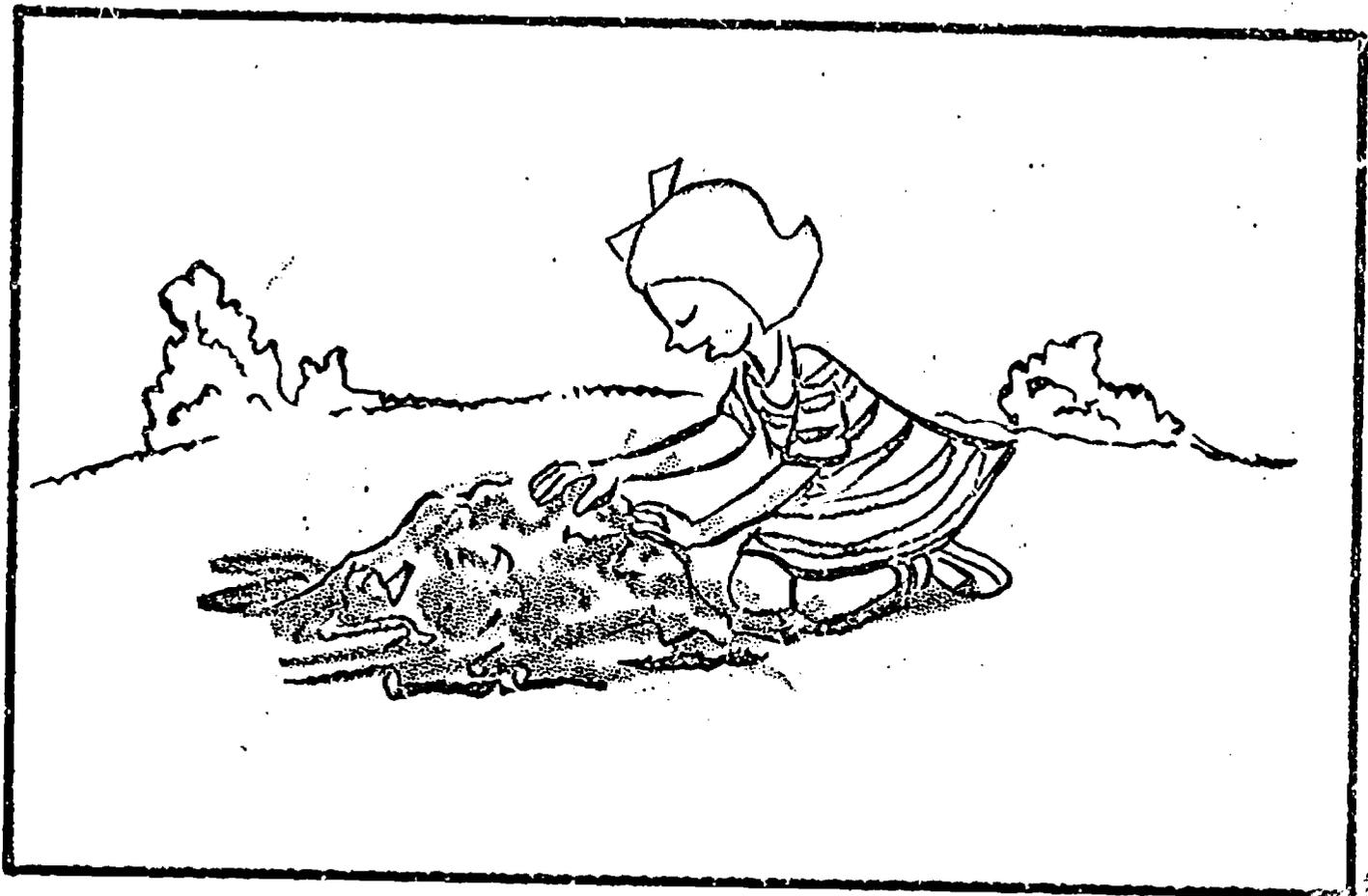






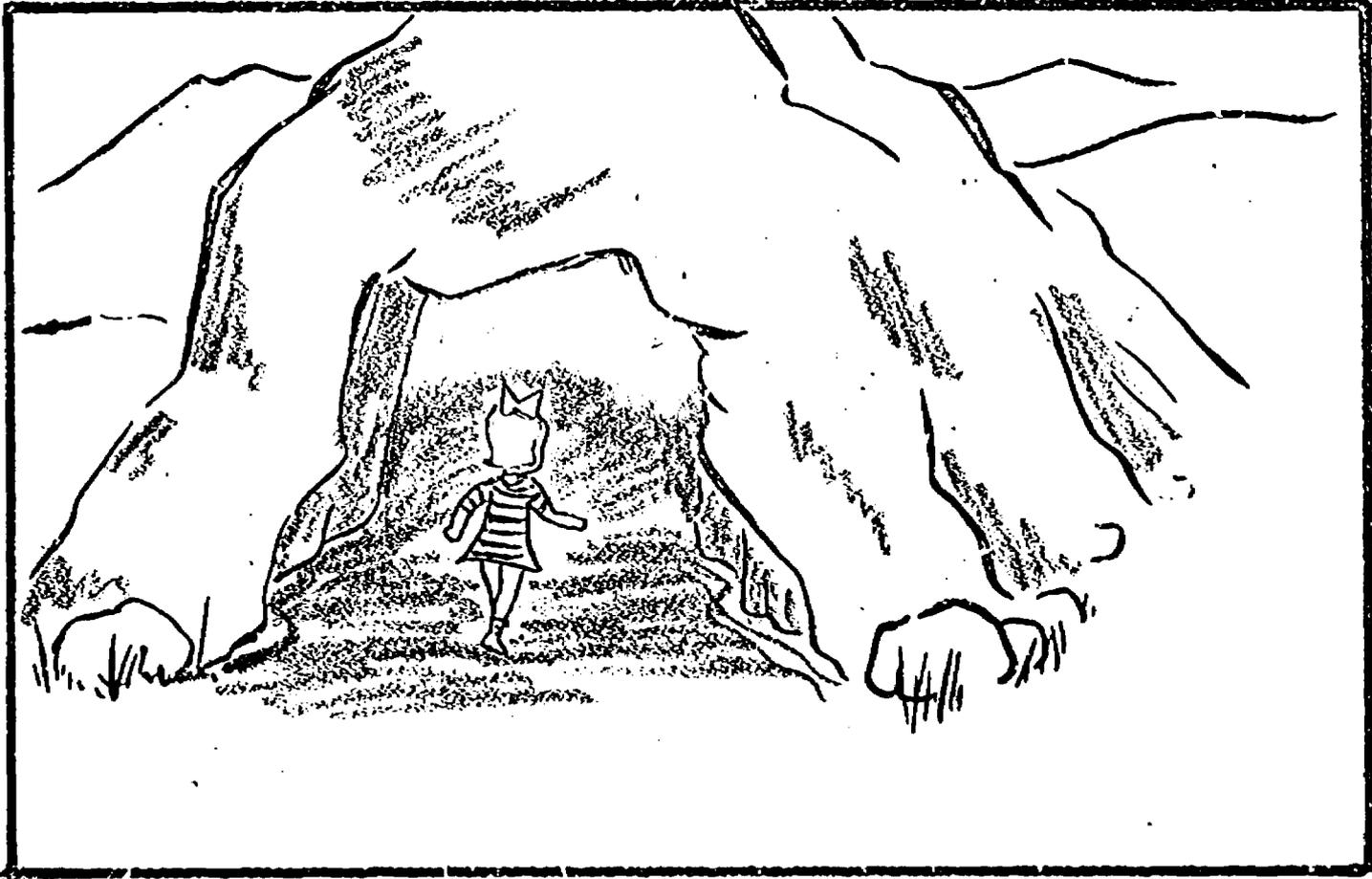
K5





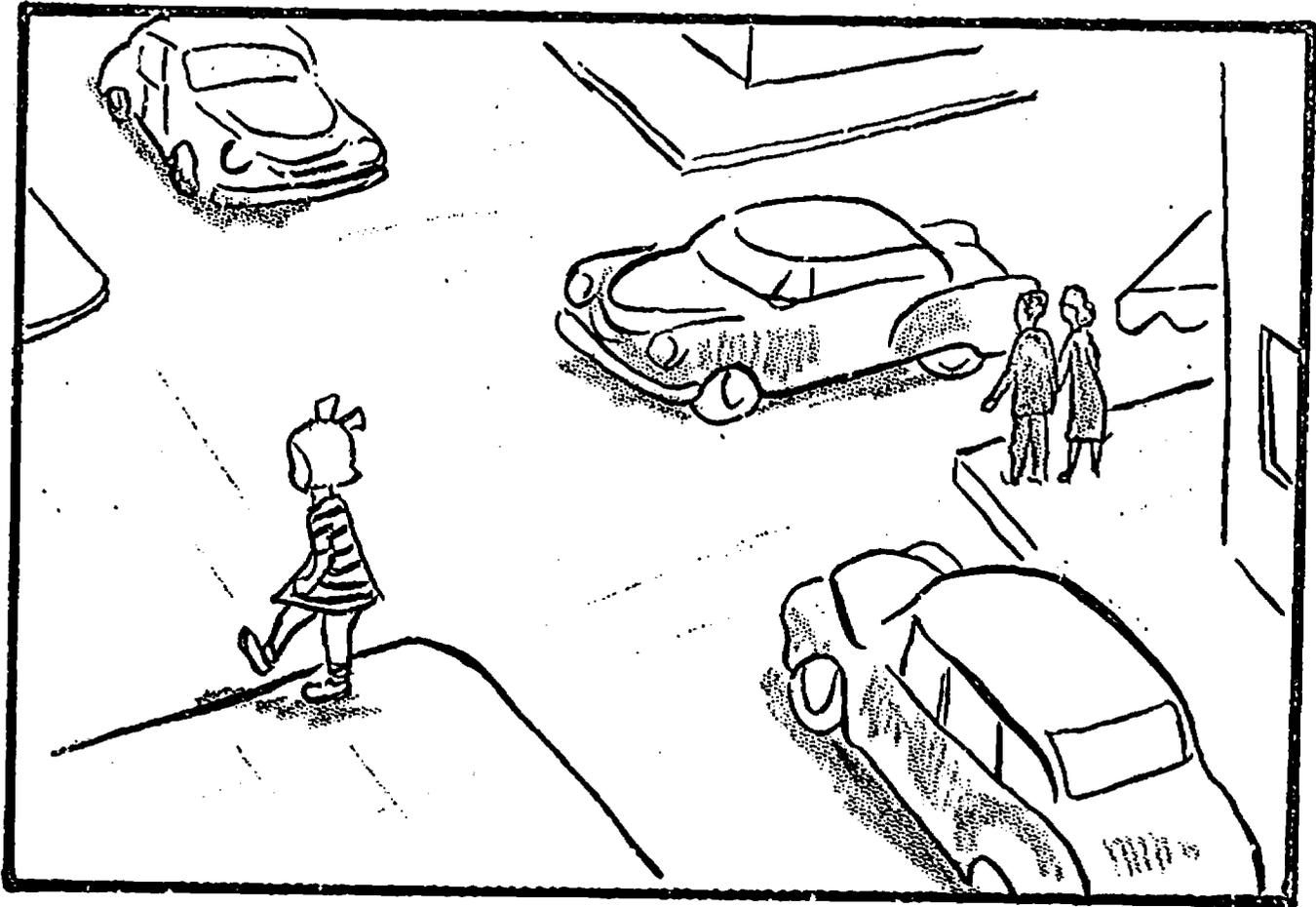
24

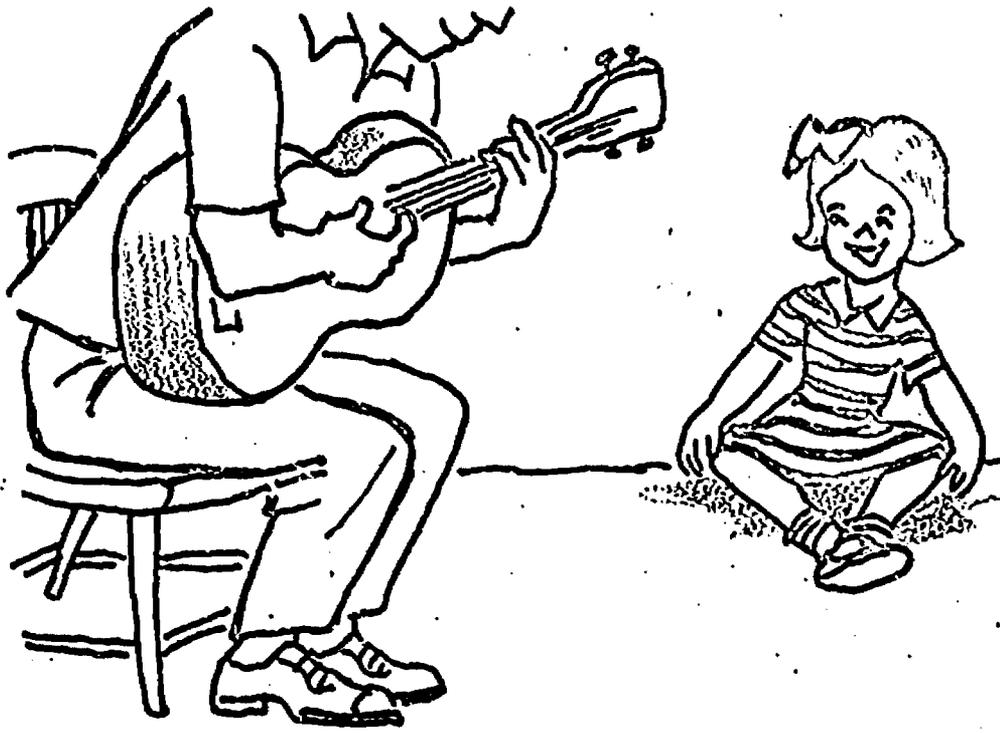


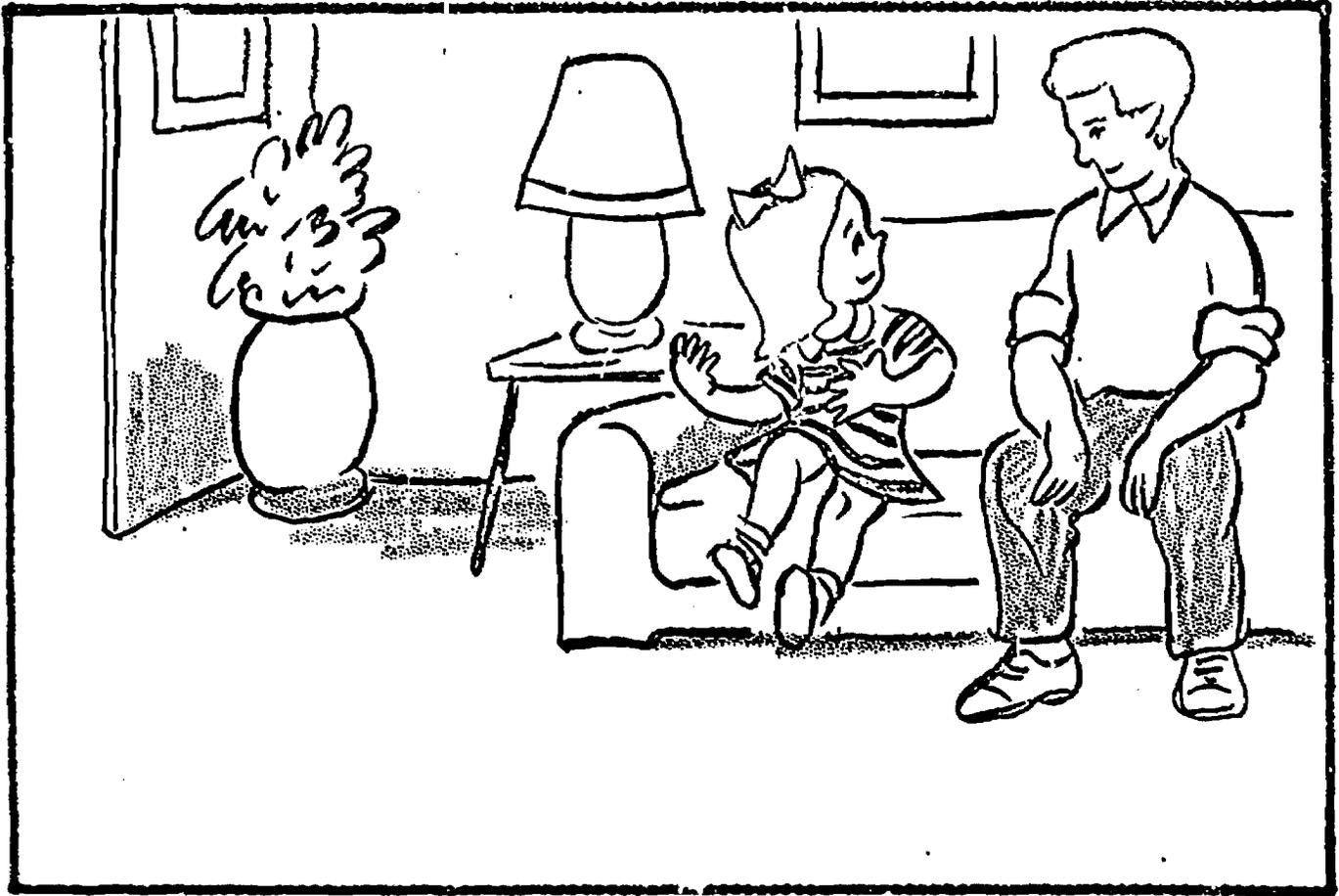


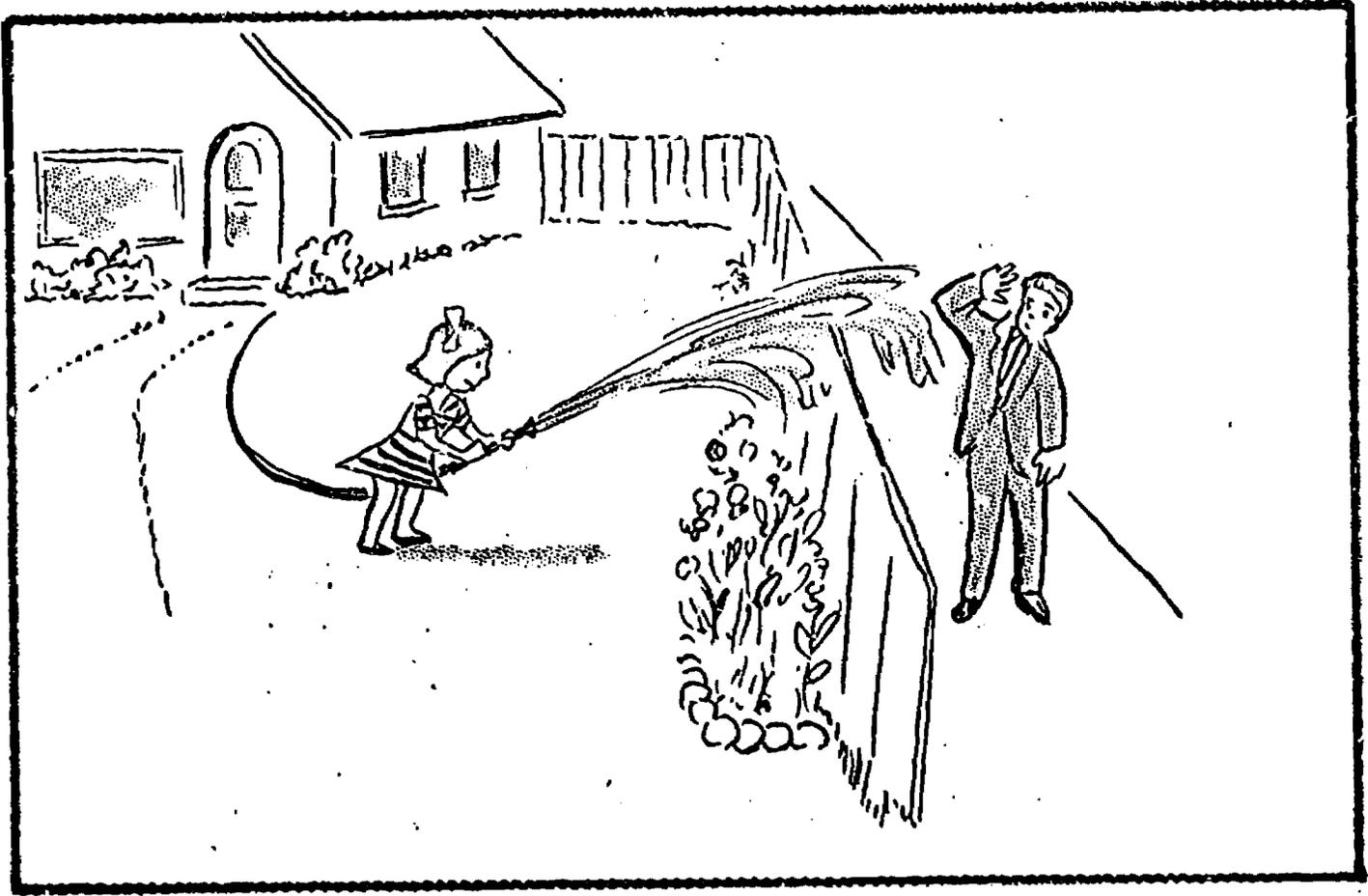


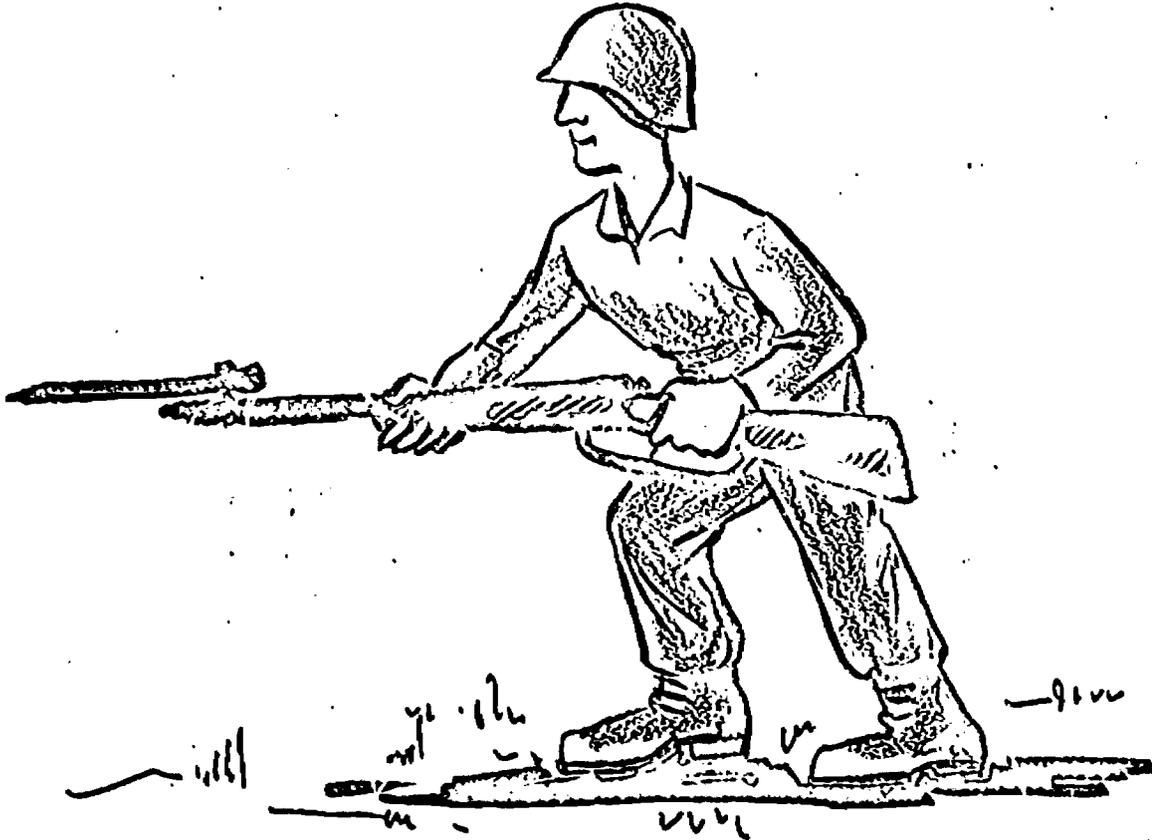


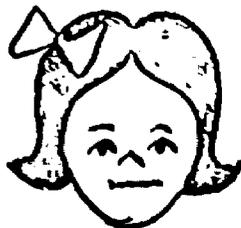


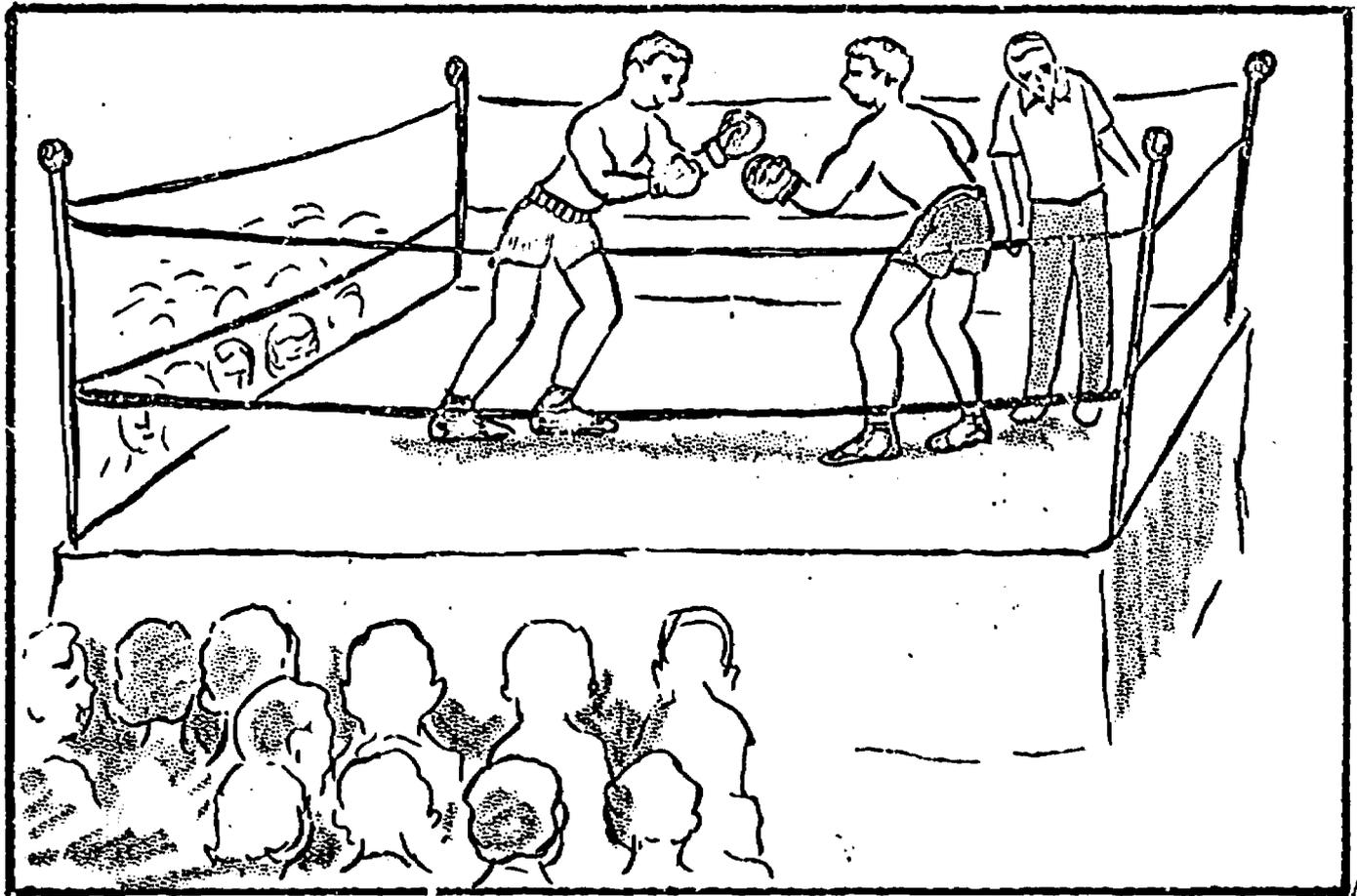








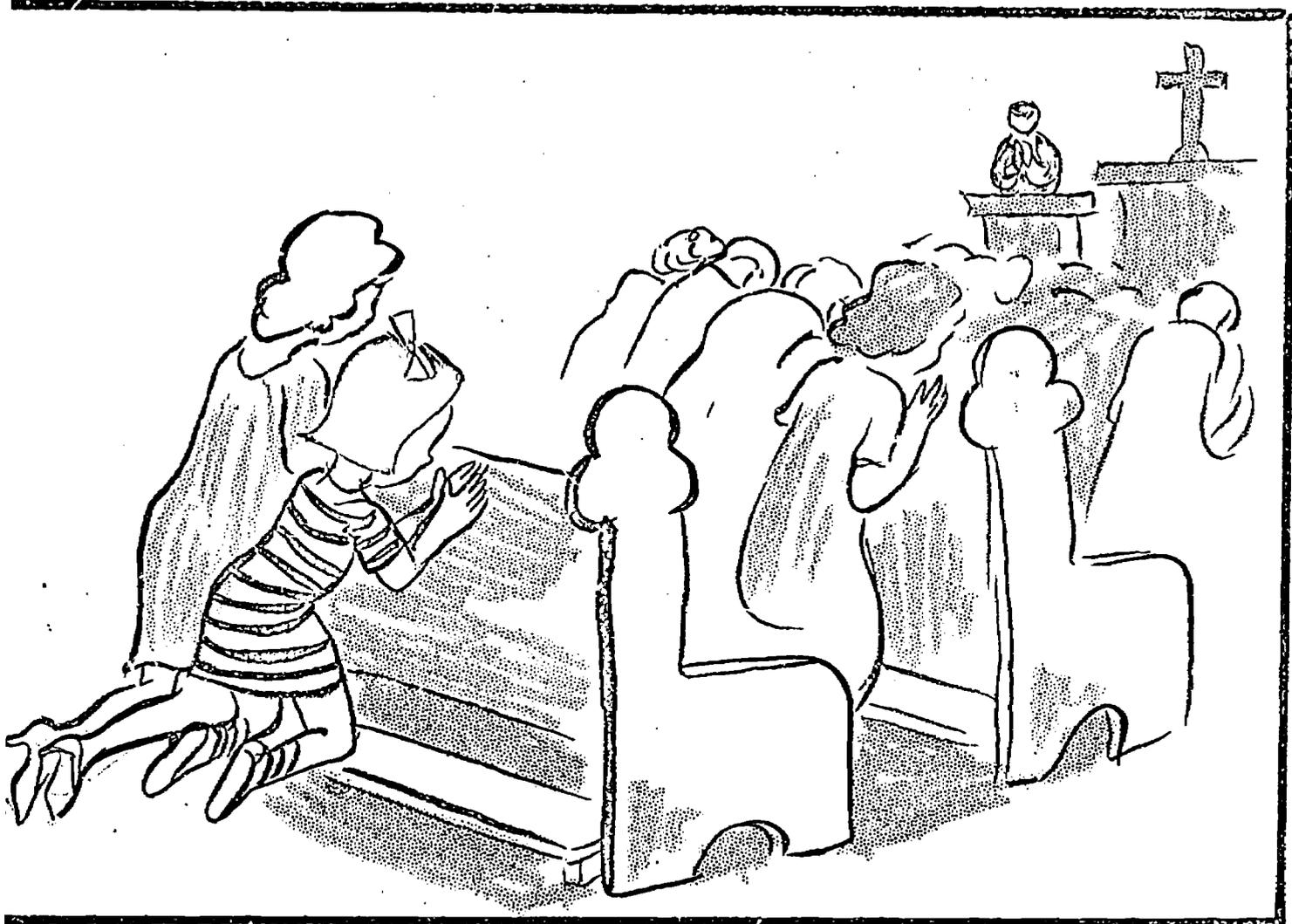




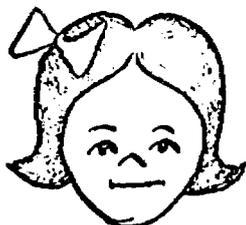
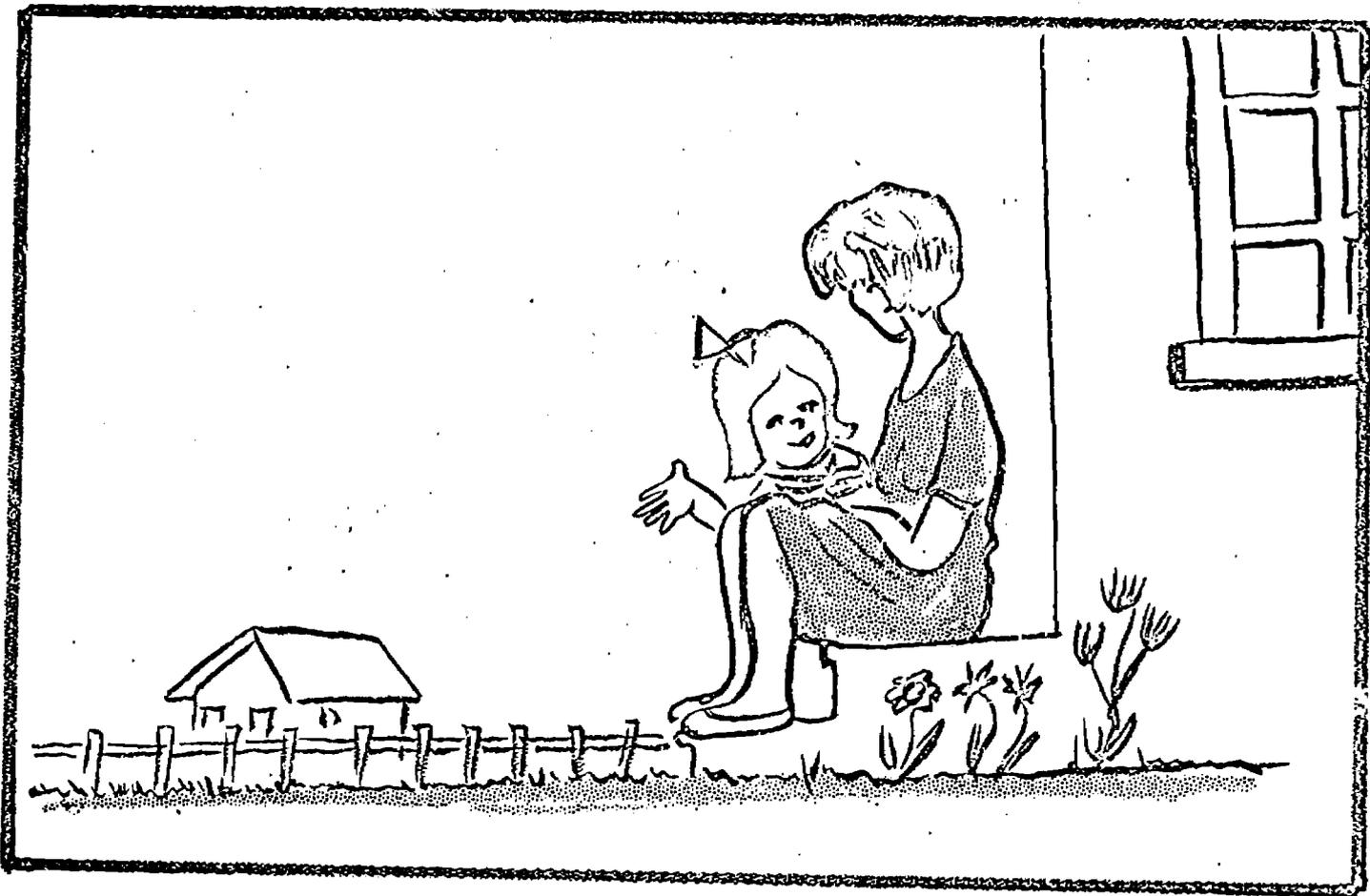


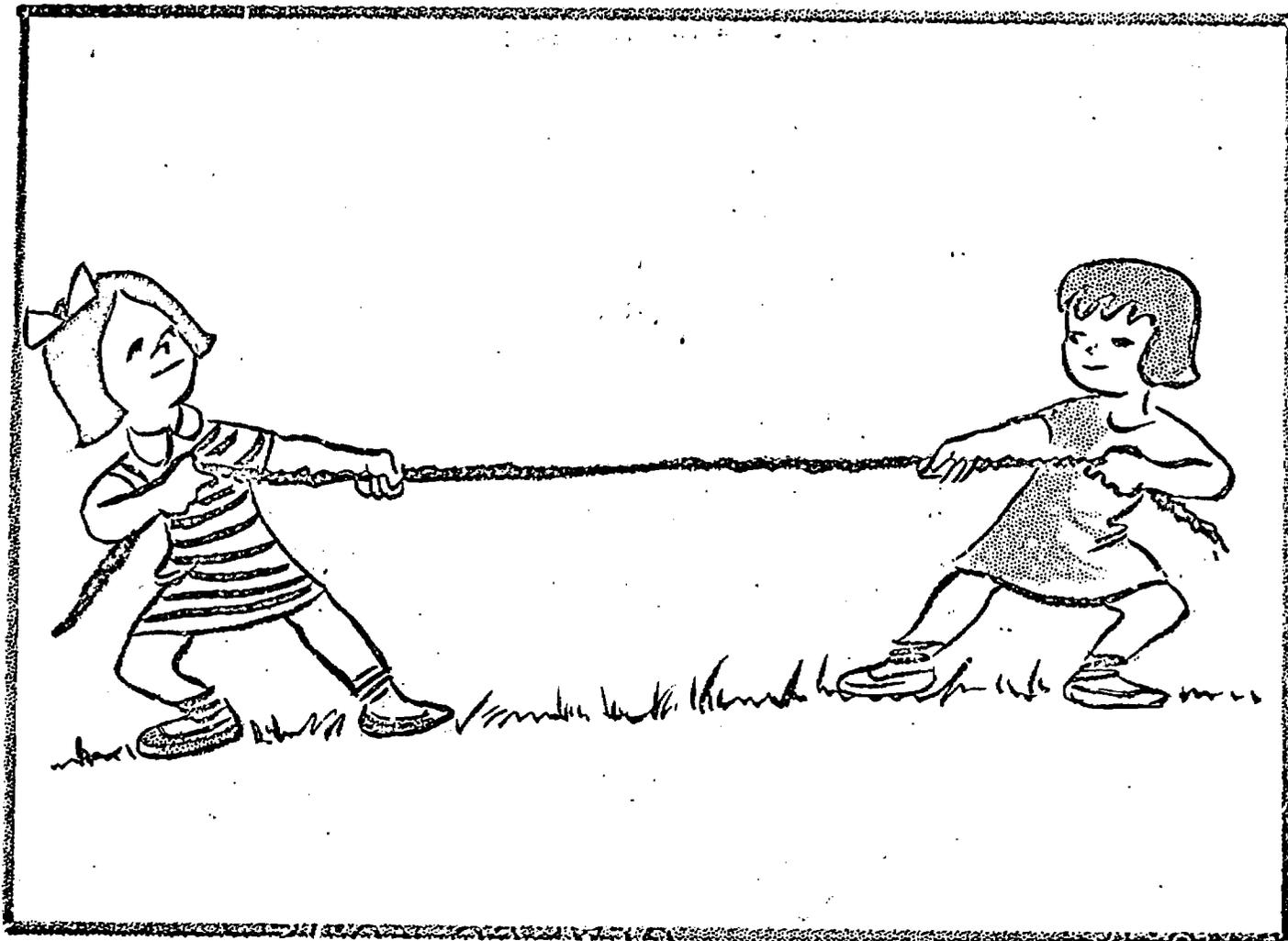
51x



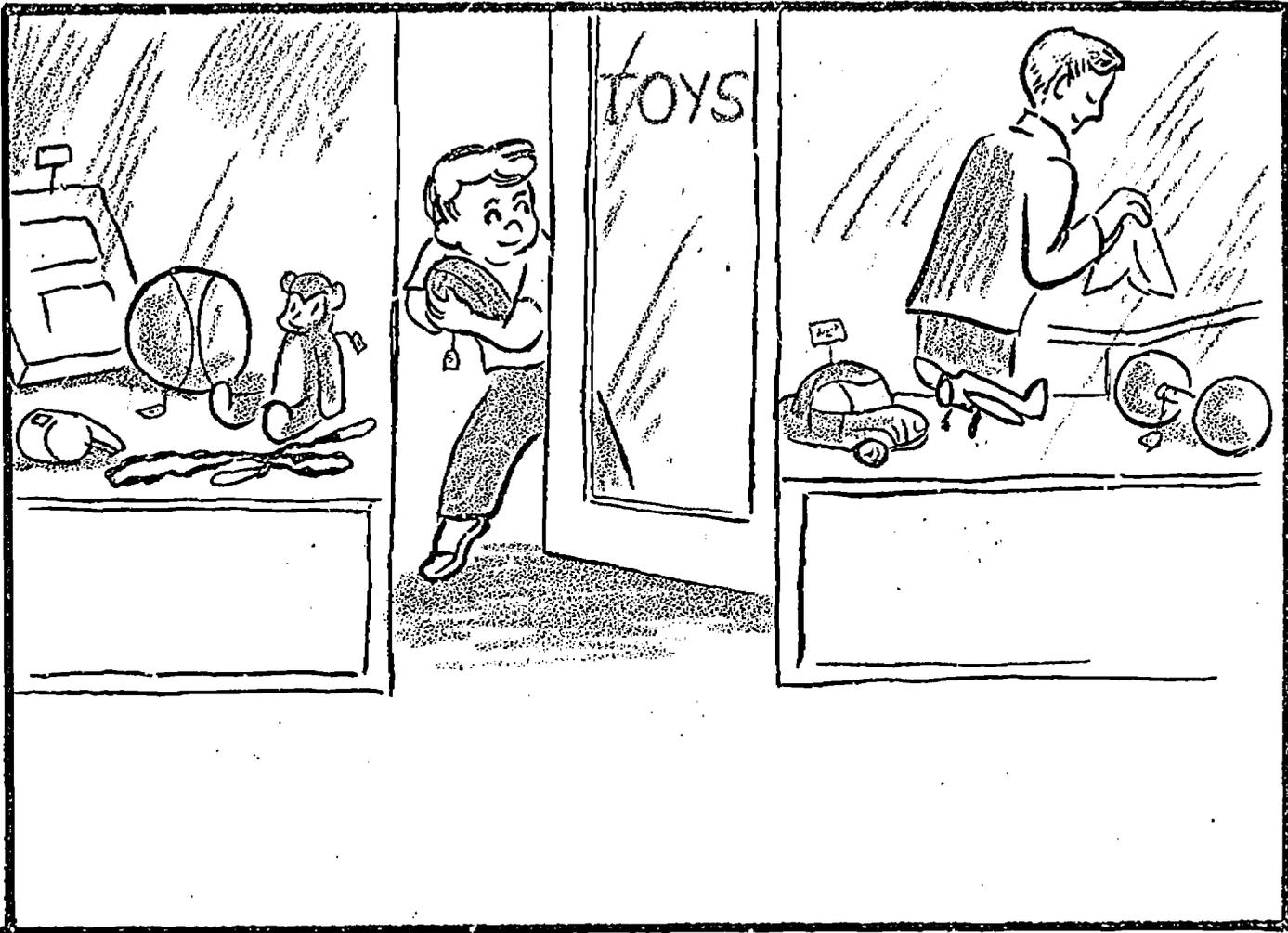






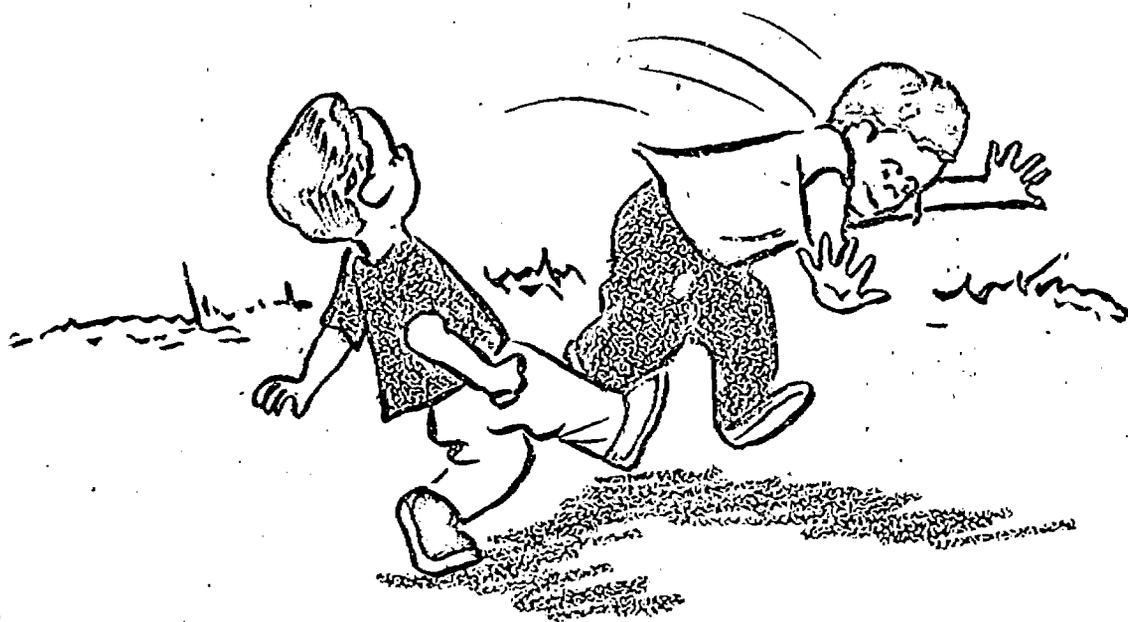


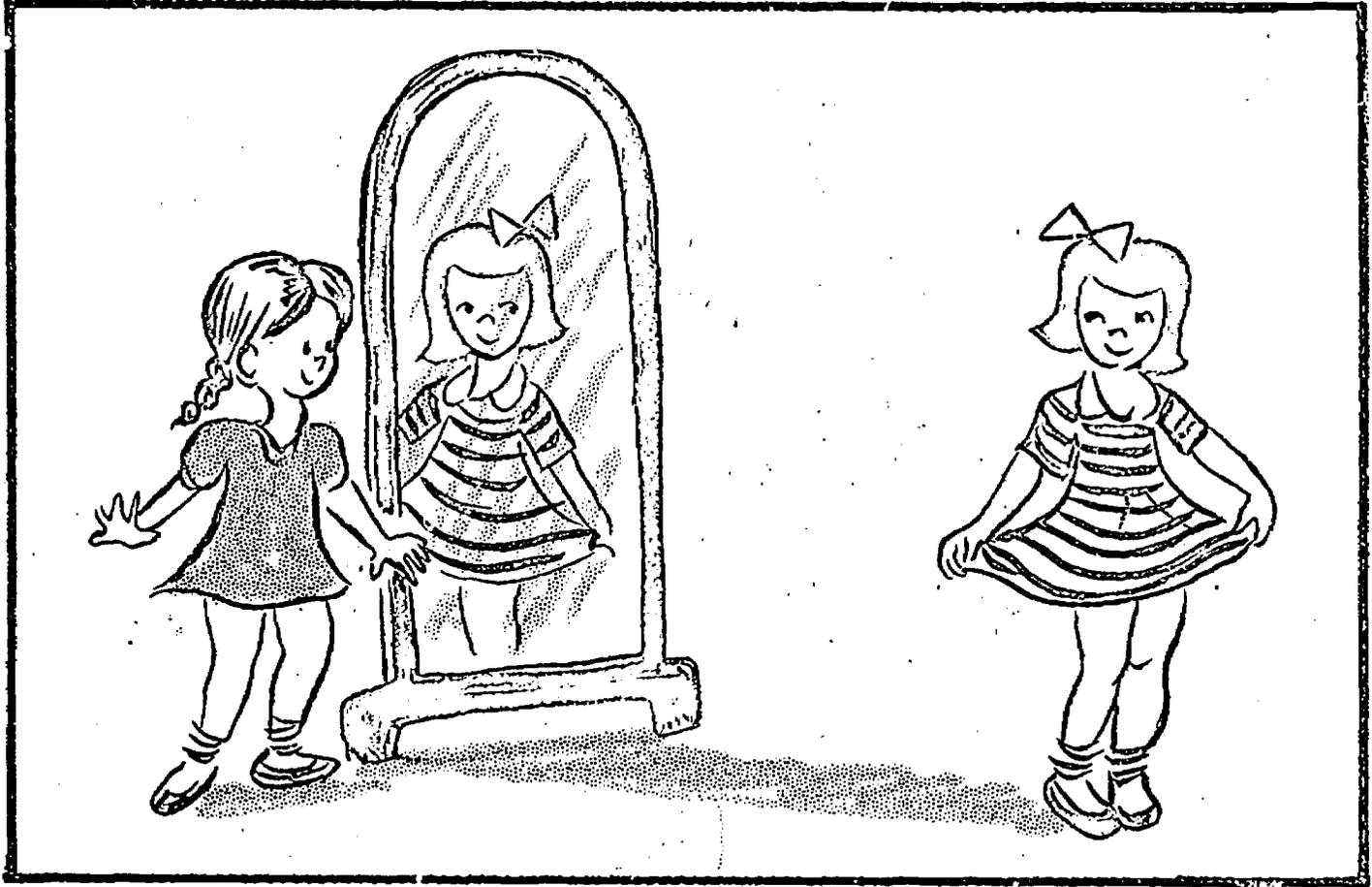




TOYS

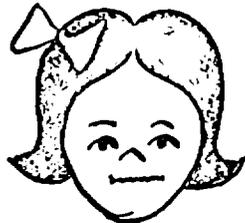


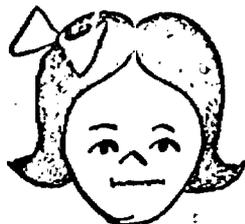
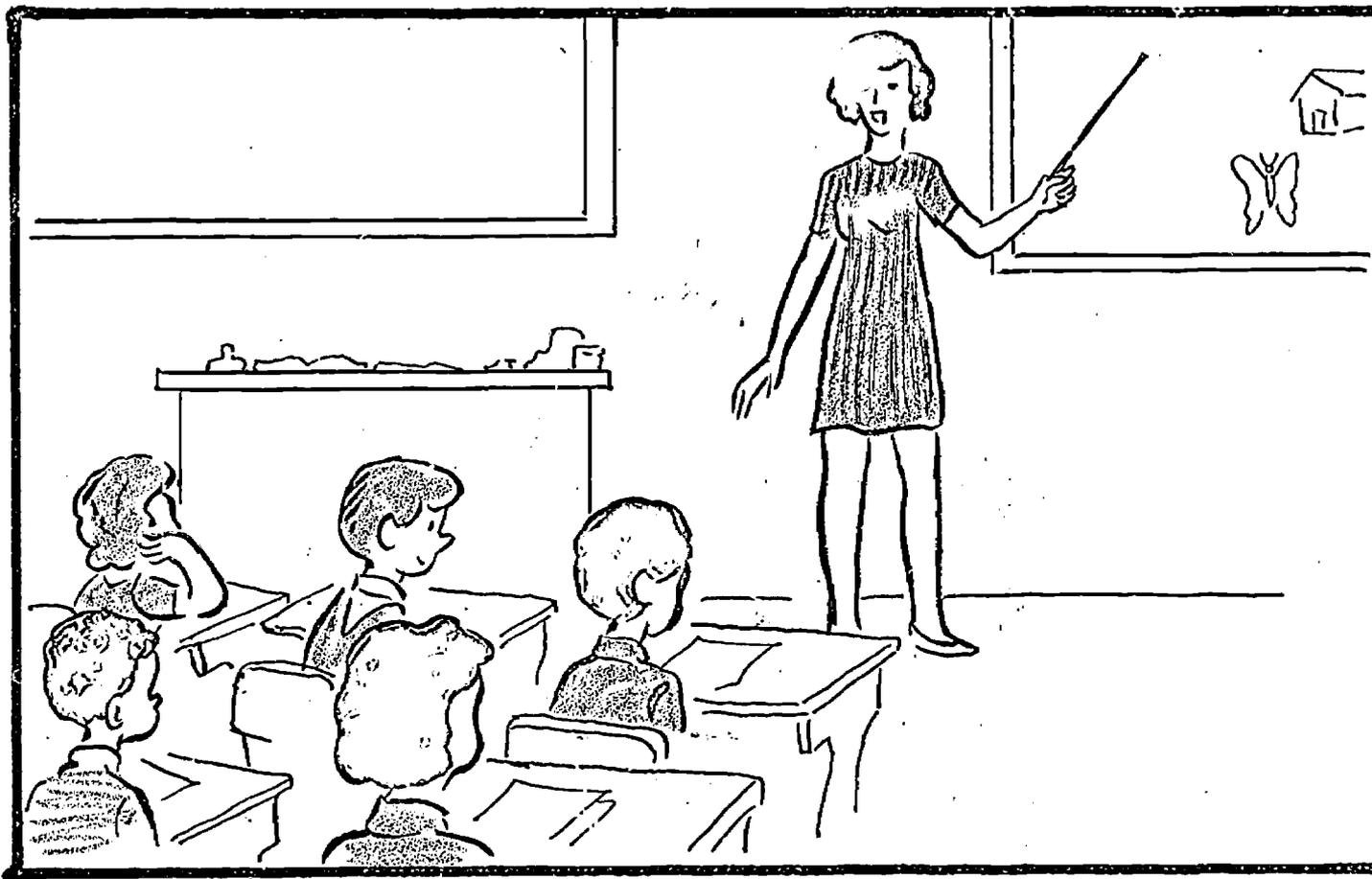




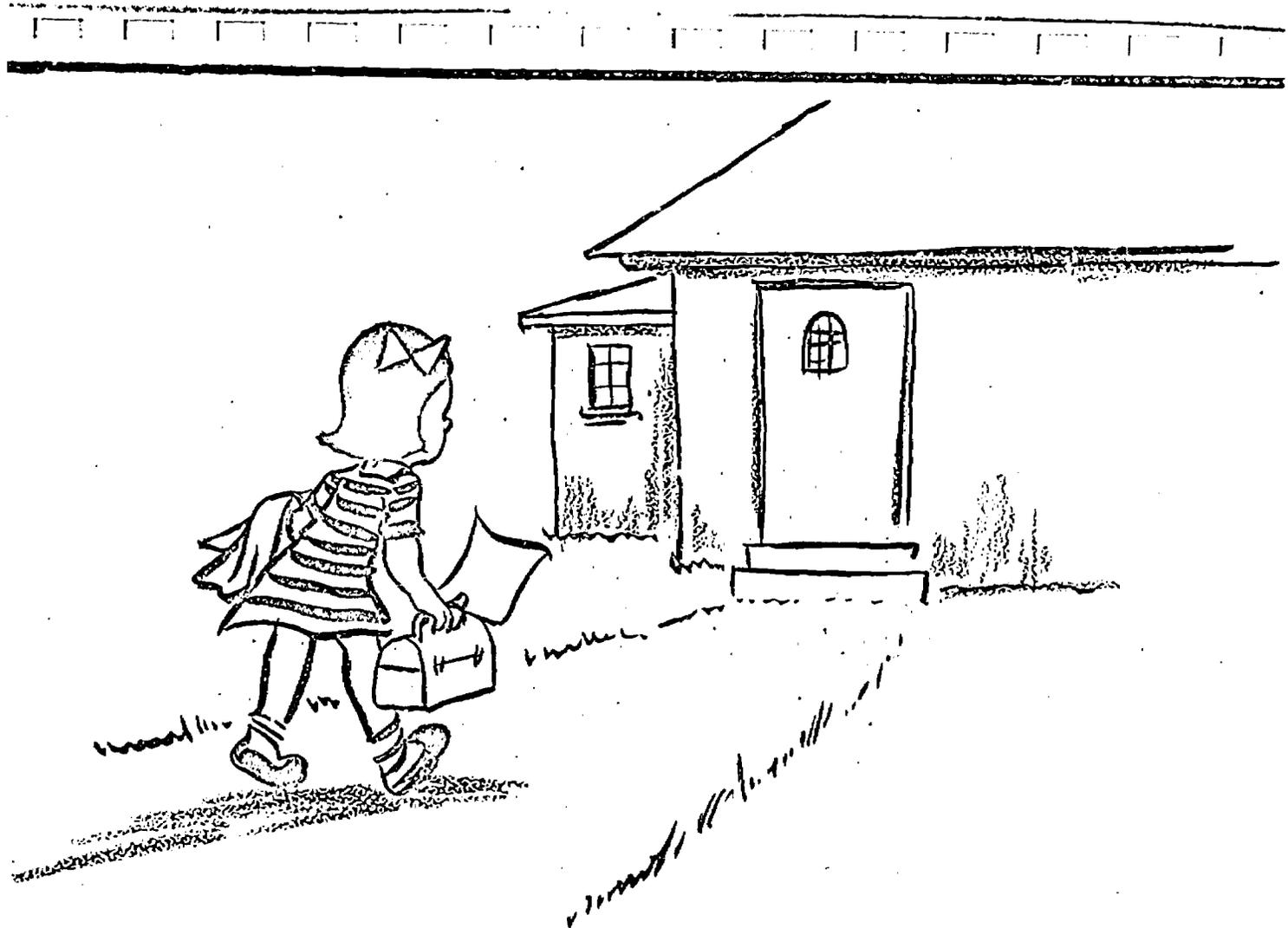
E 3x

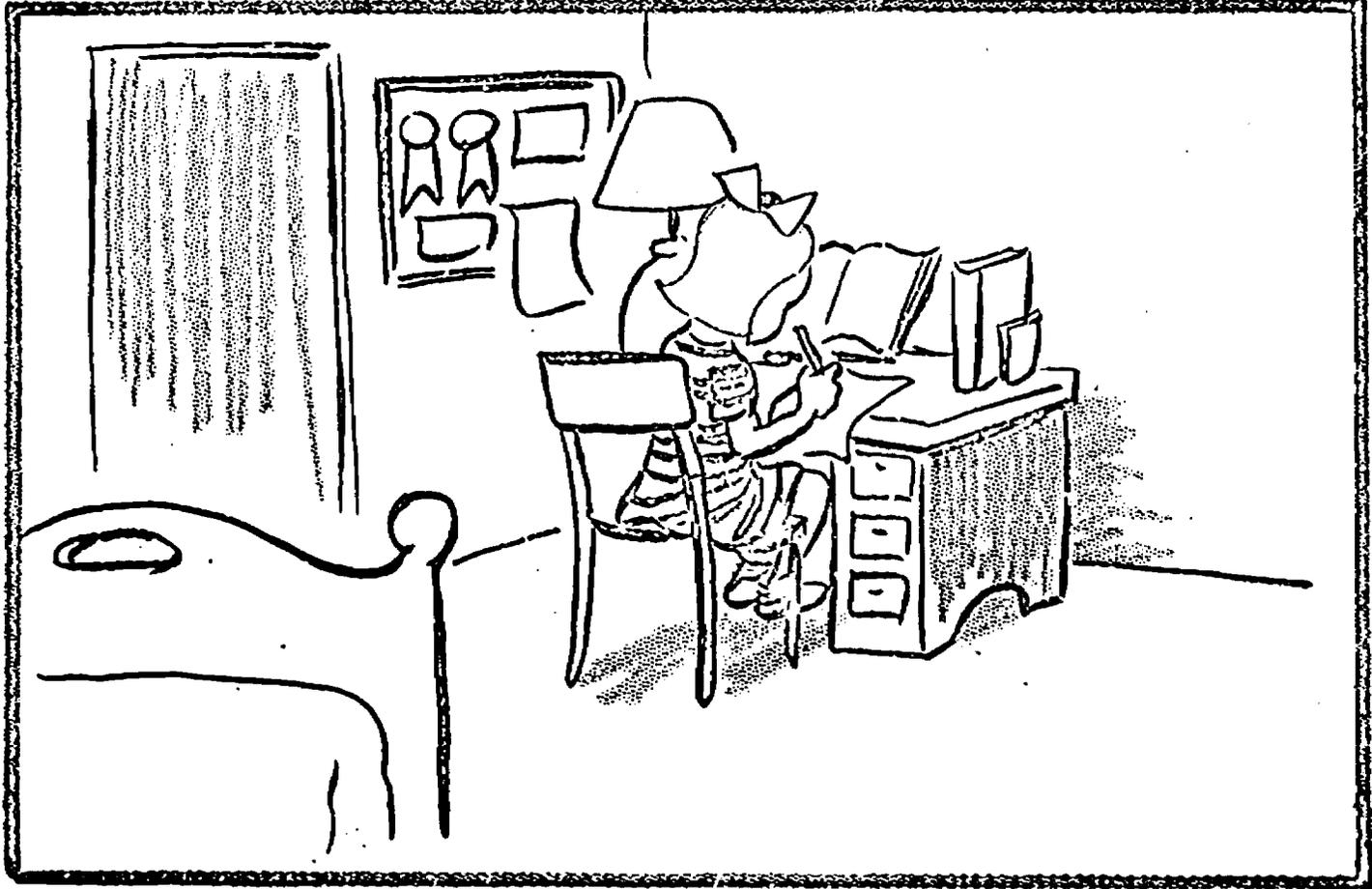


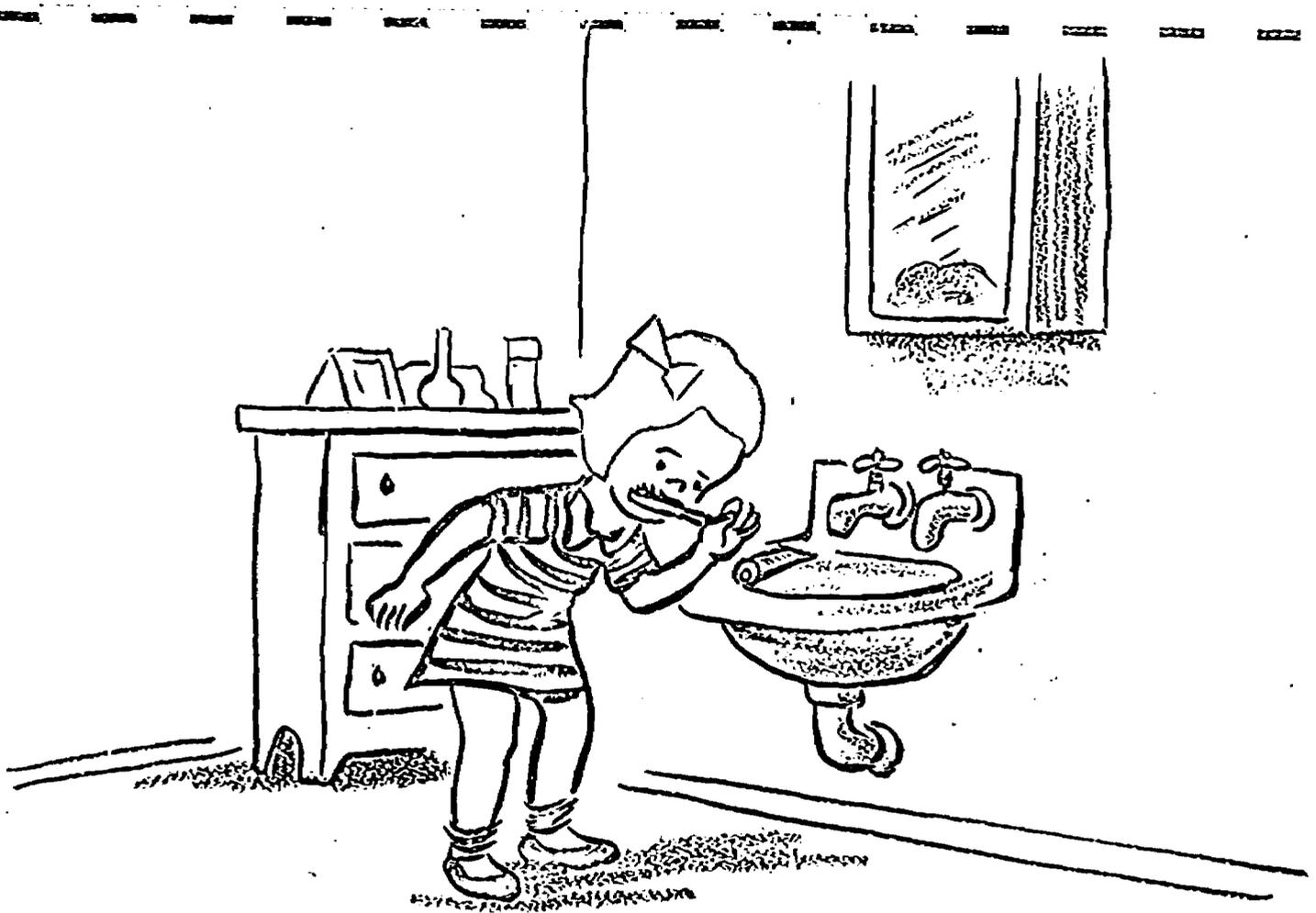


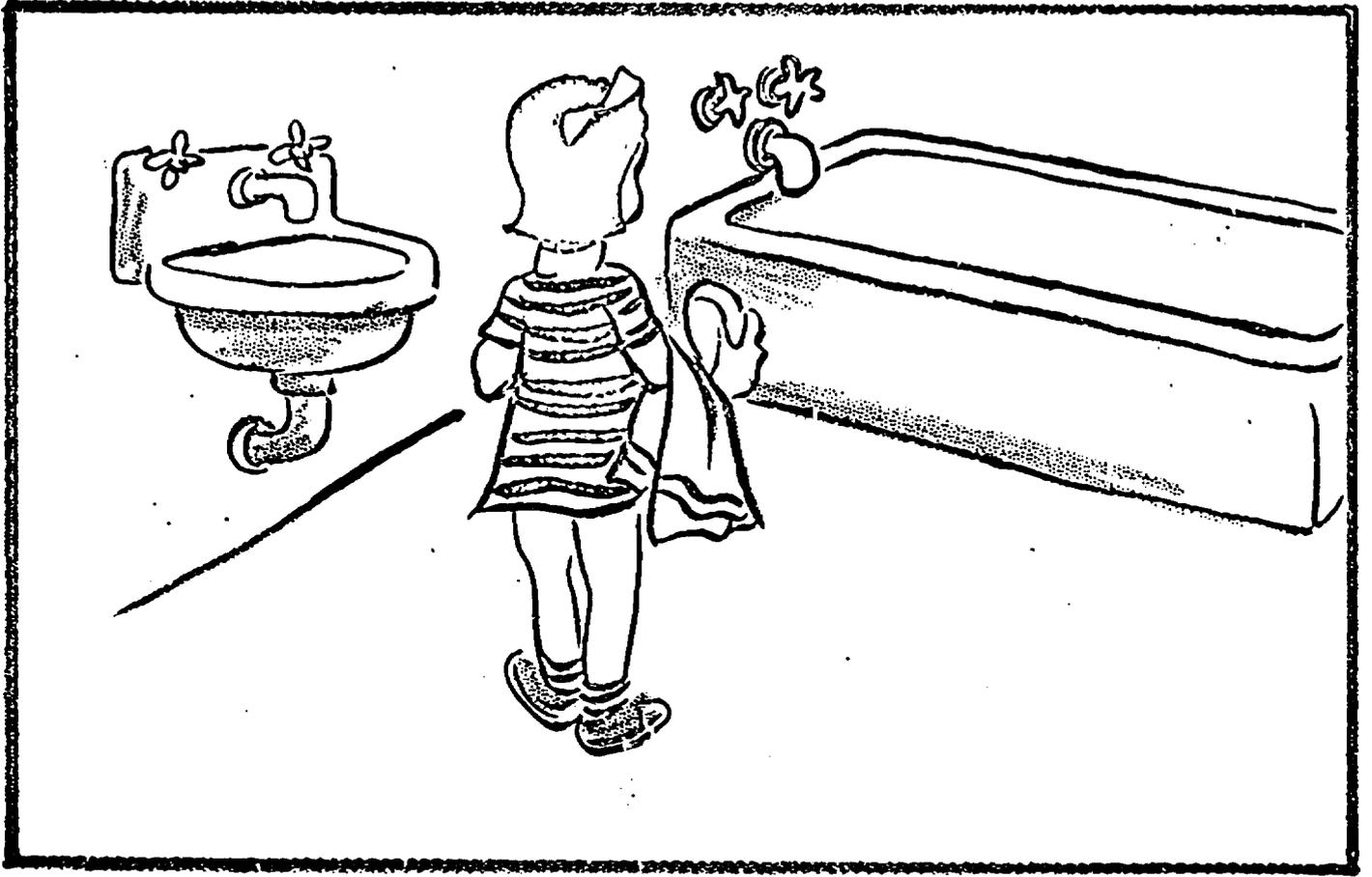








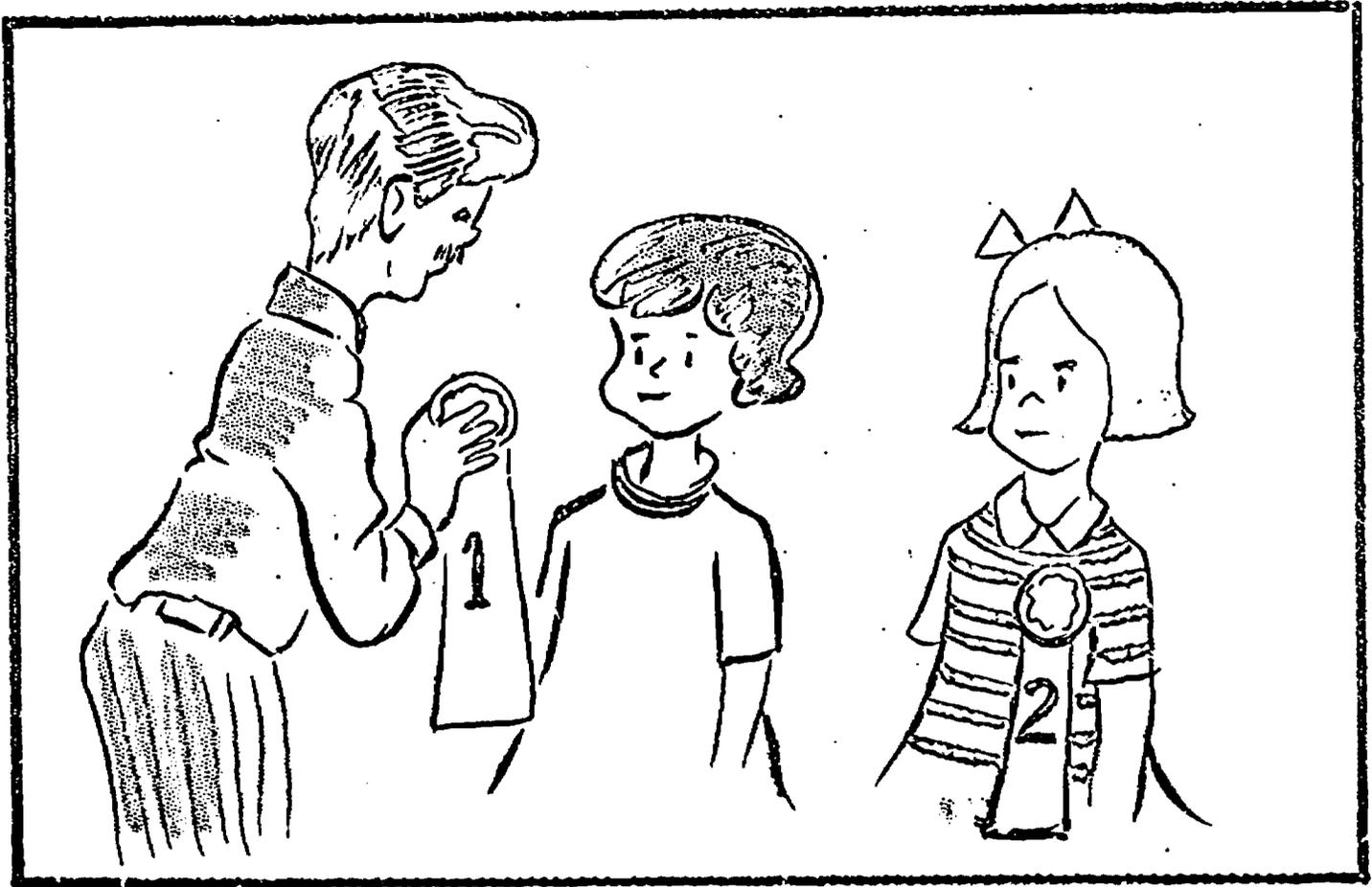




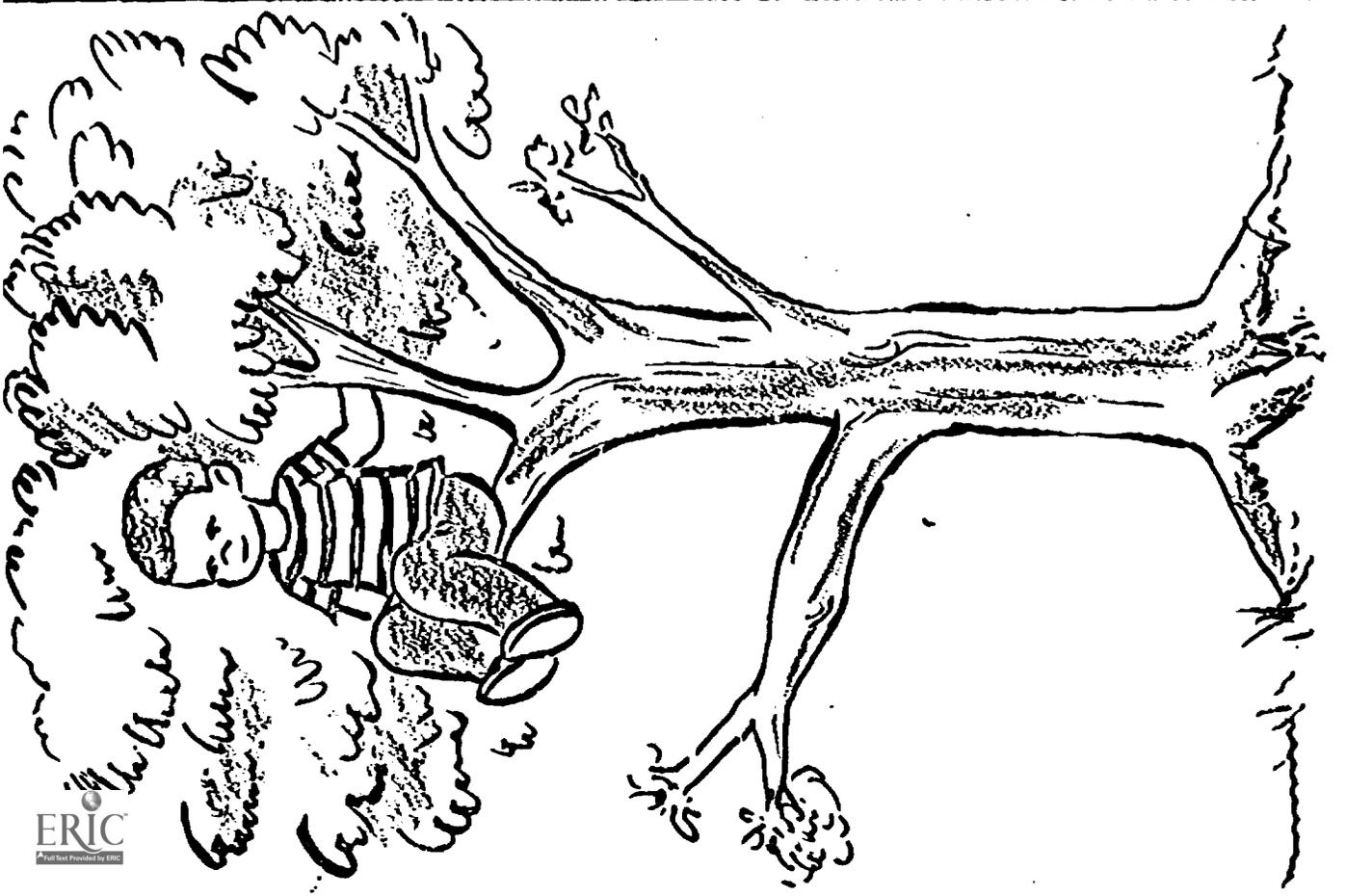
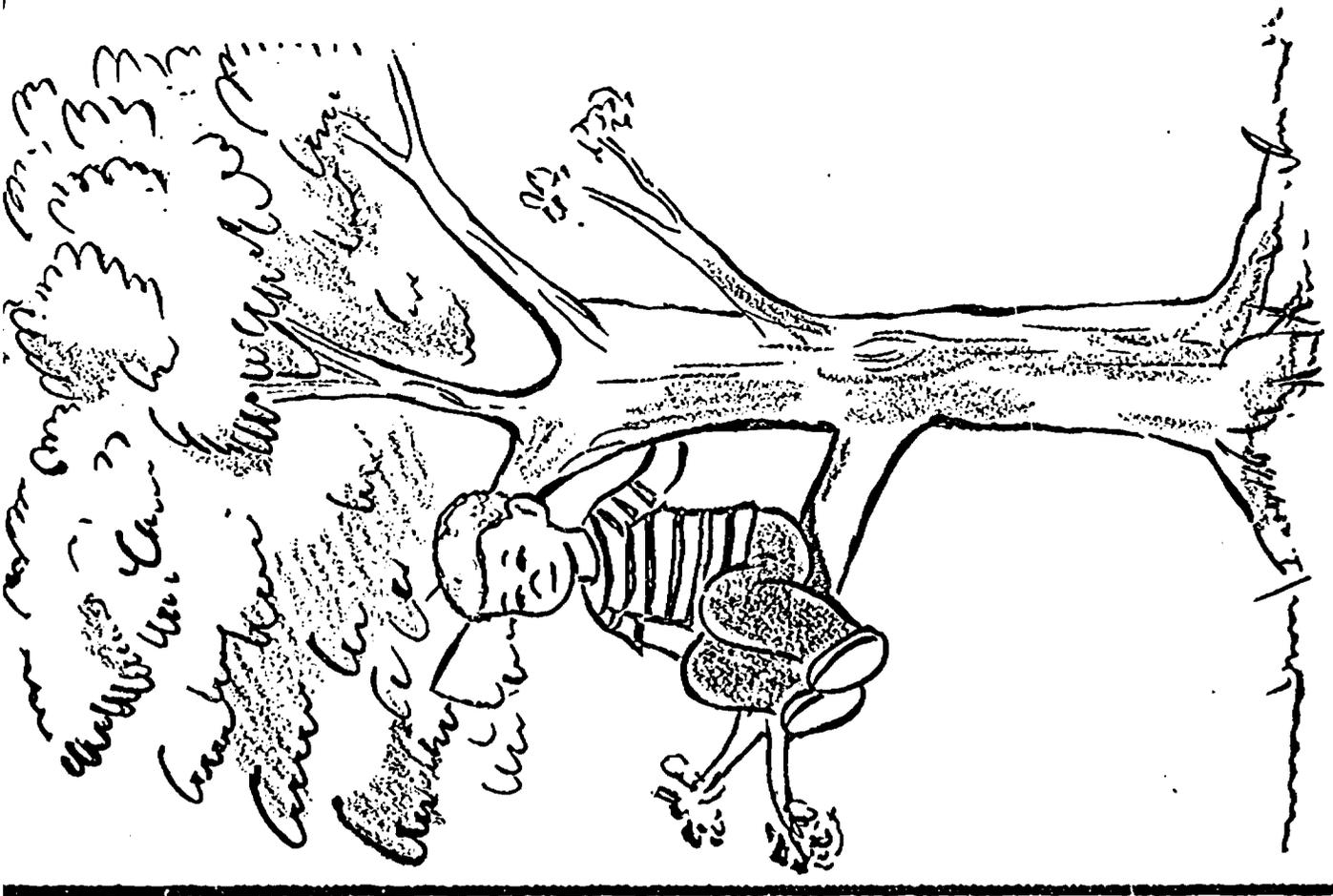


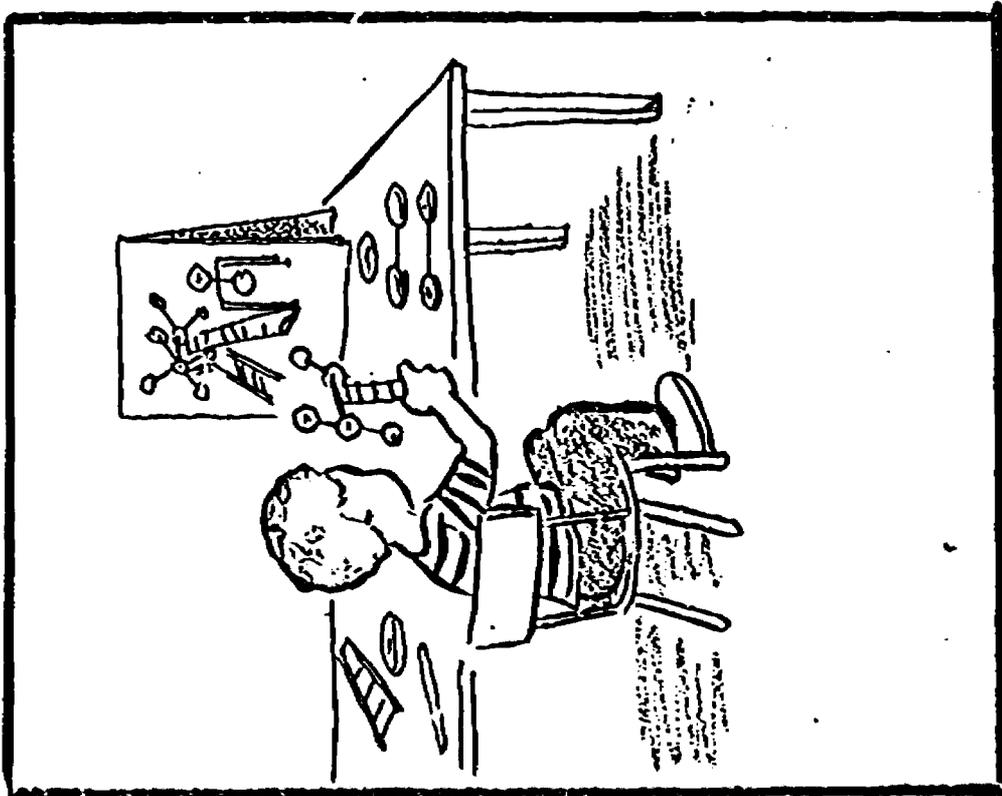
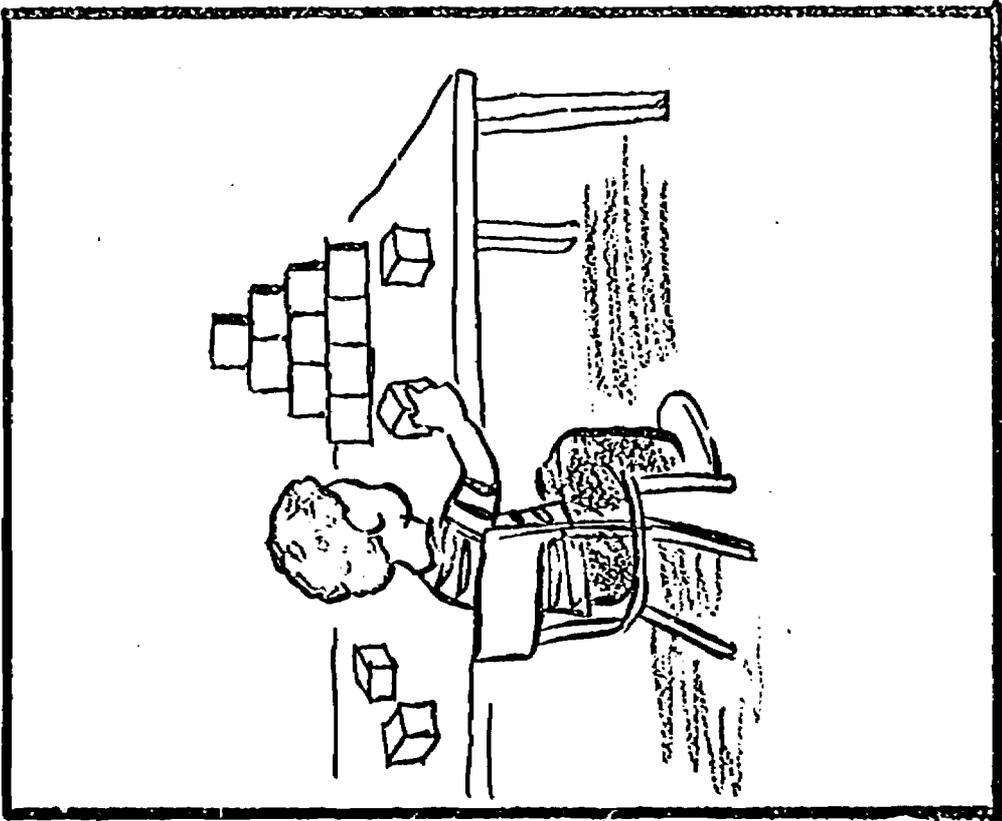
L3x

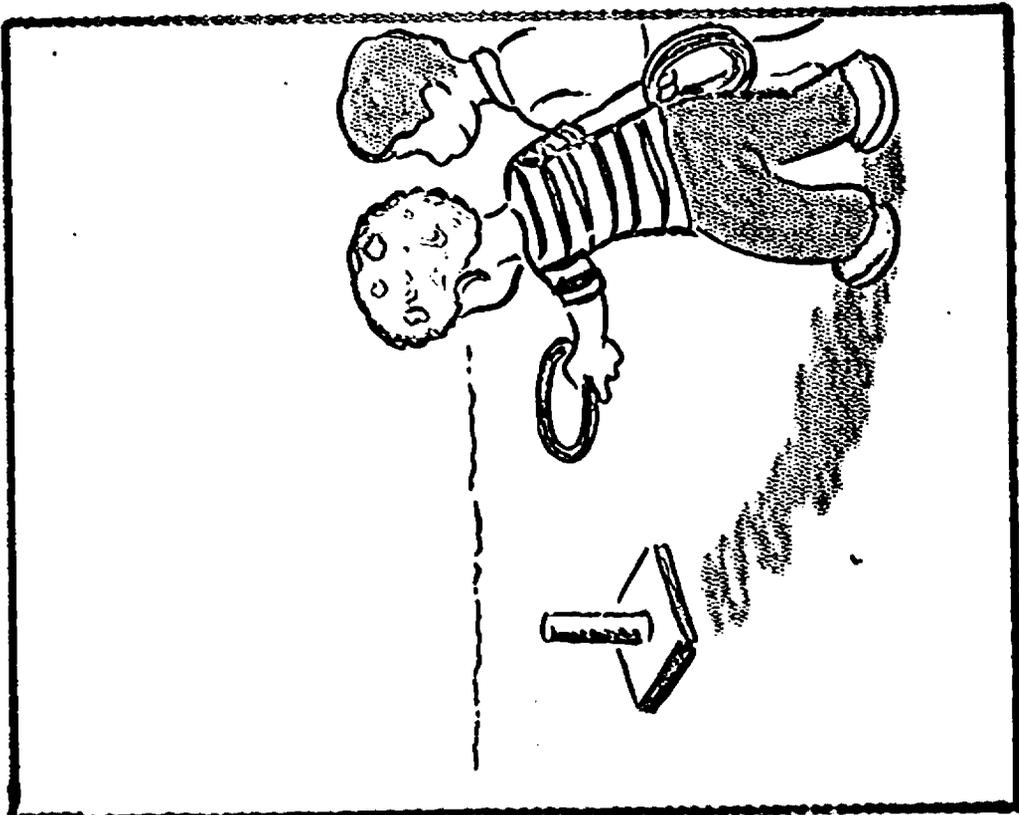
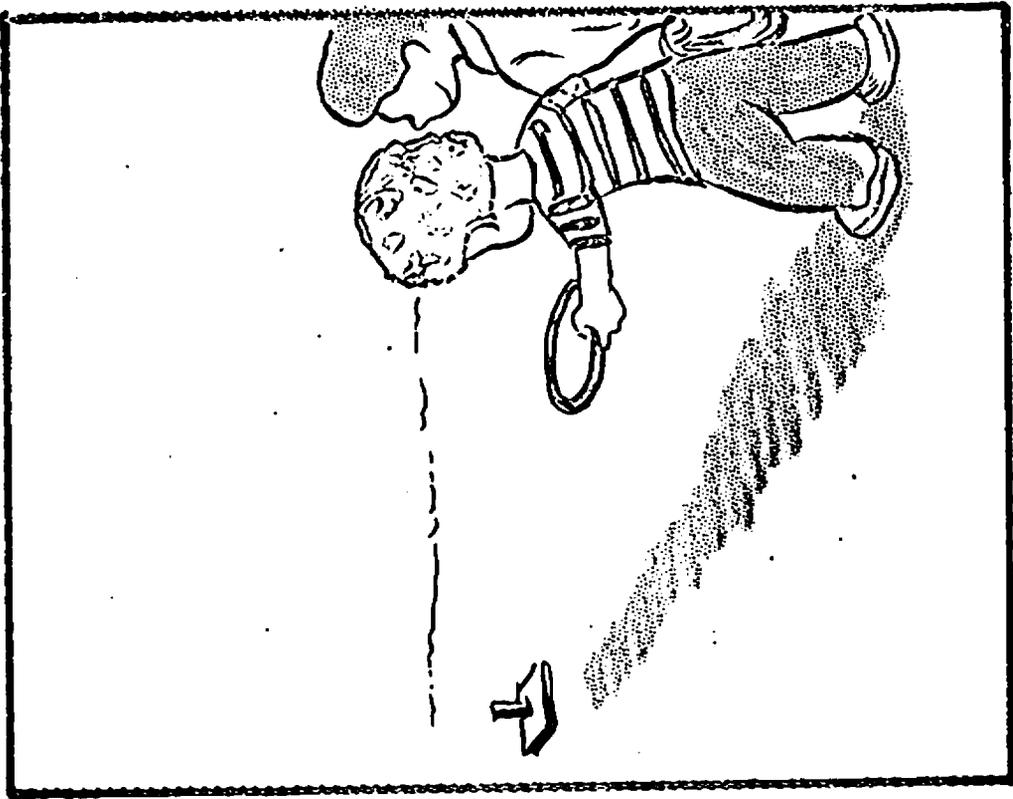


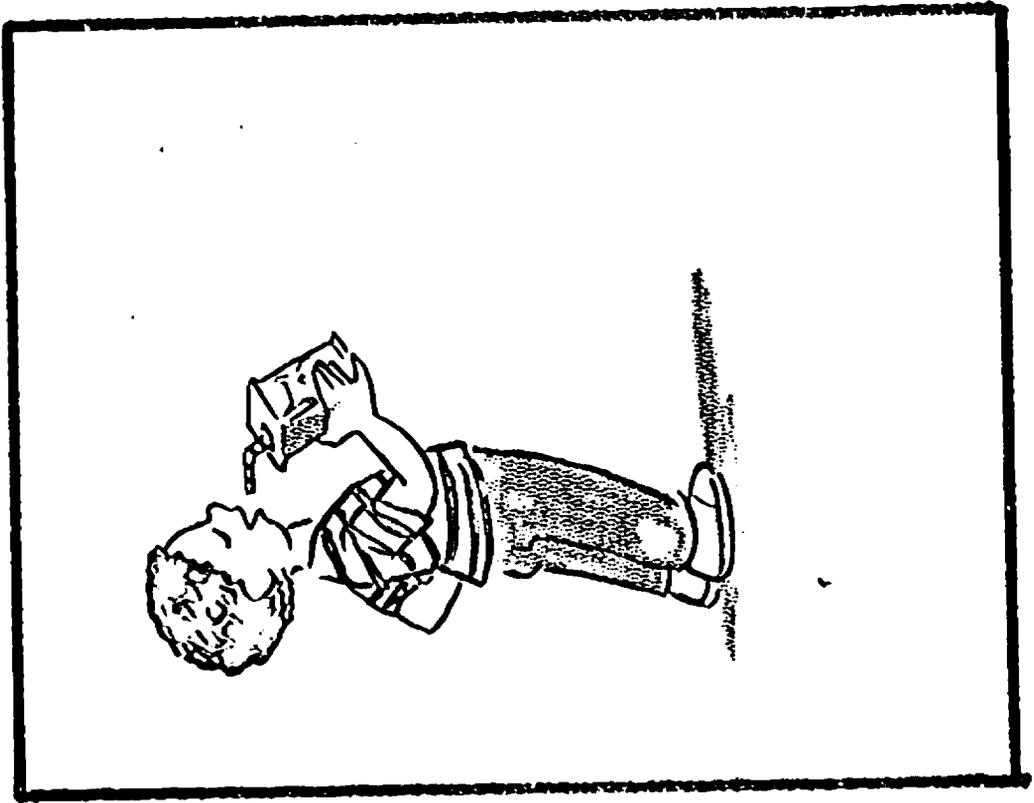
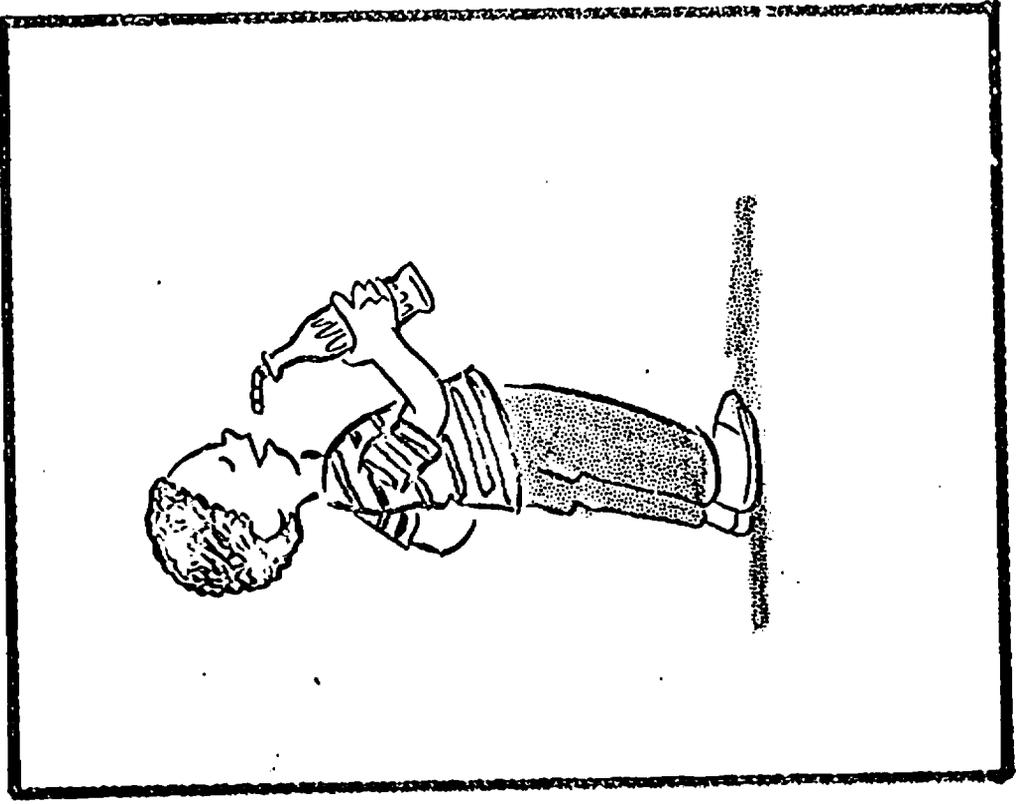


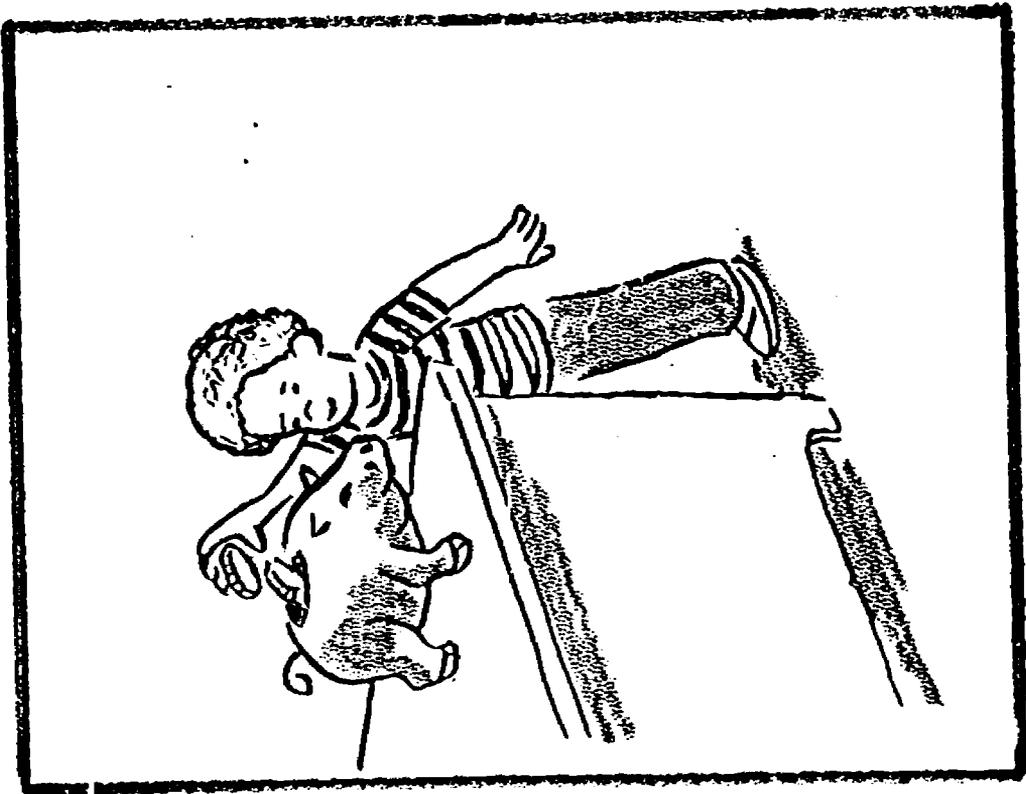
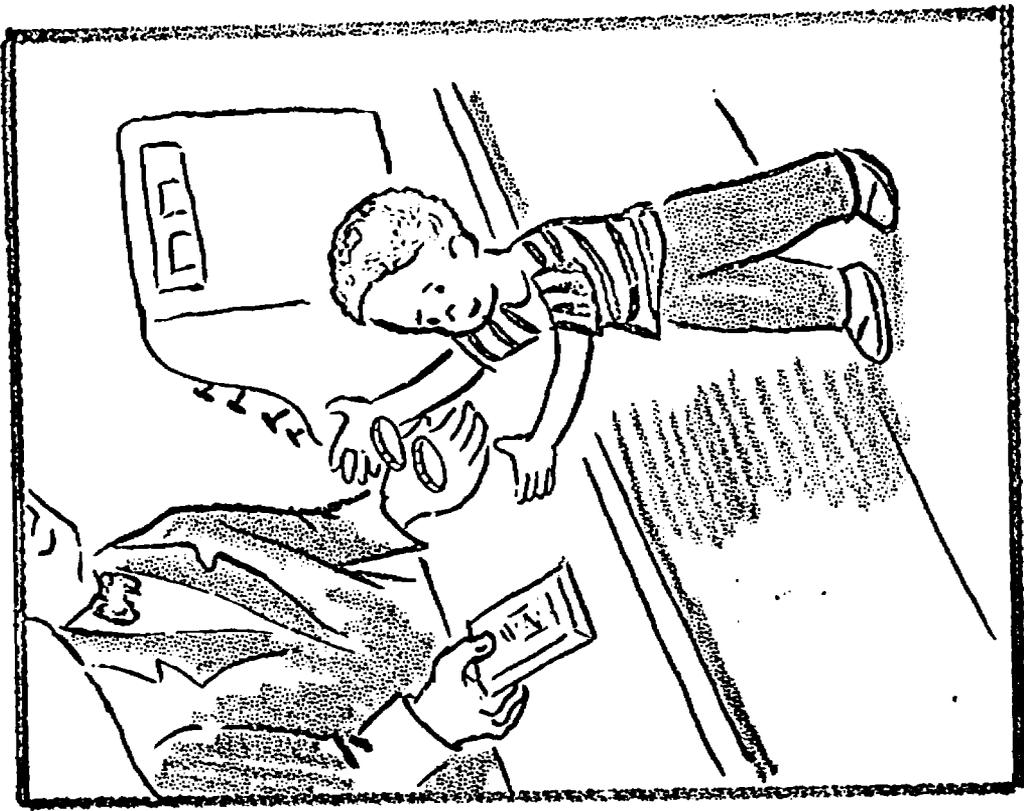


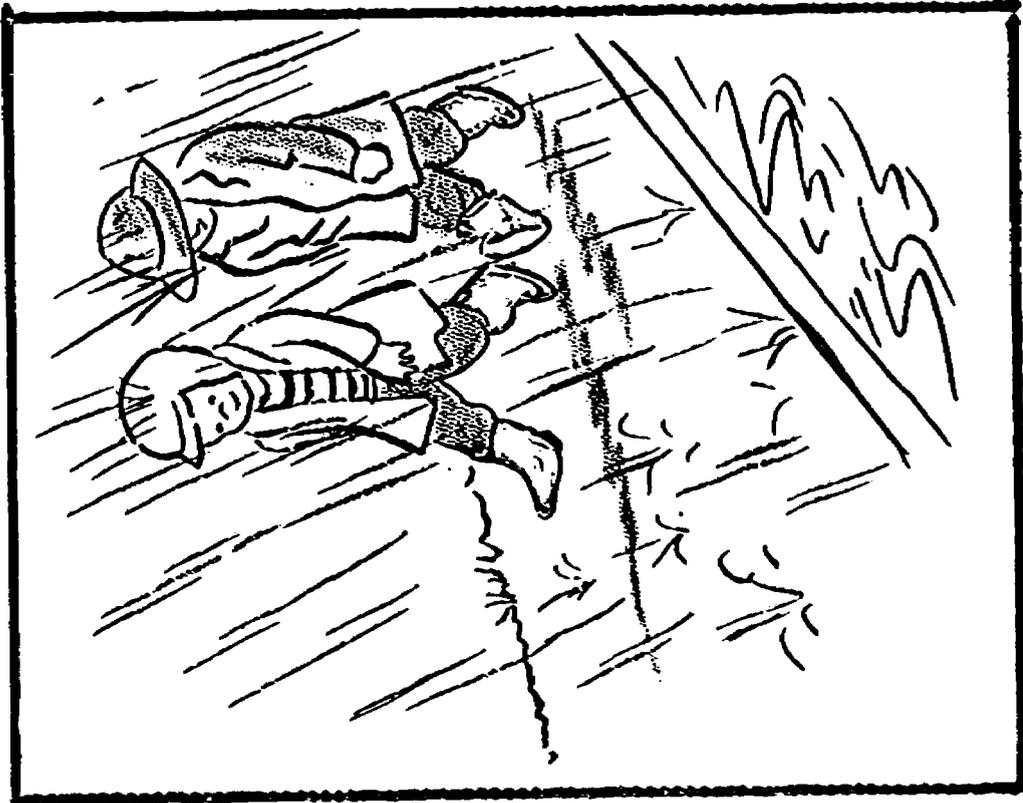
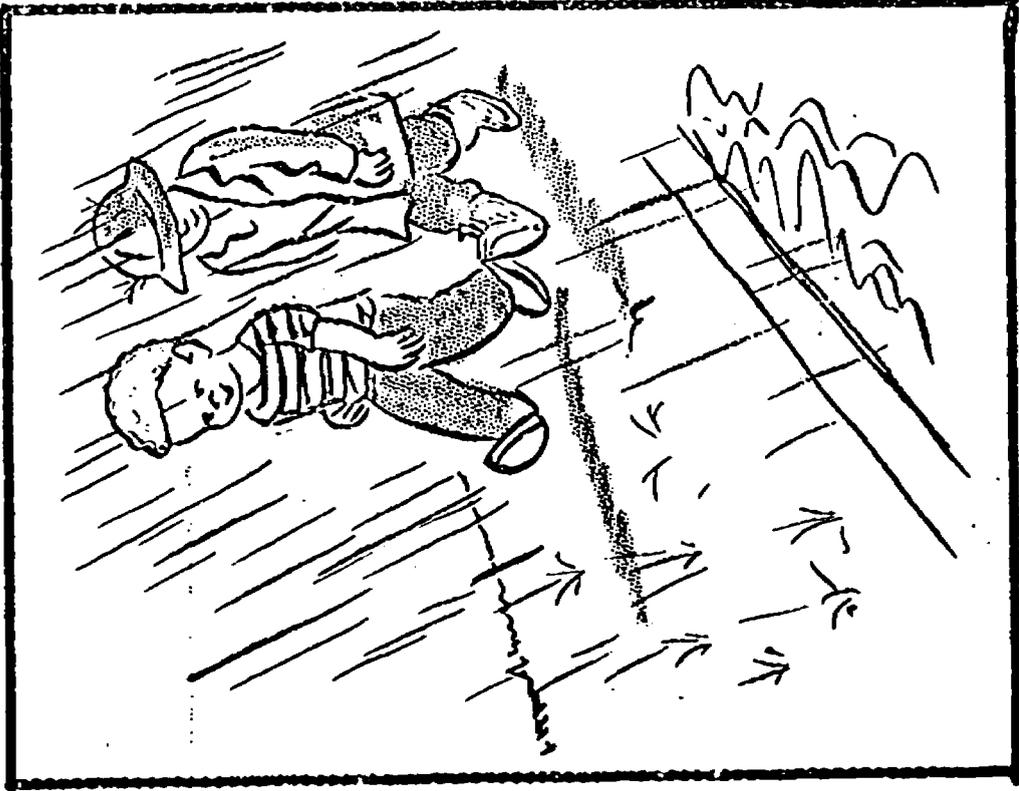


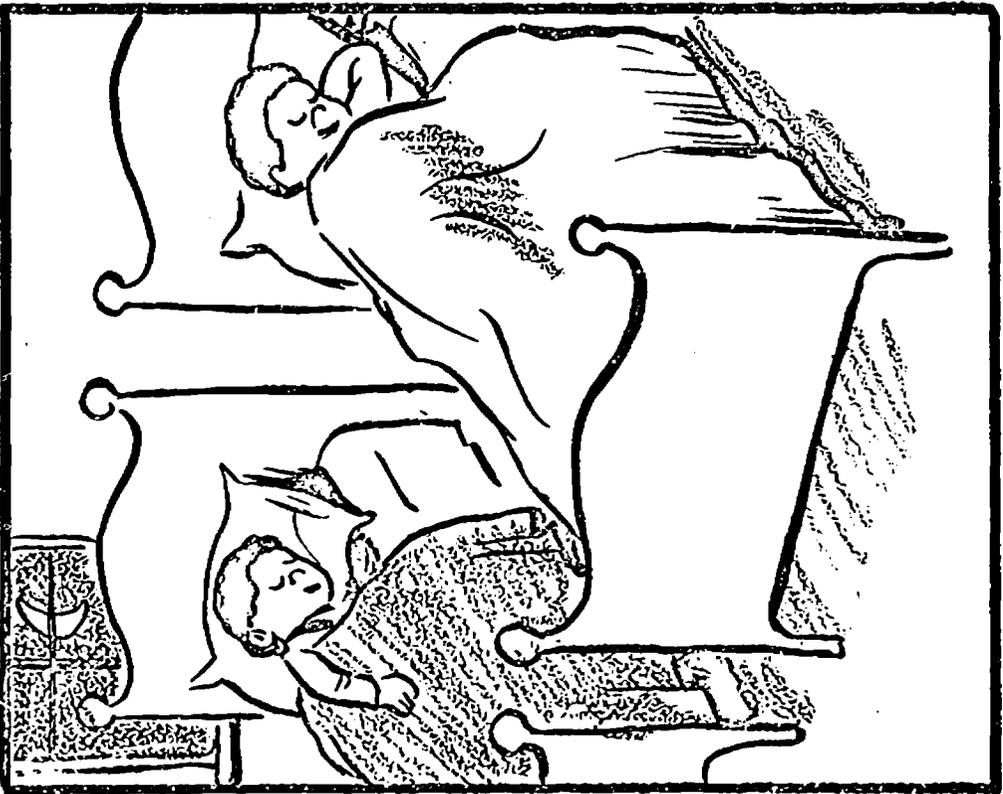
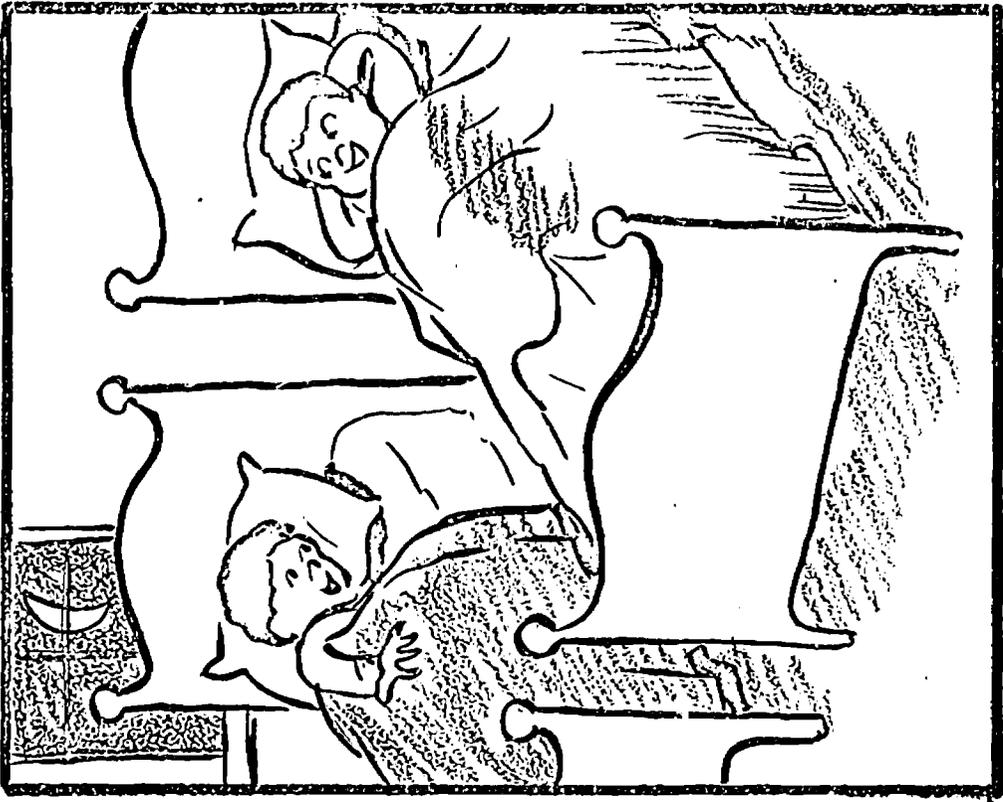


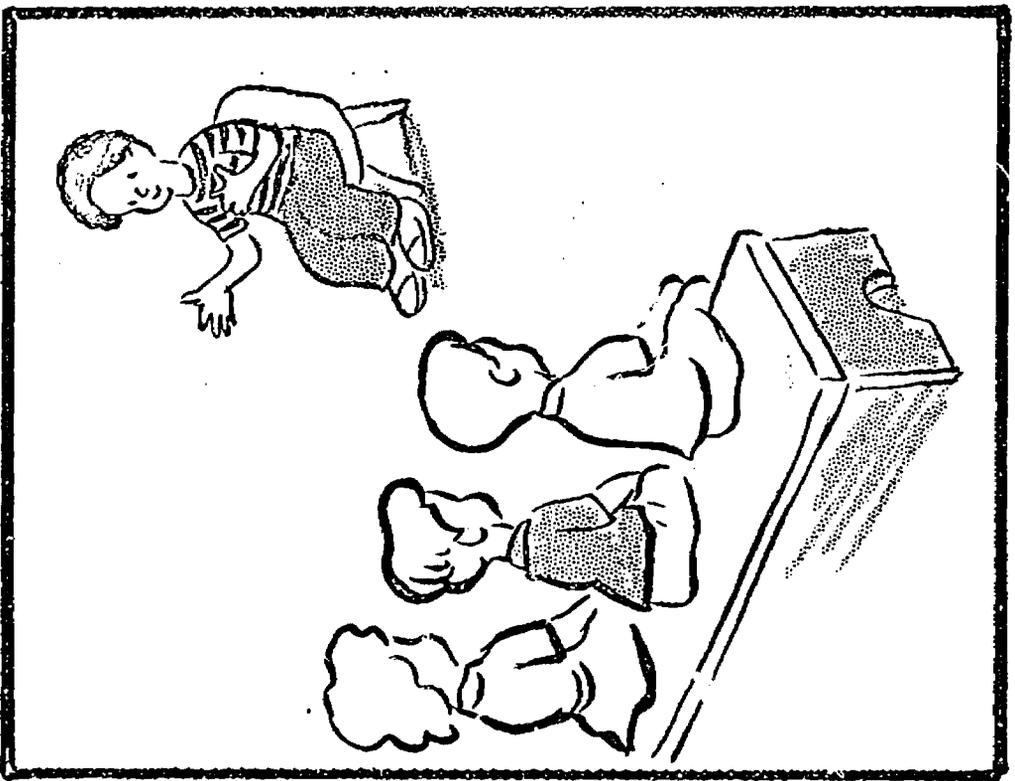
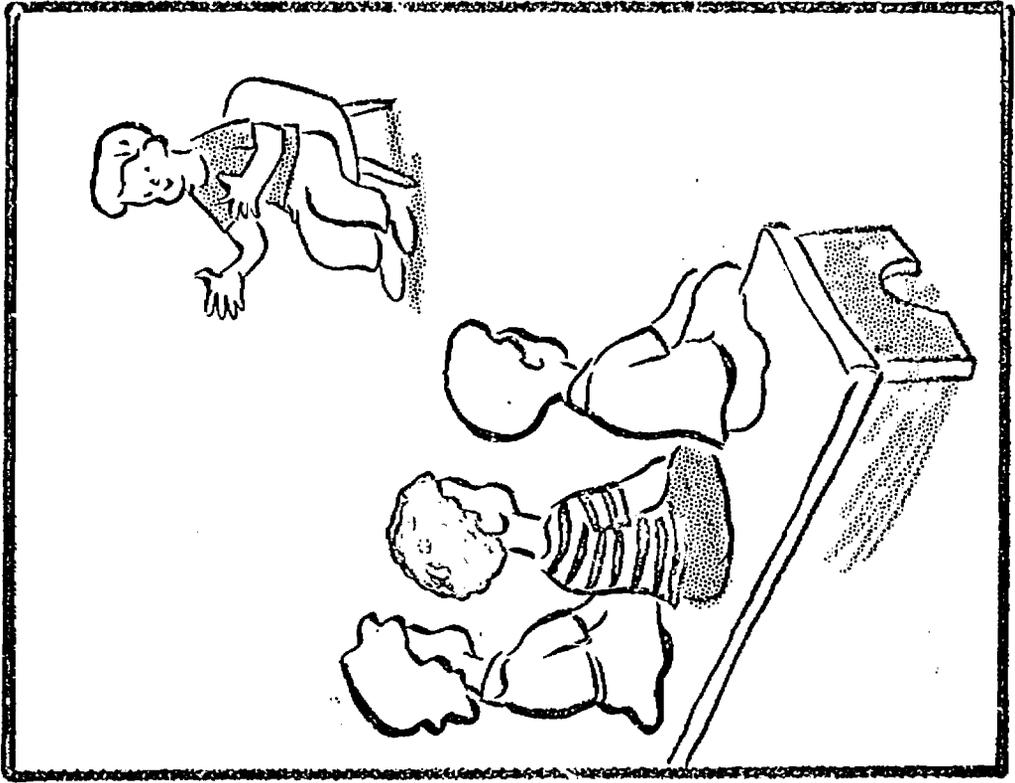


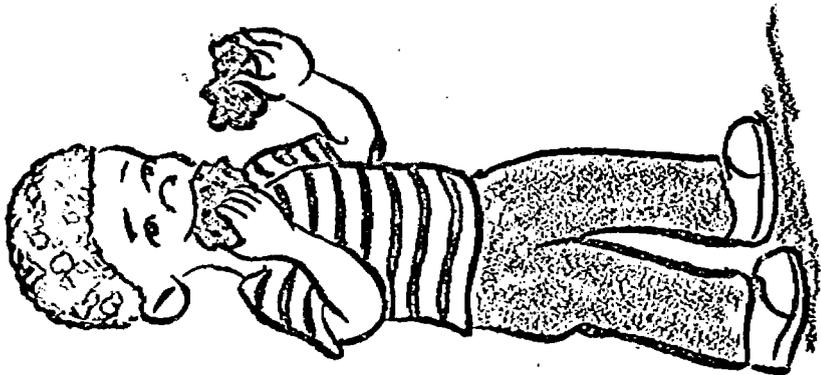
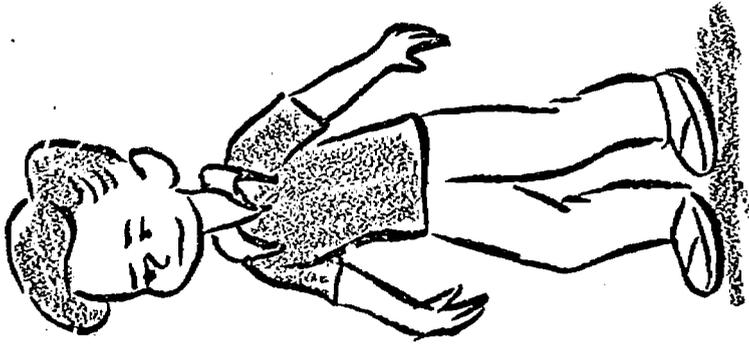
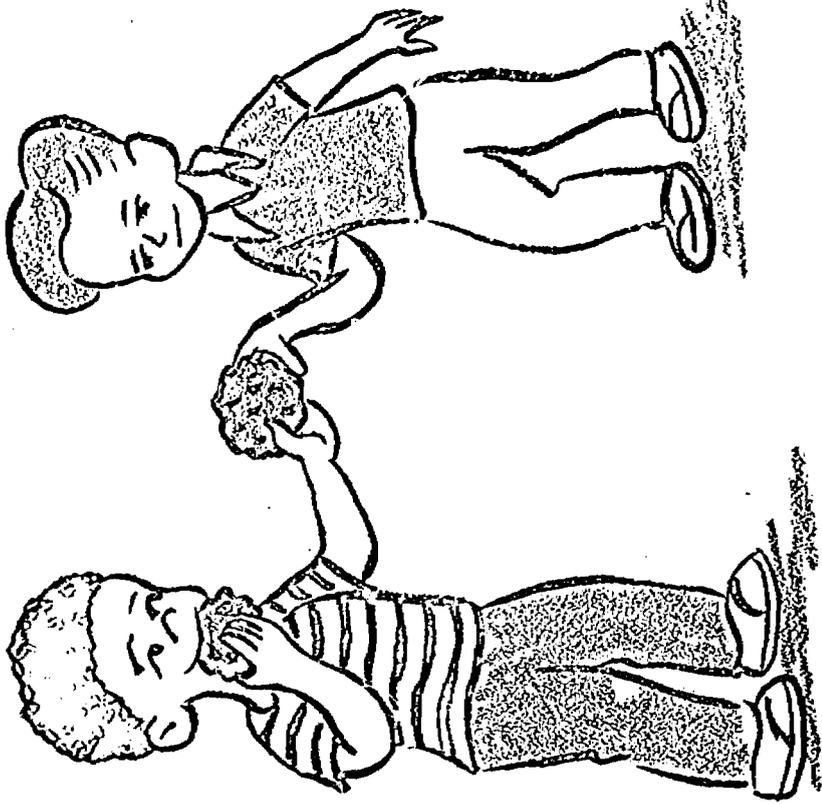


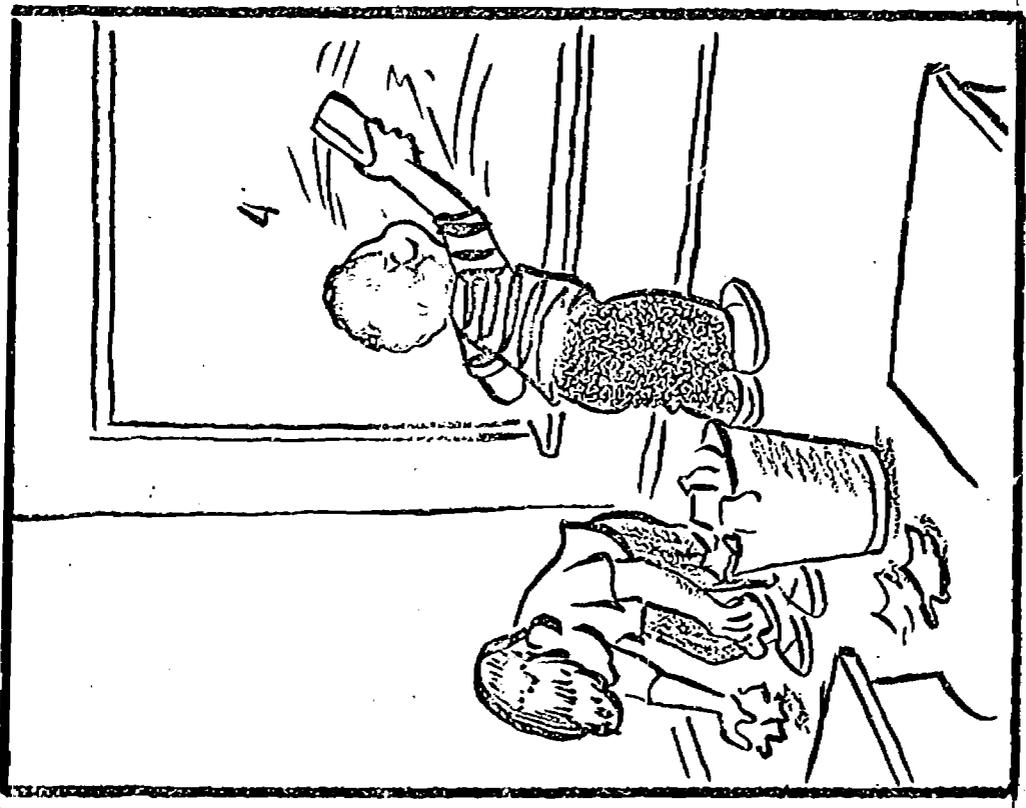
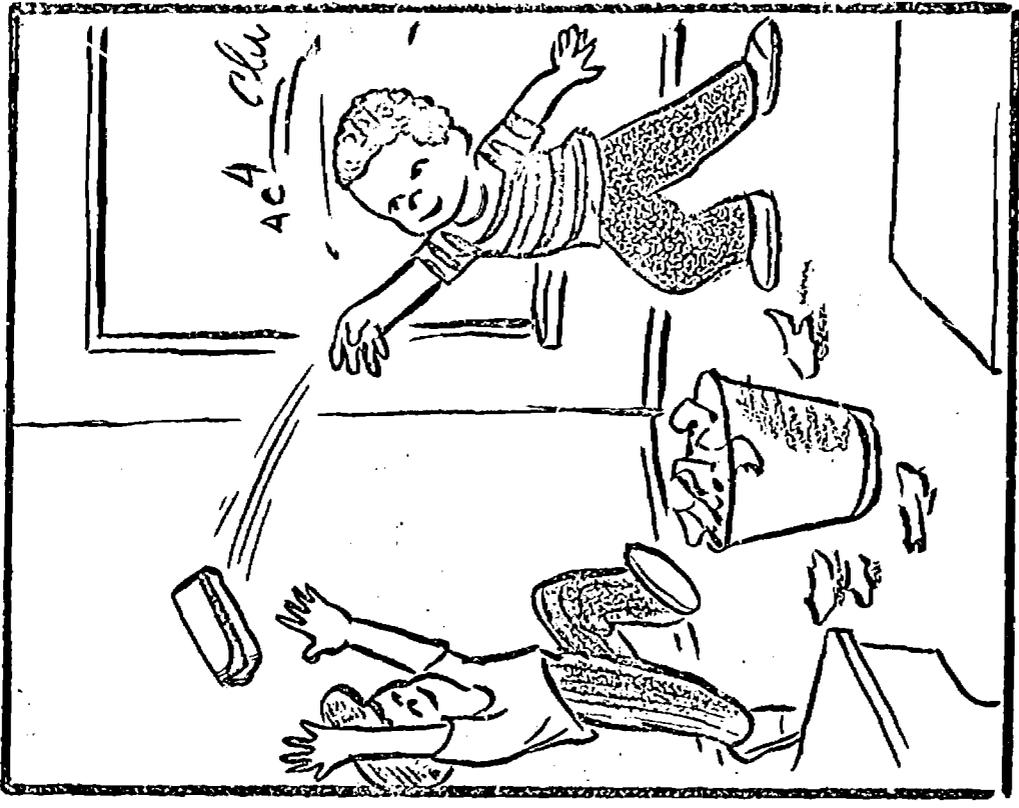


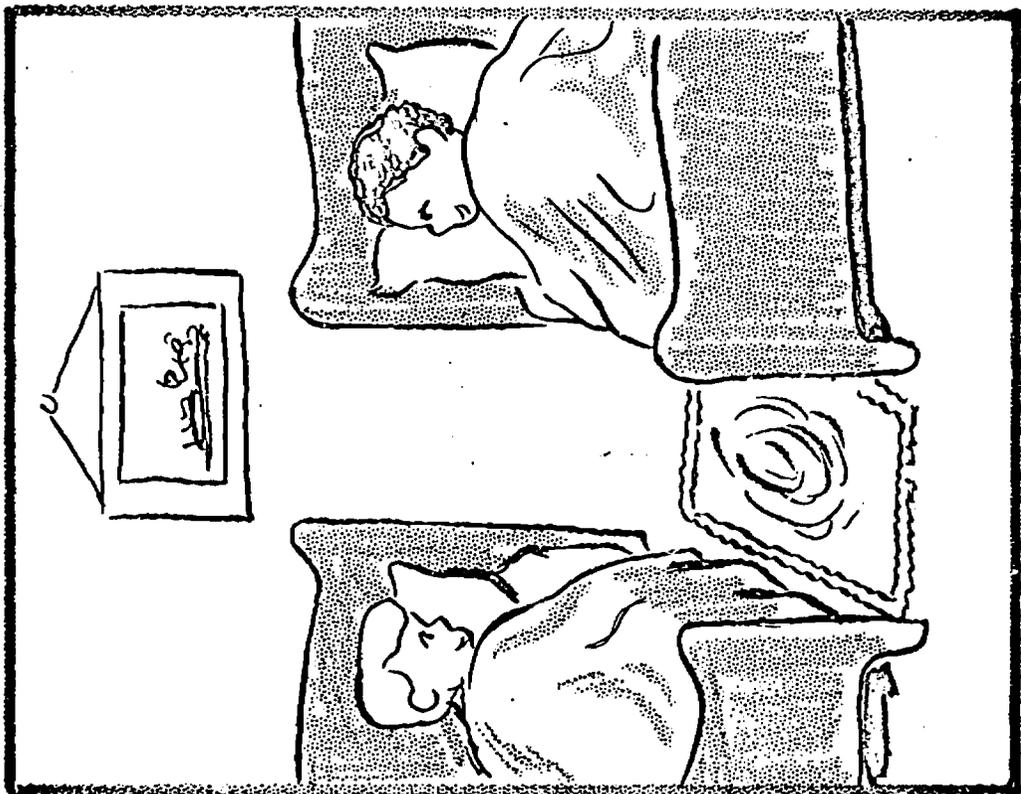
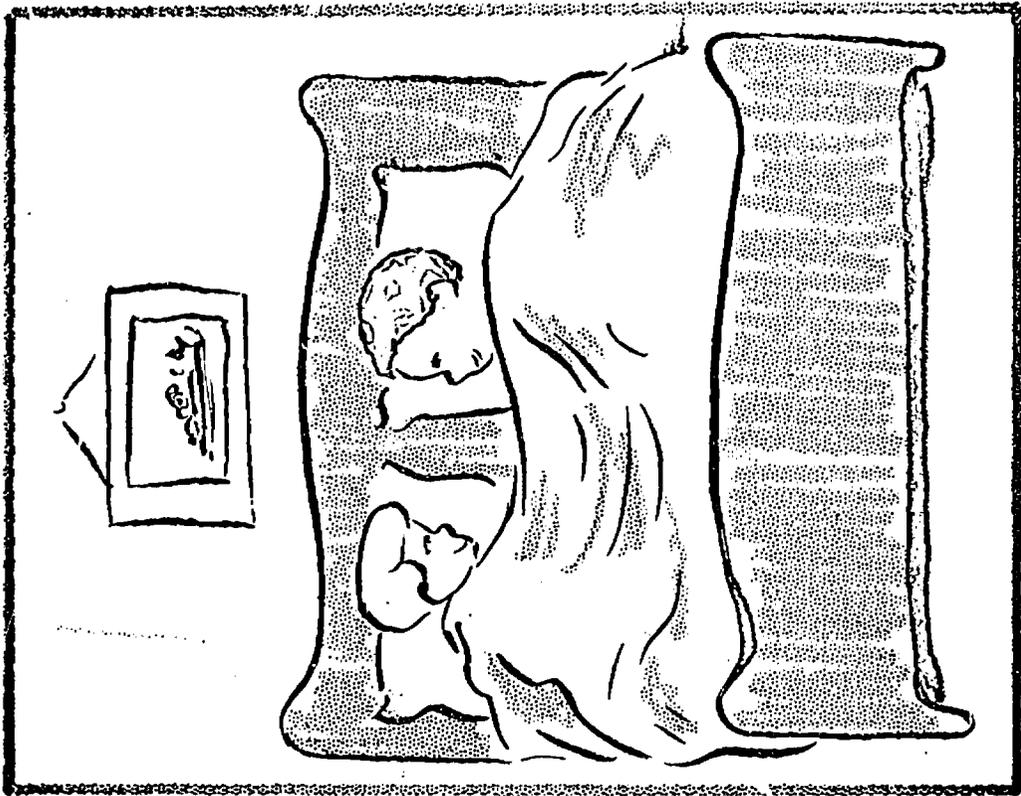


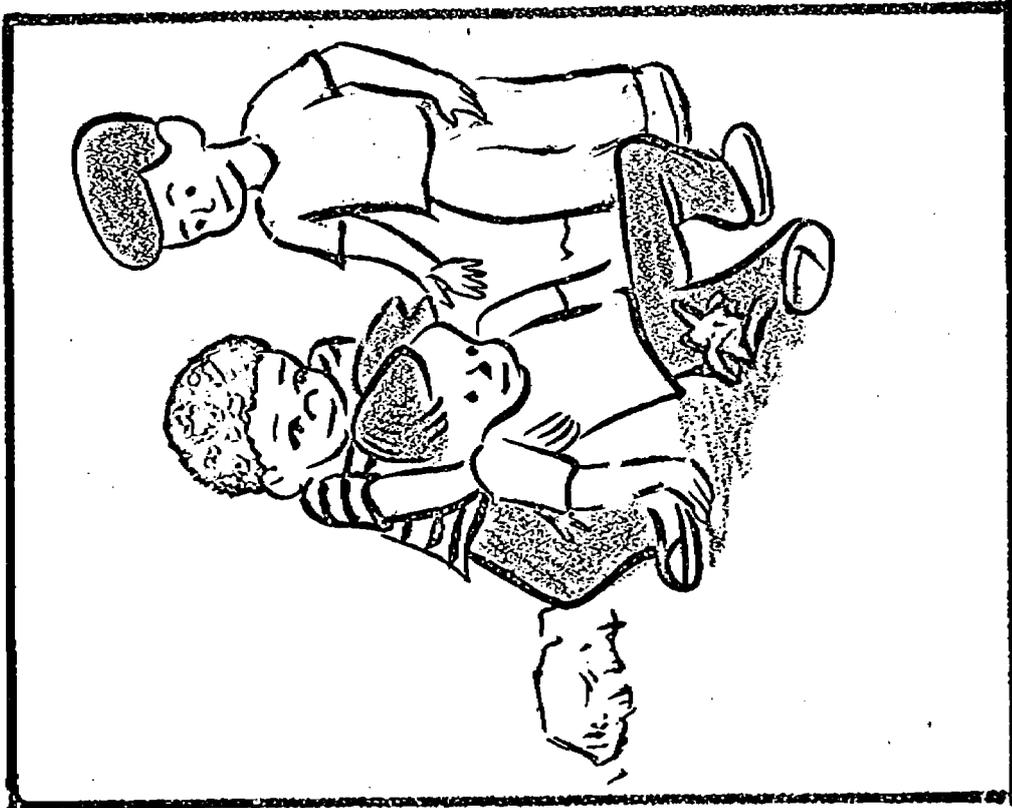




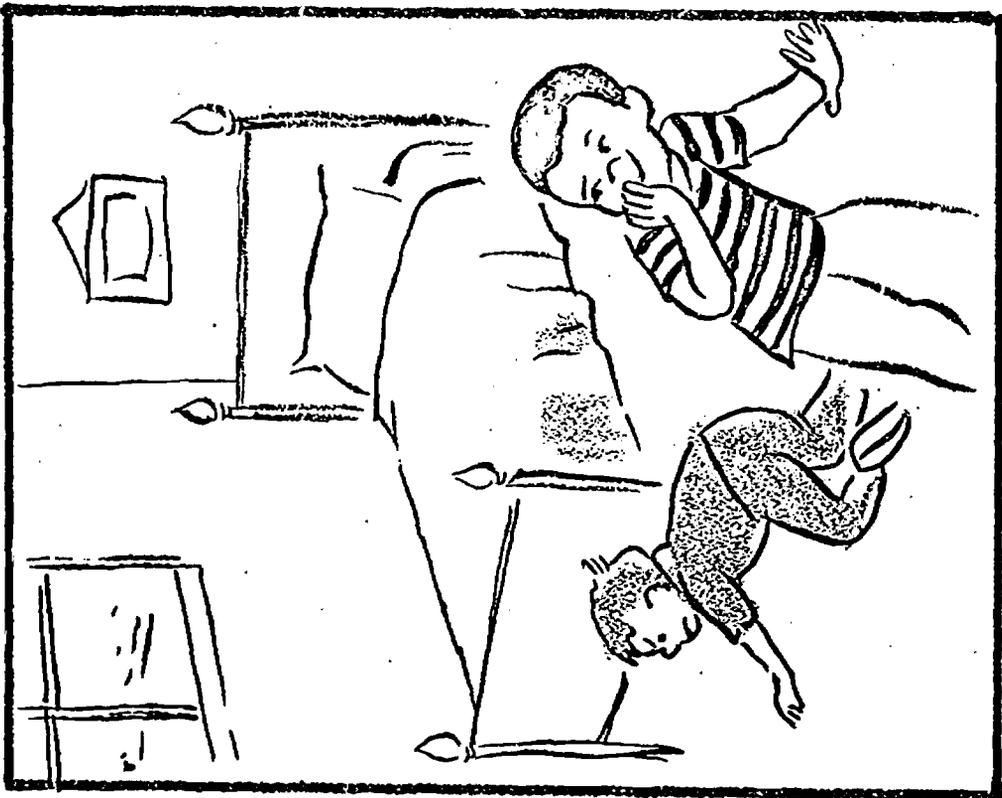
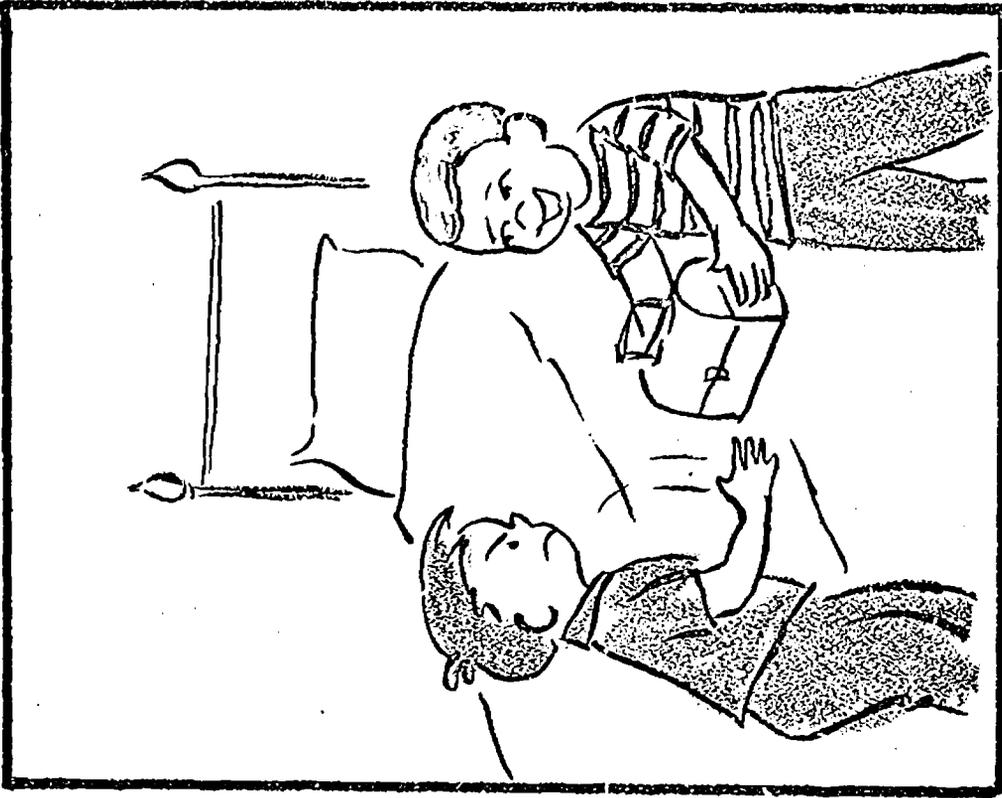


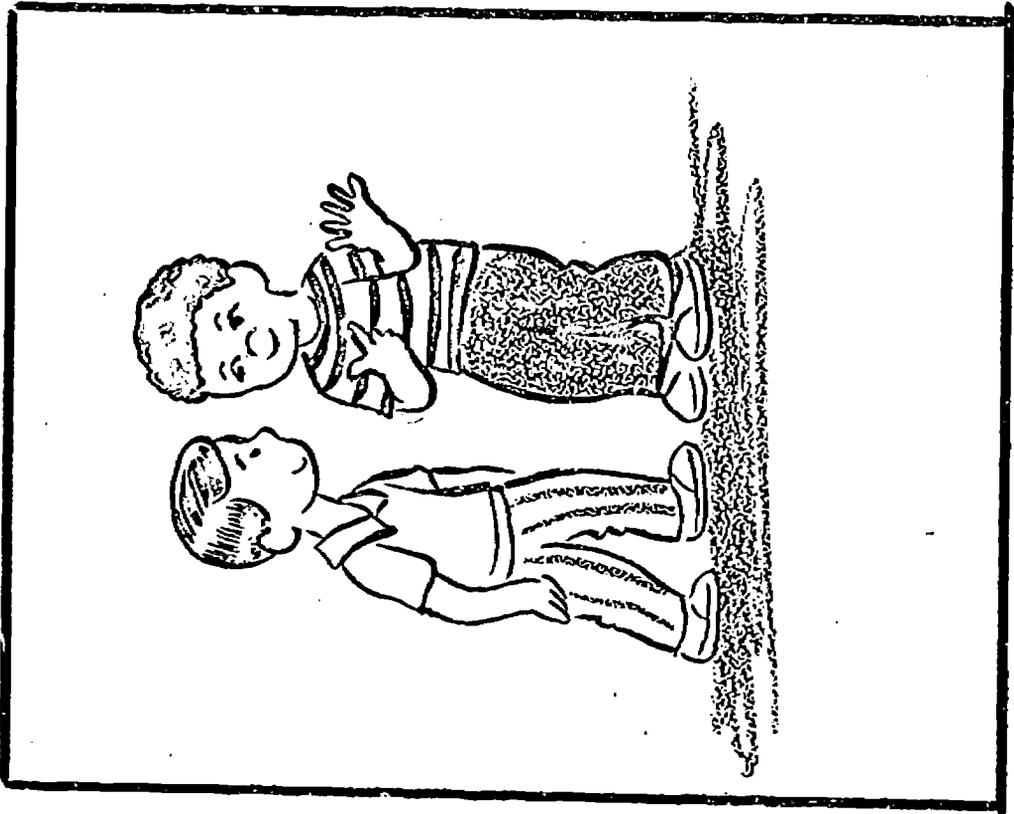


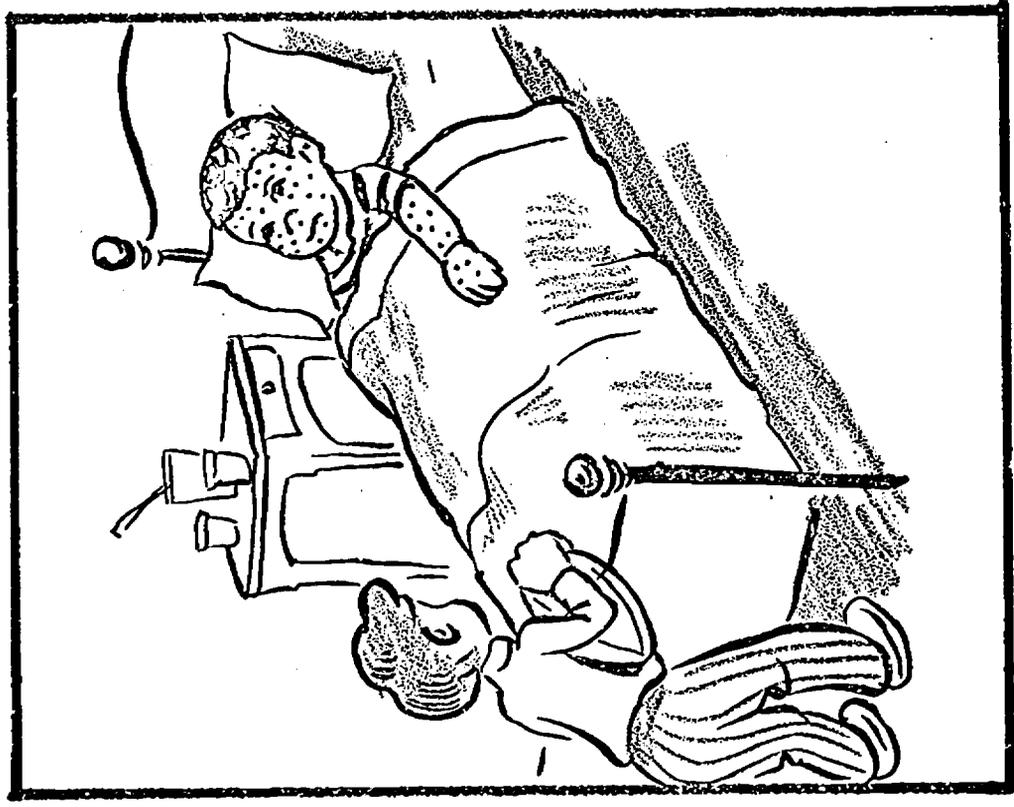
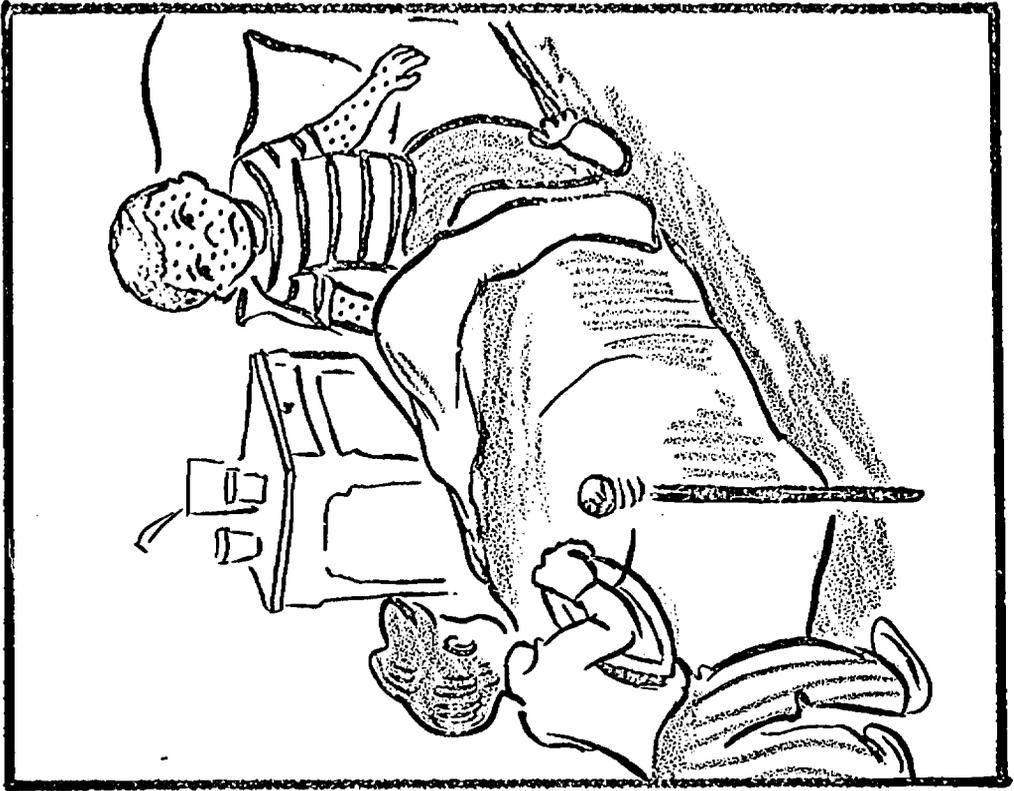


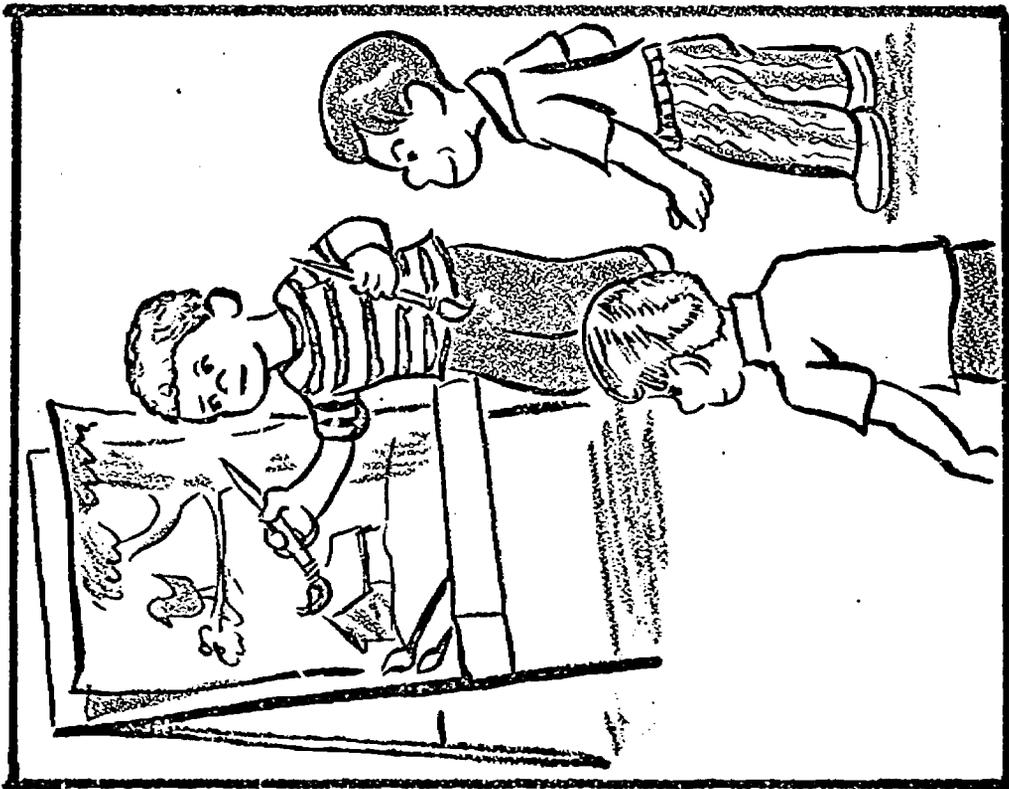
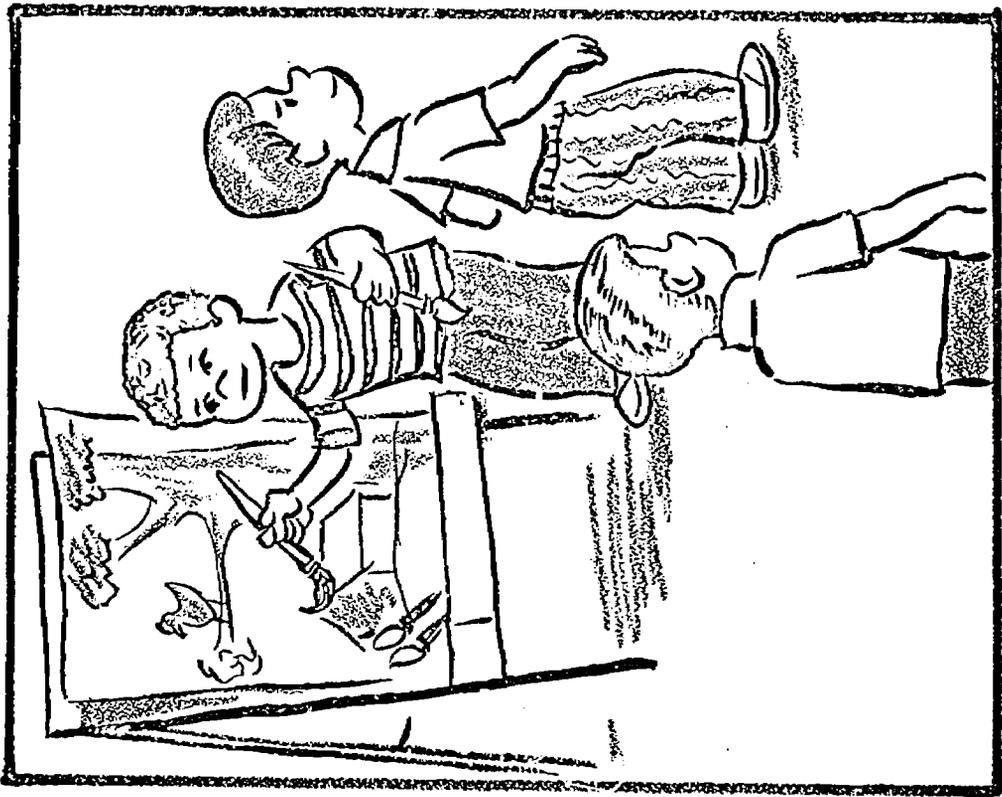


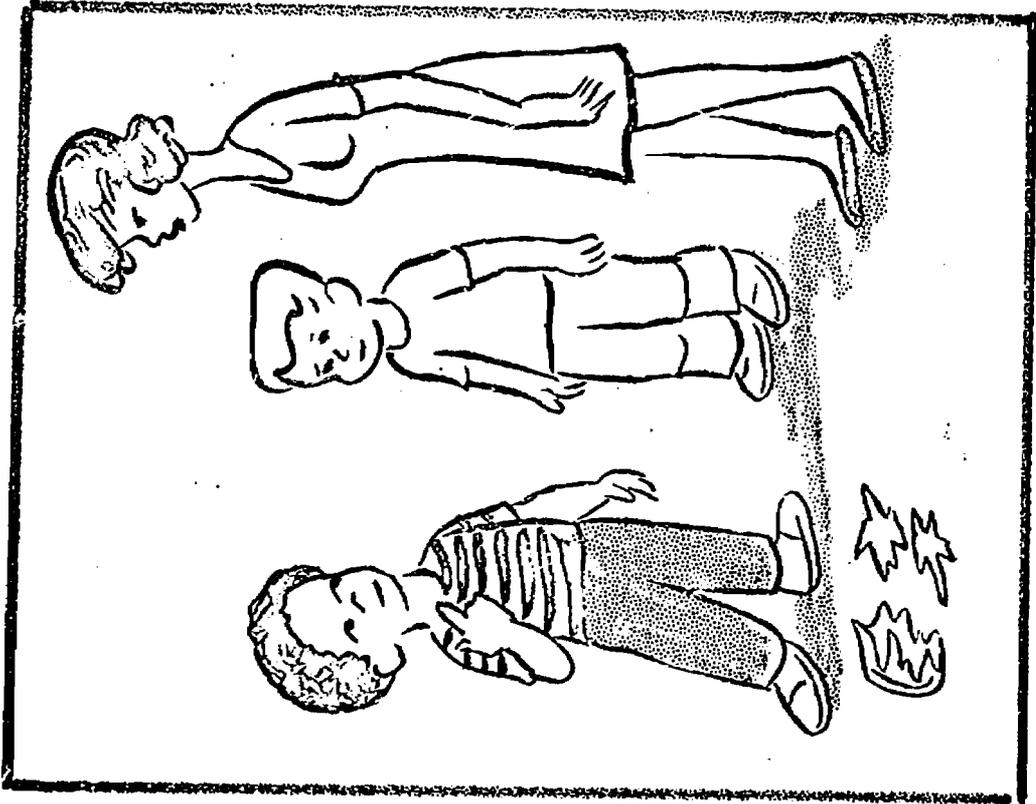
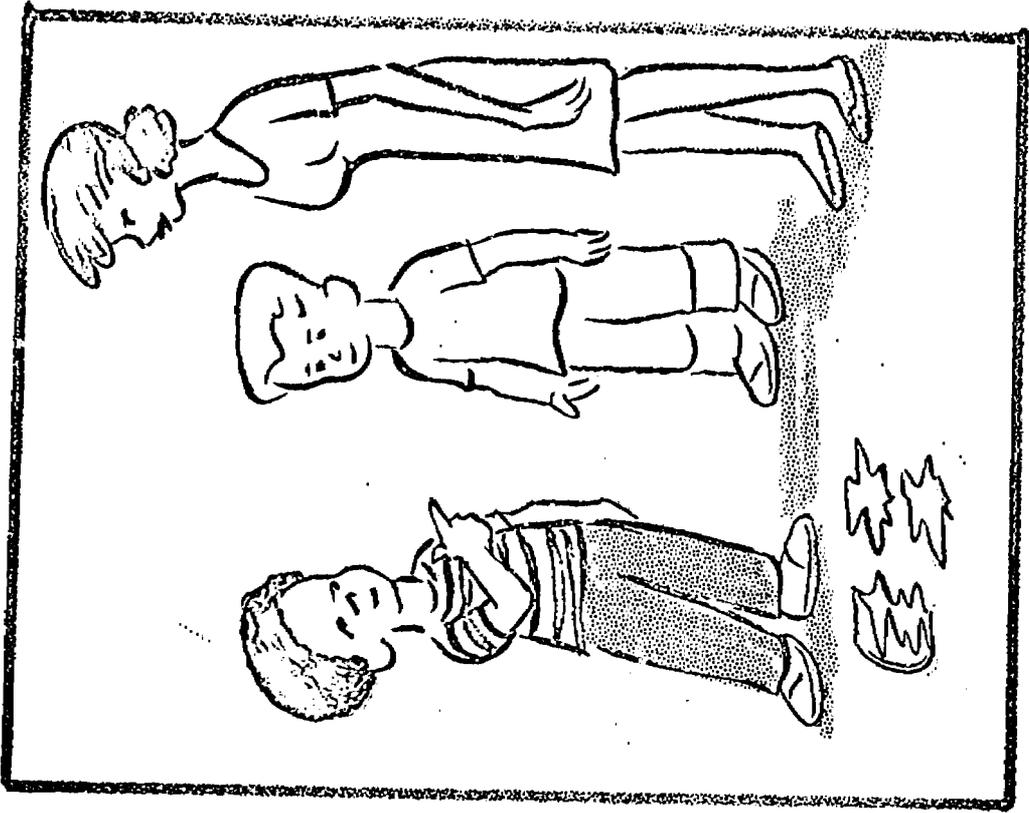
A84

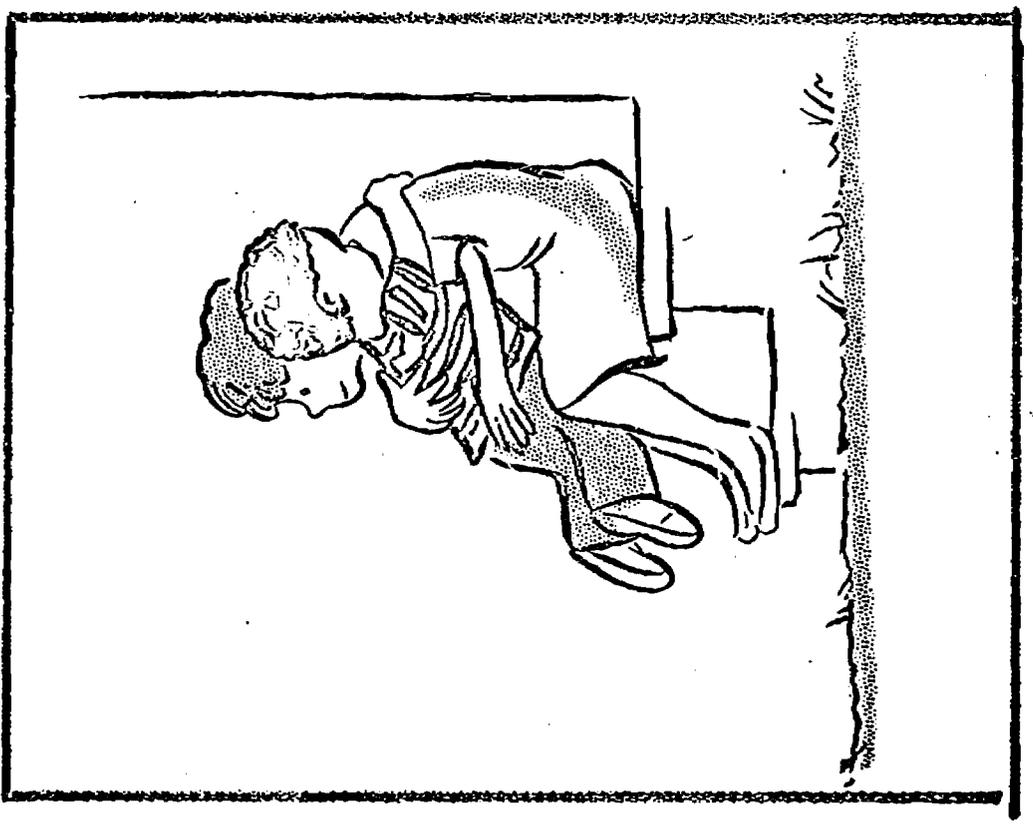
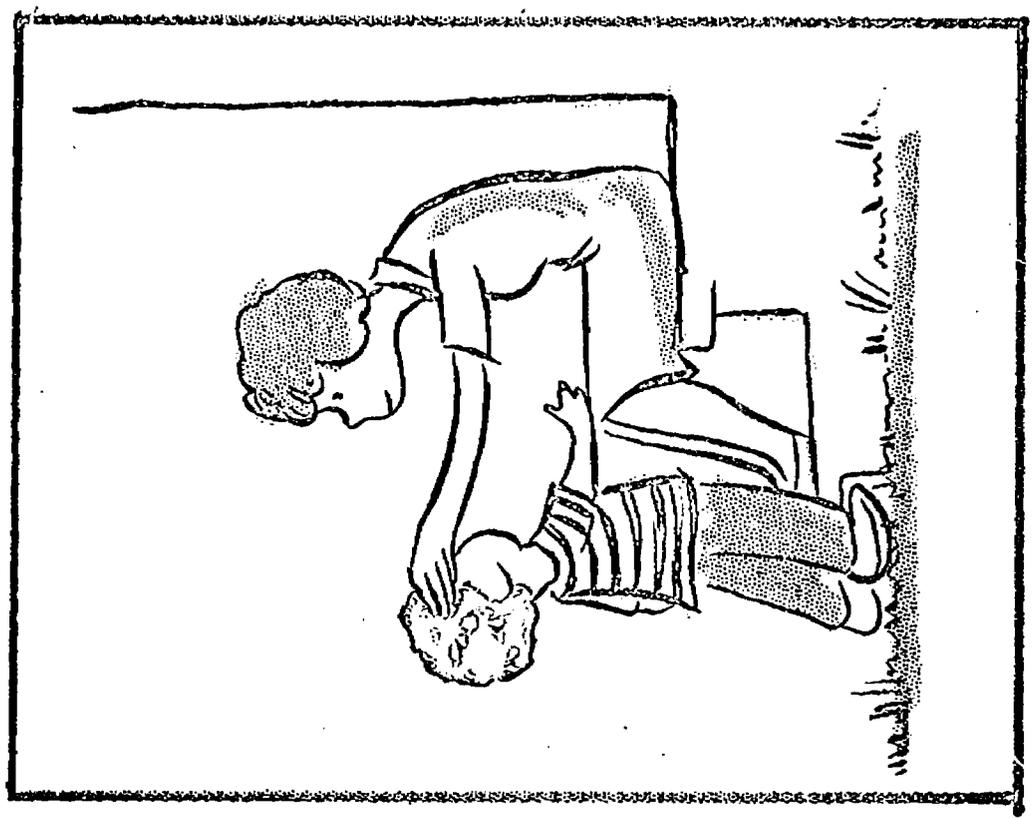




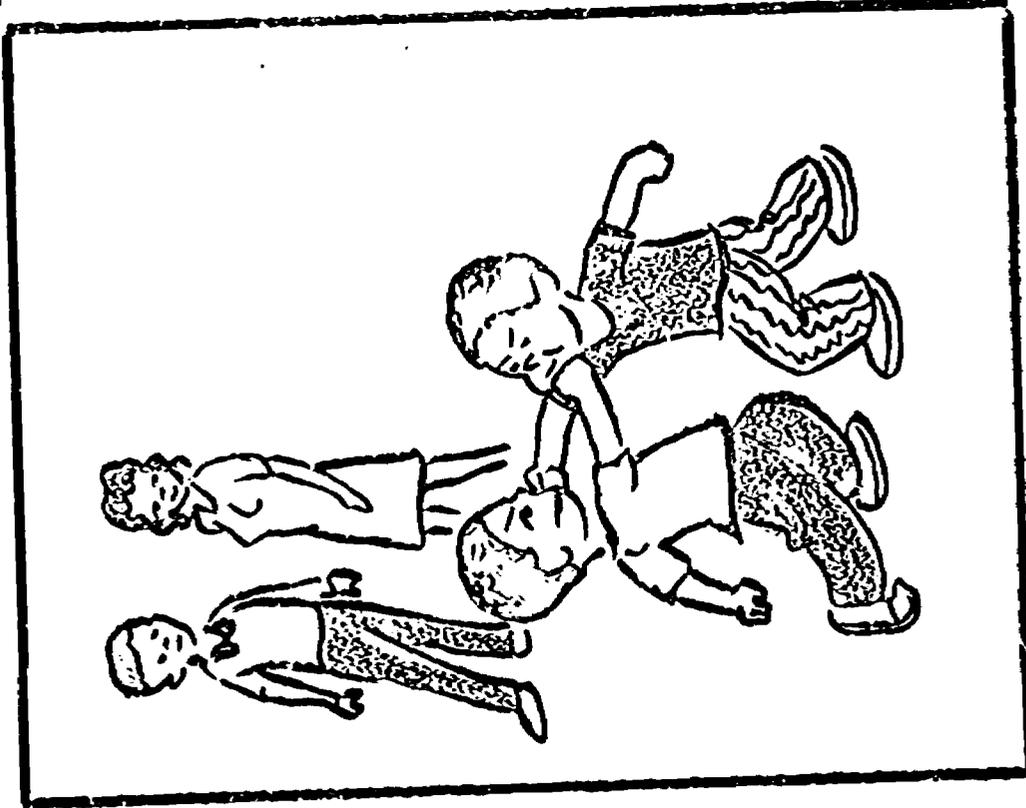
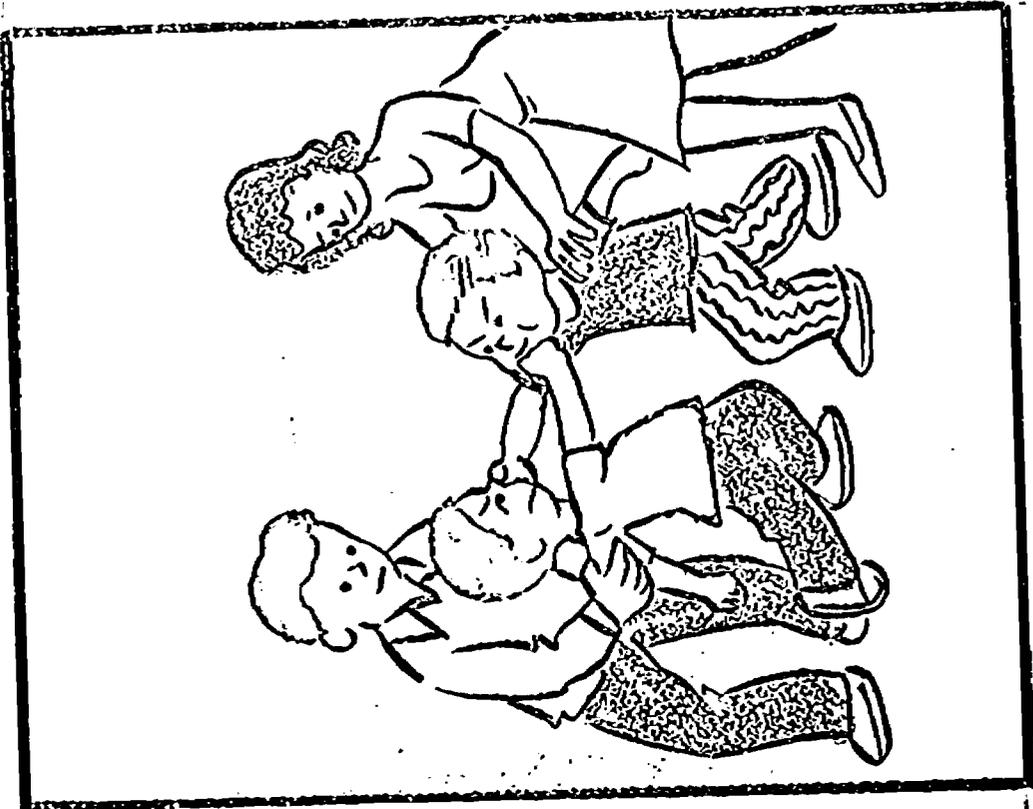


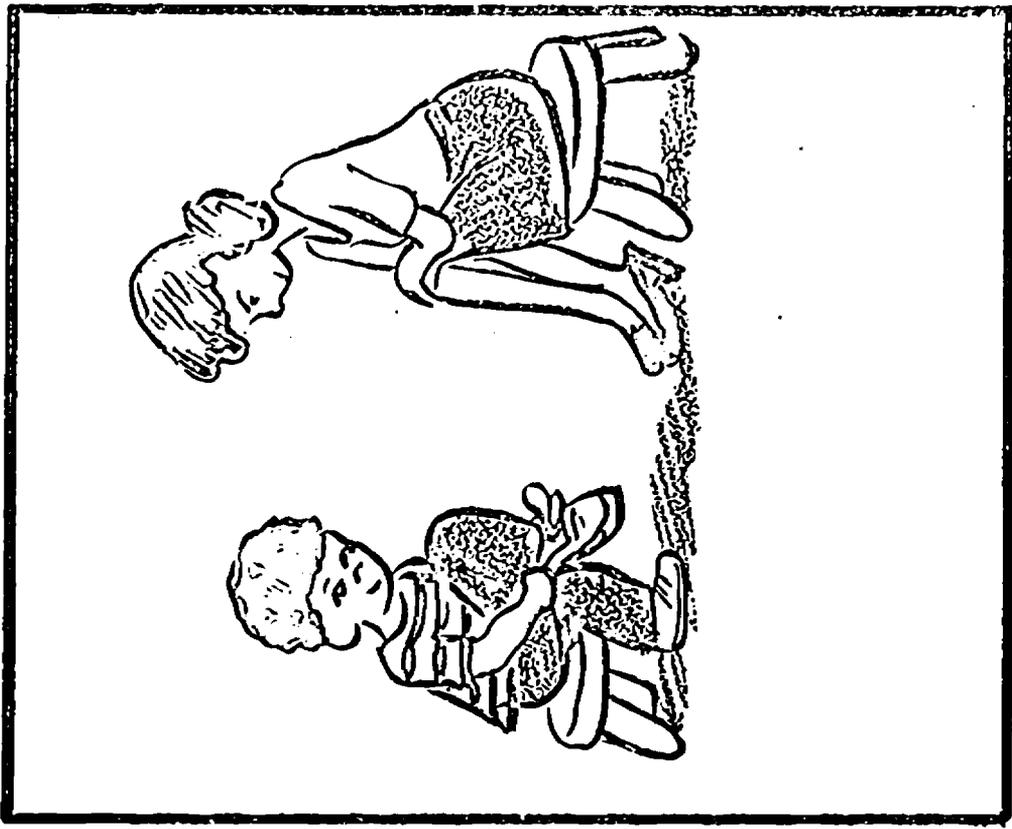




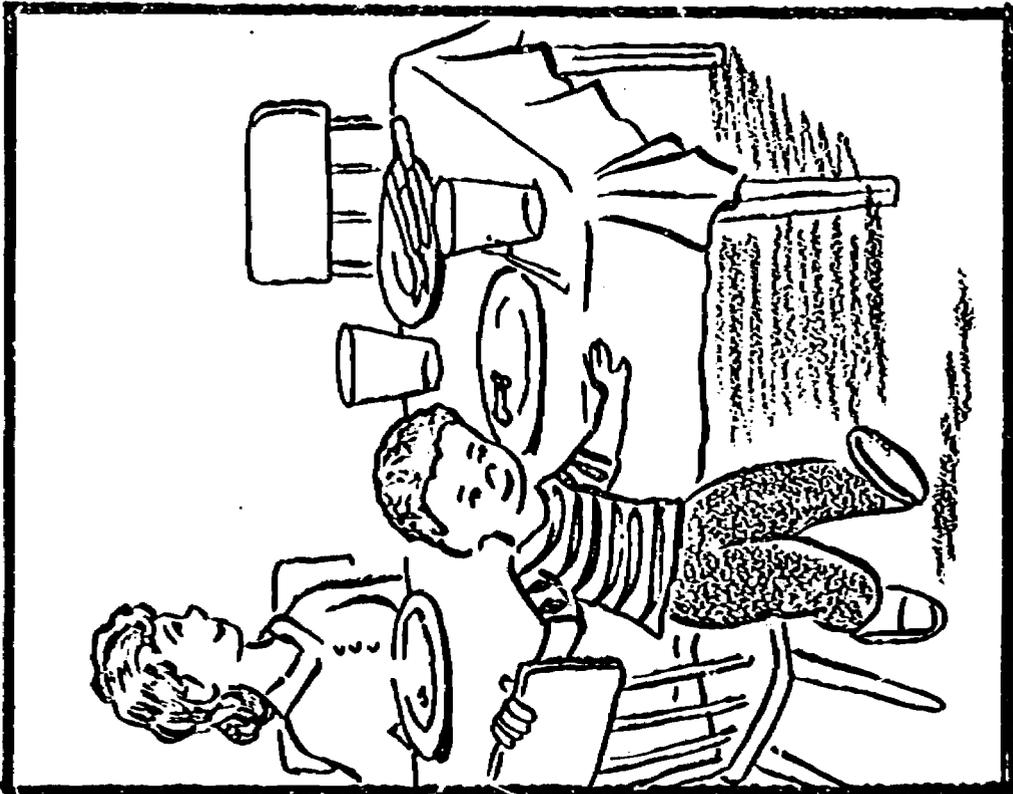
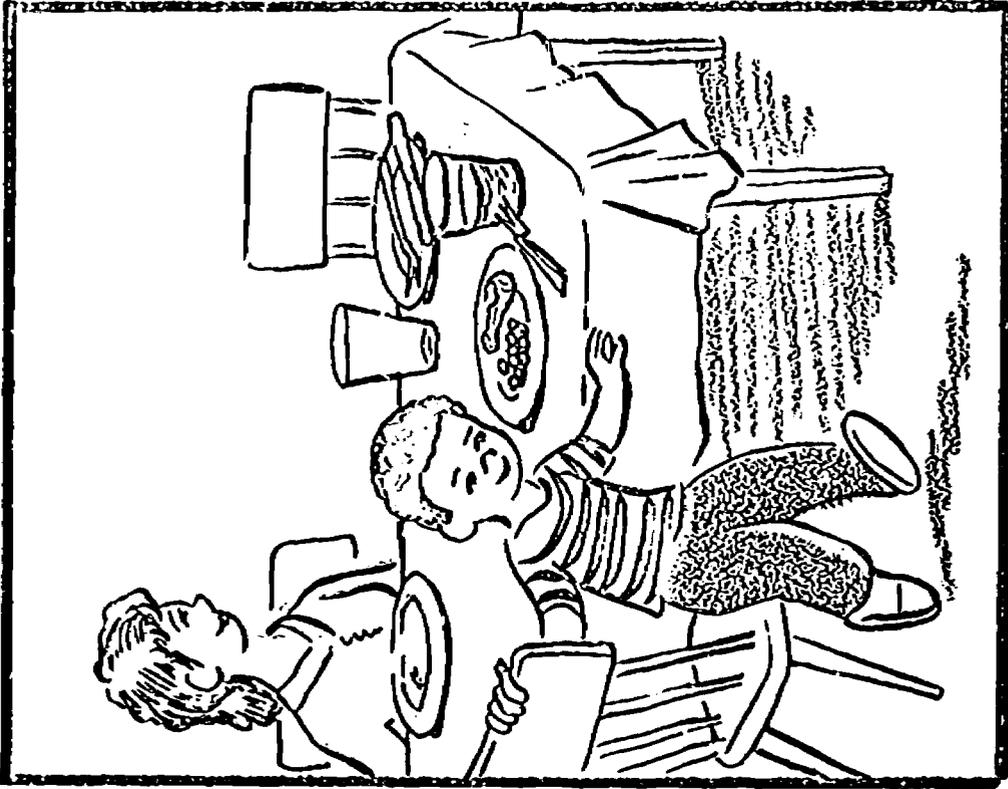


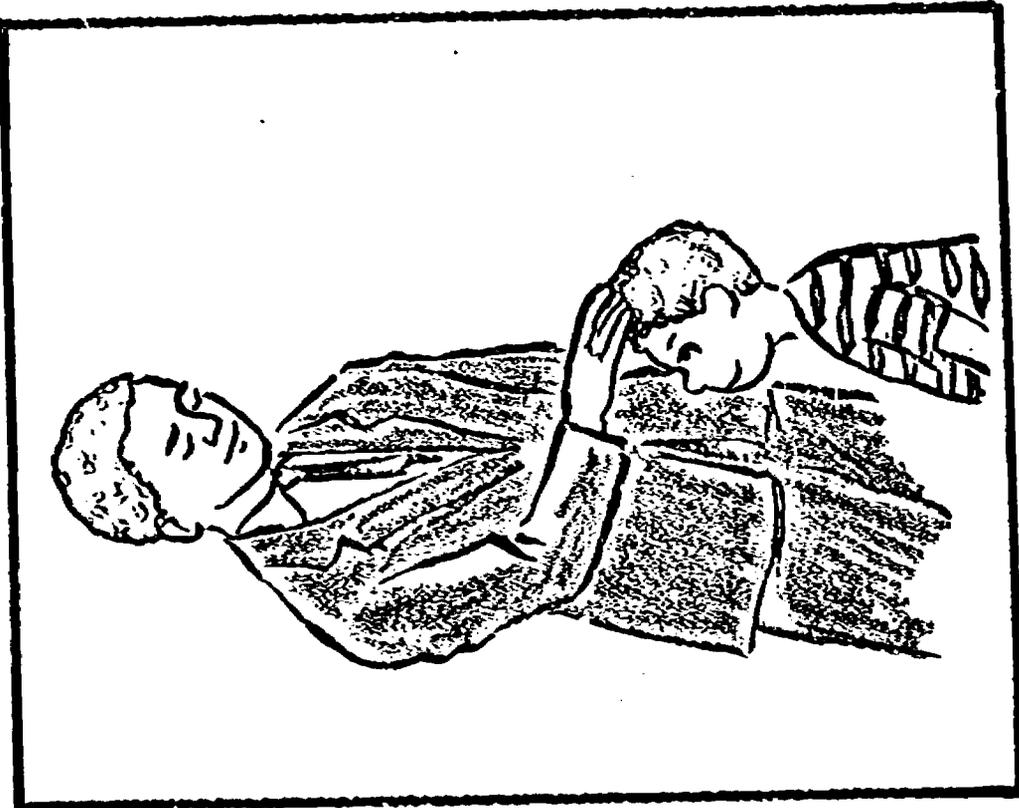
4304

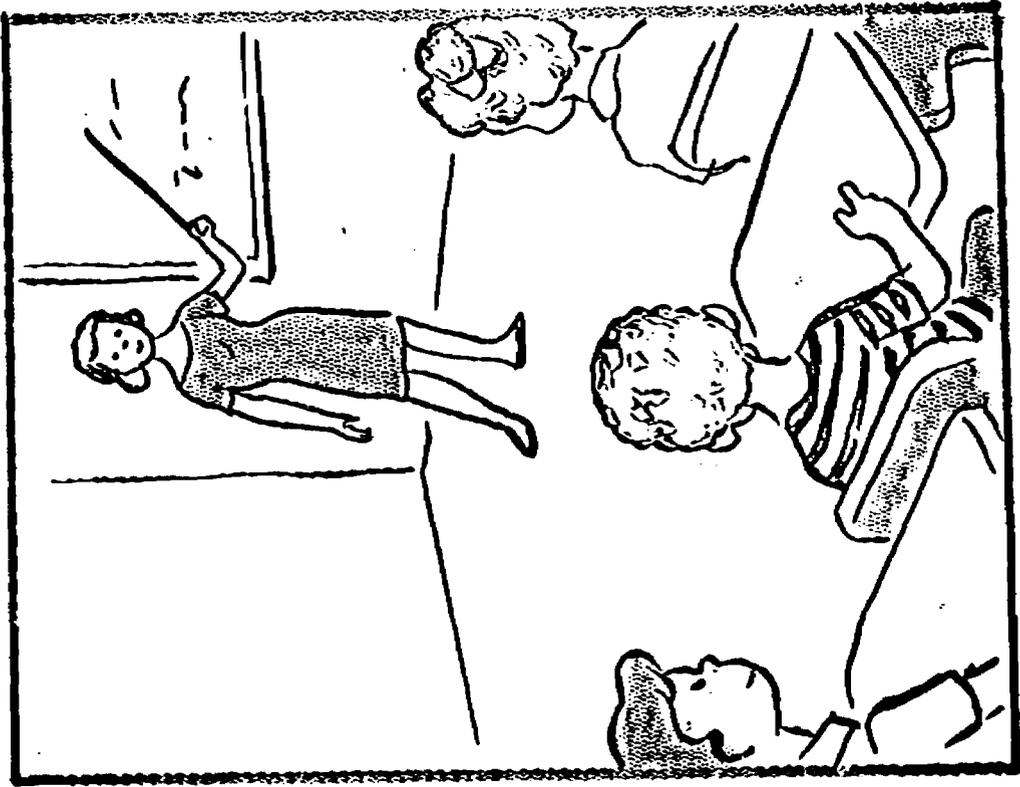
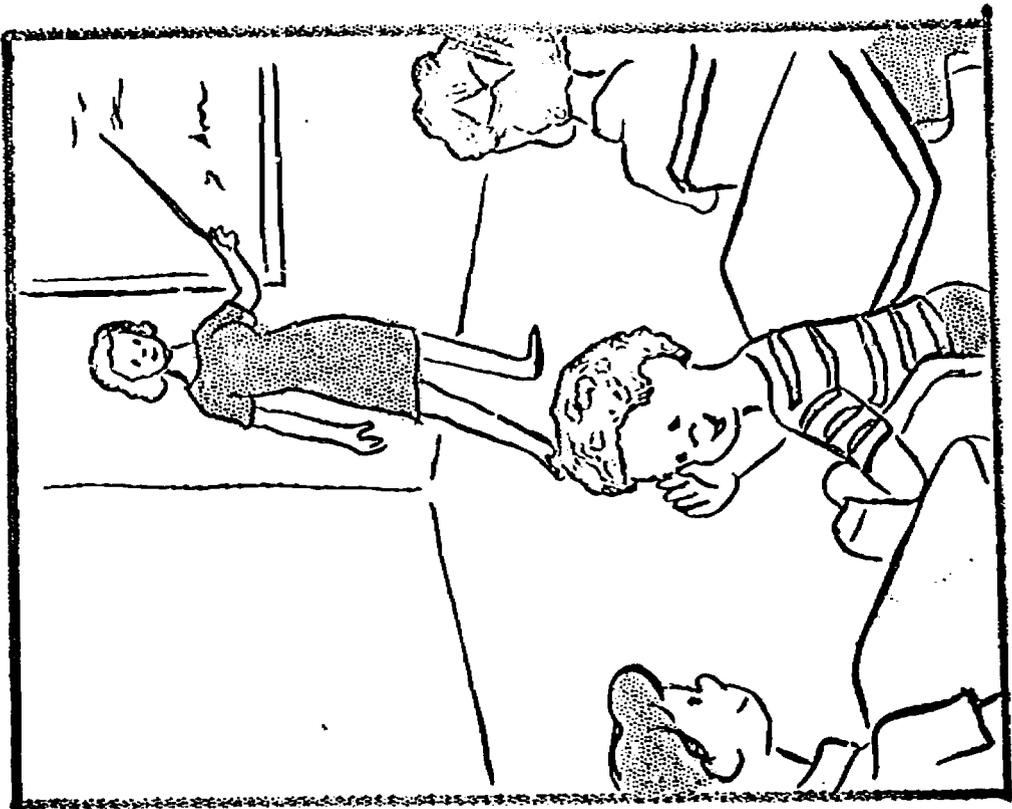


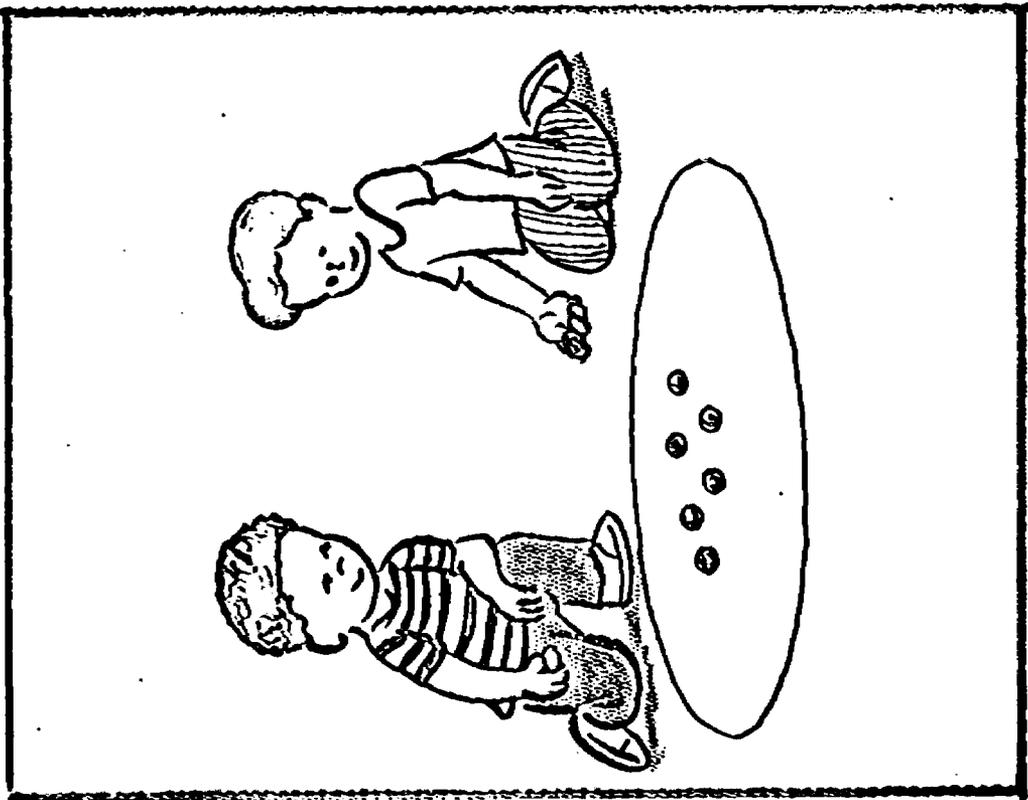
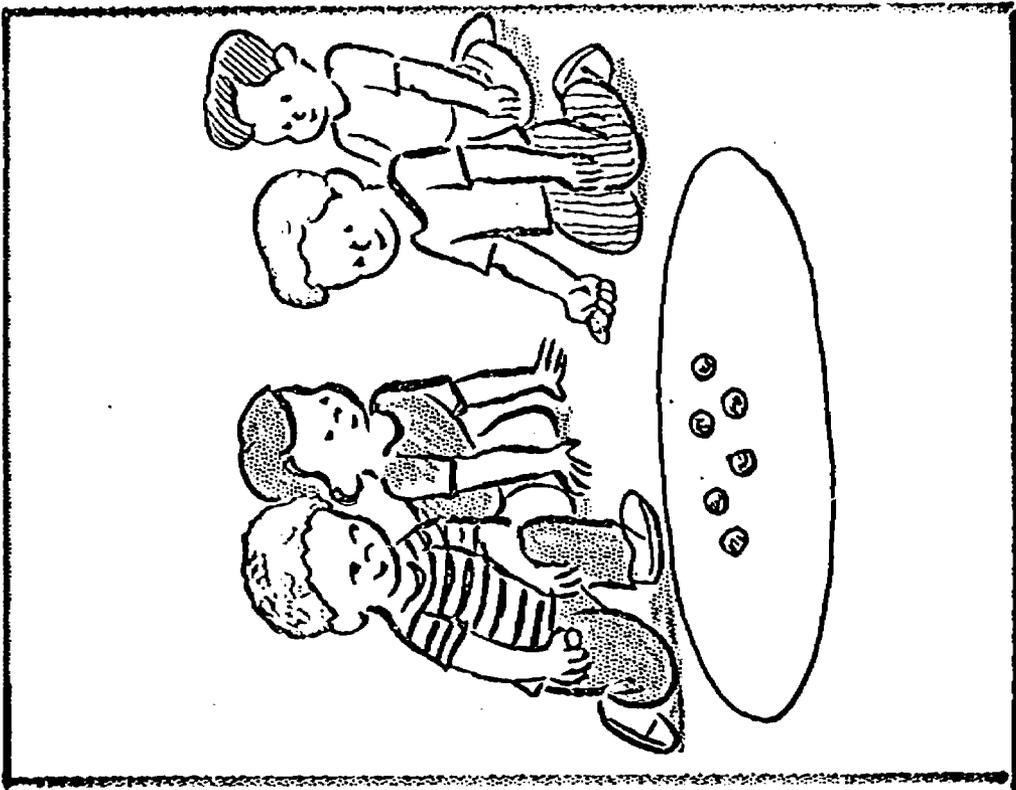


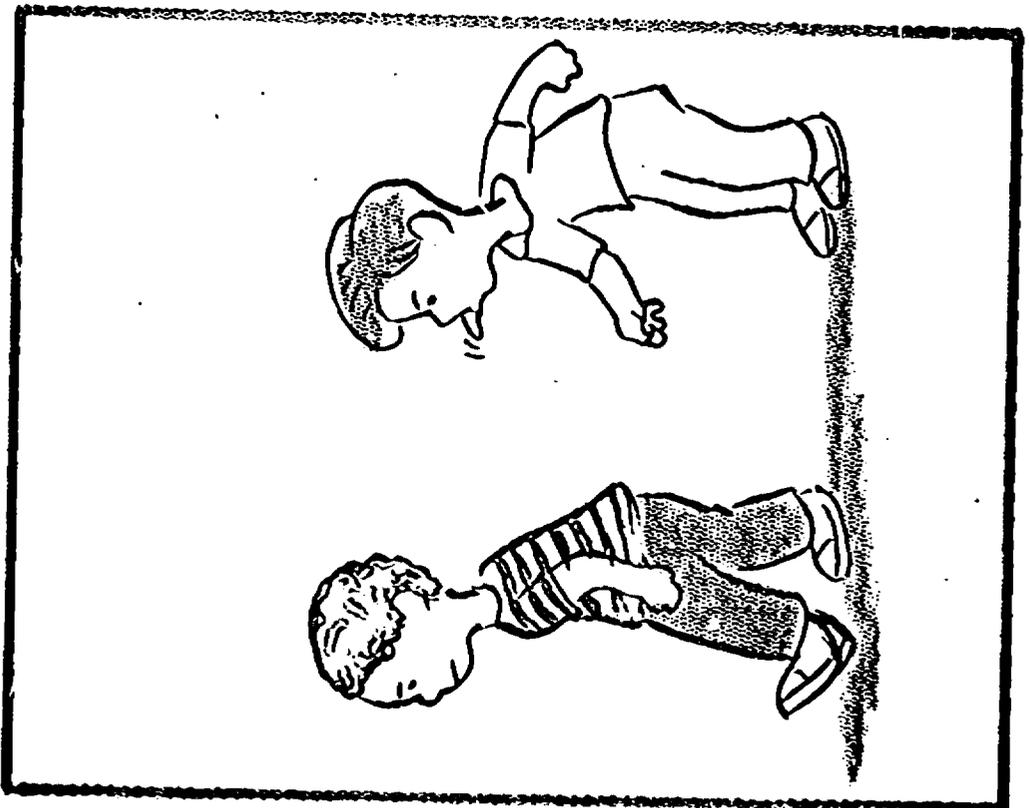
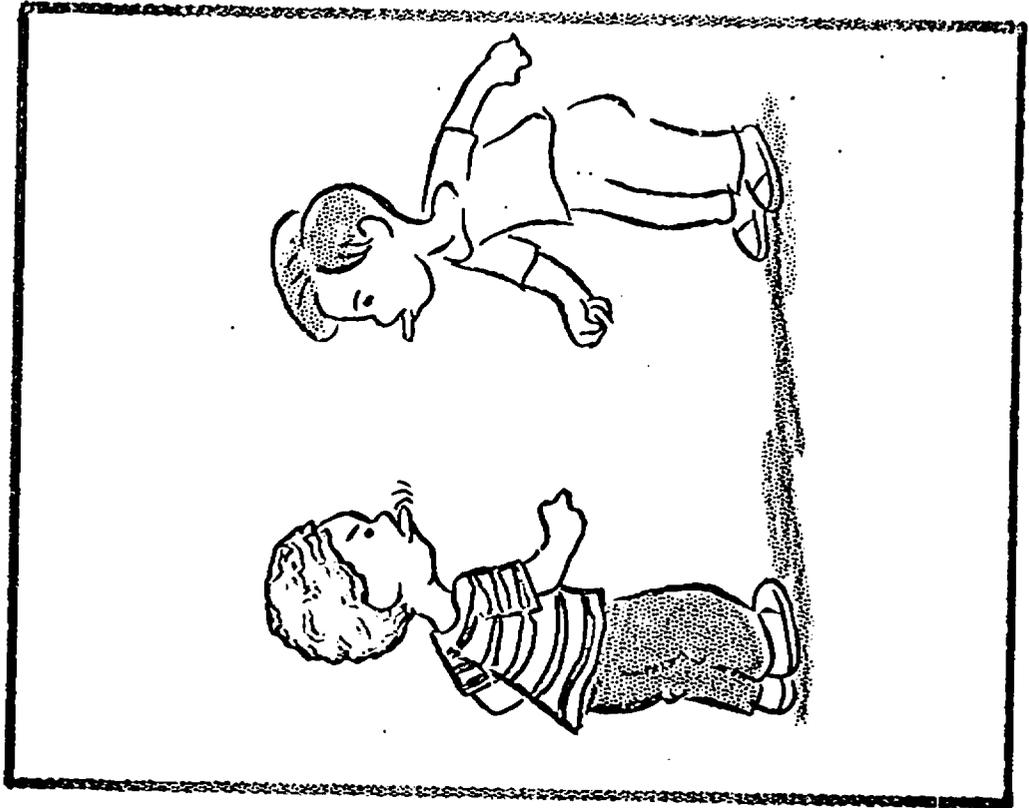
Play-

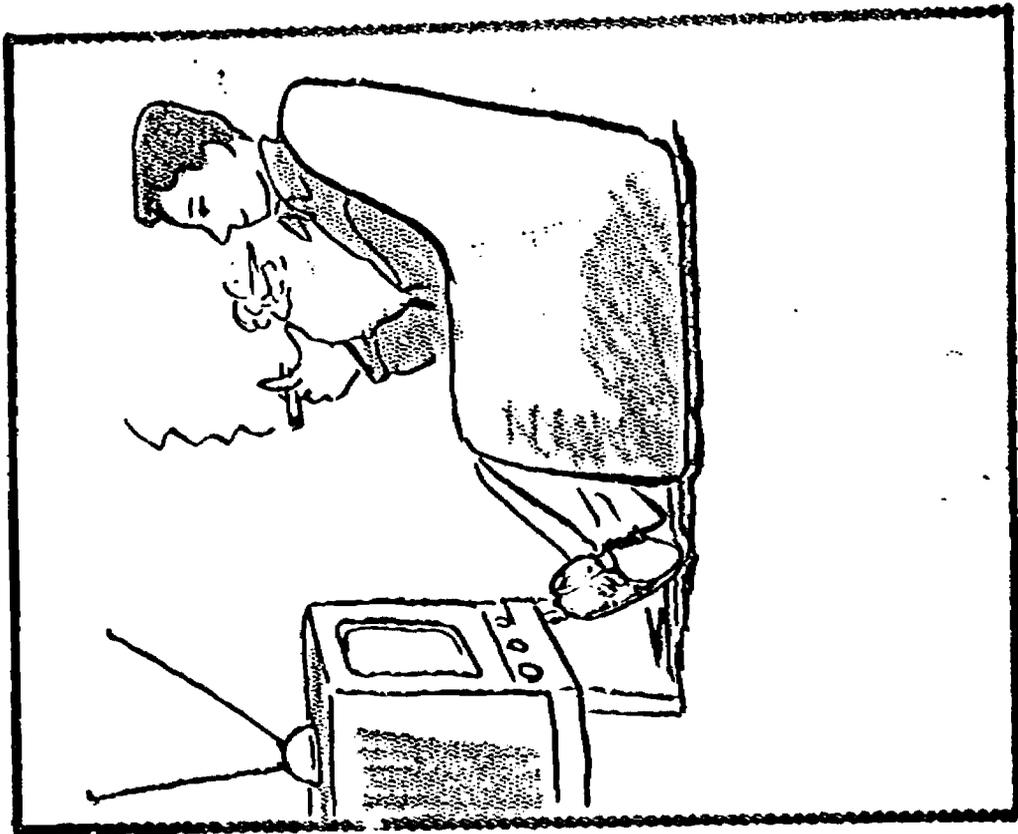
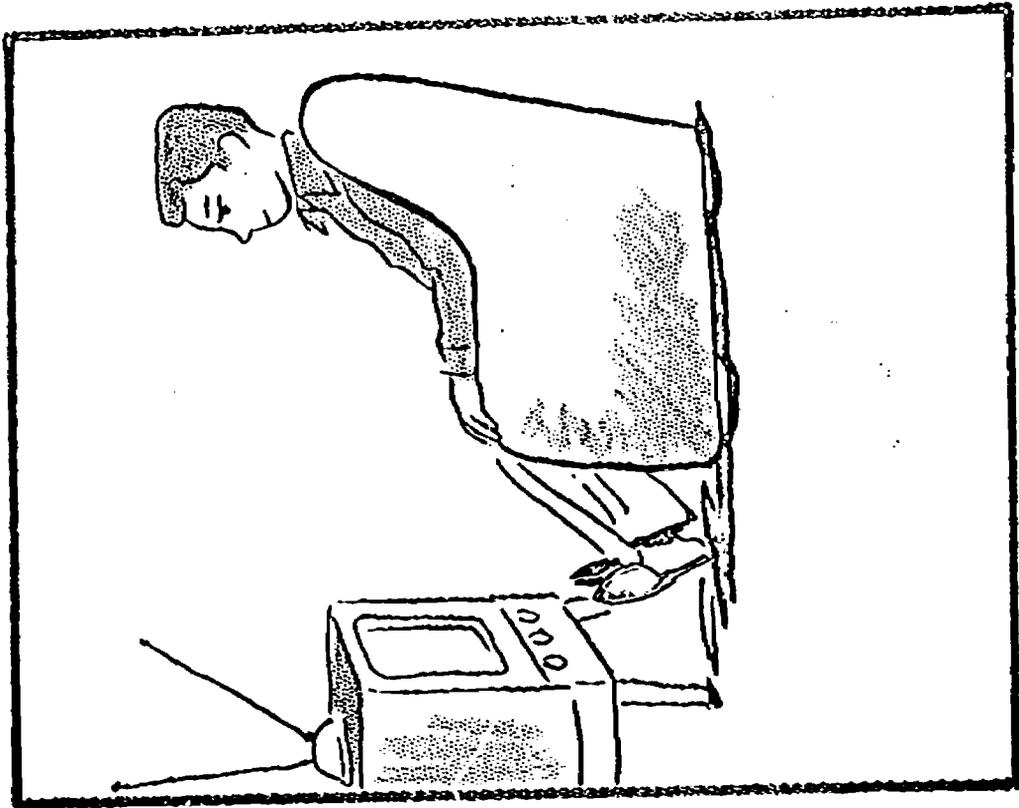


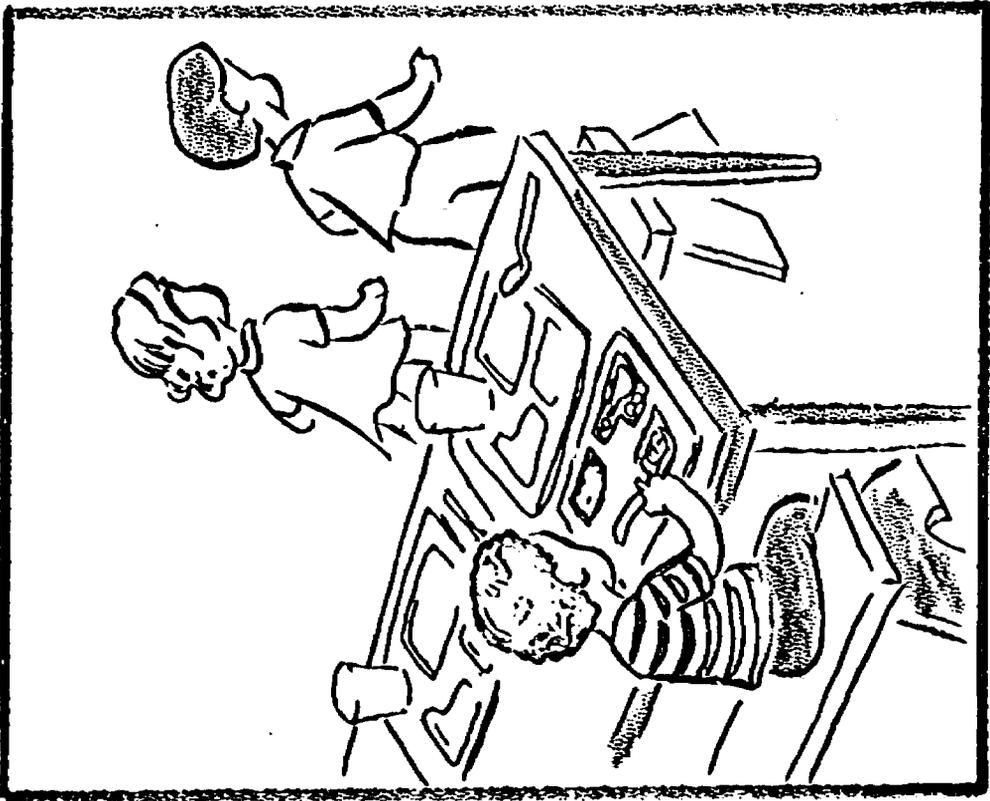
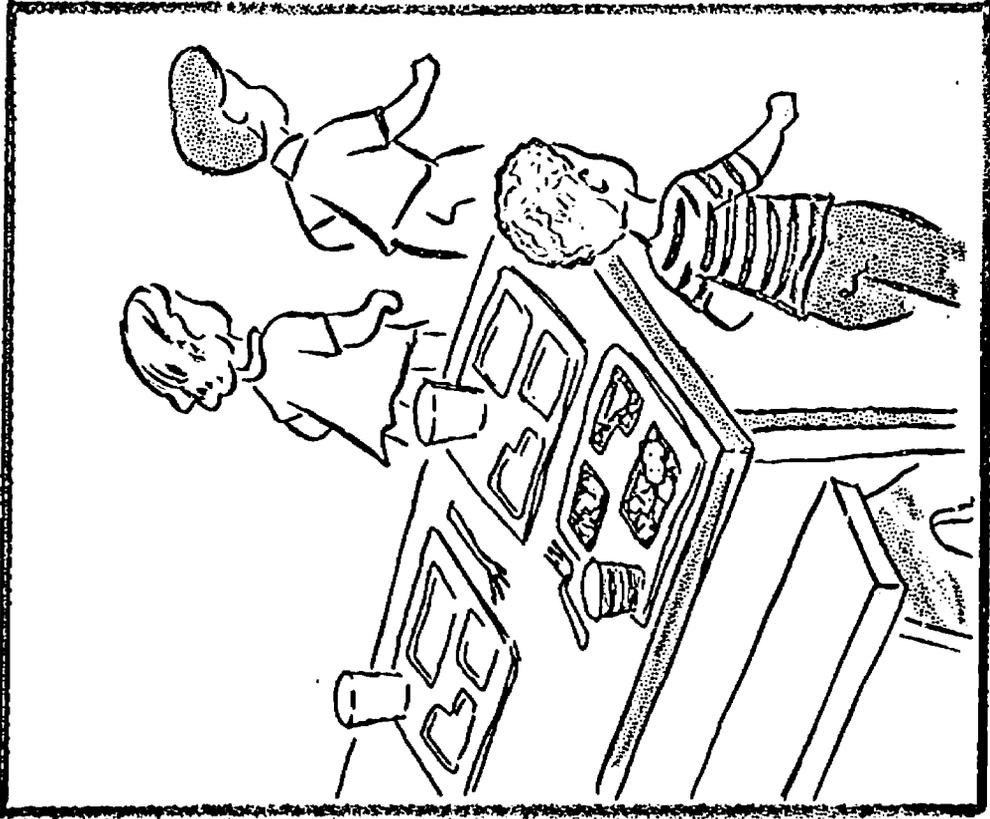


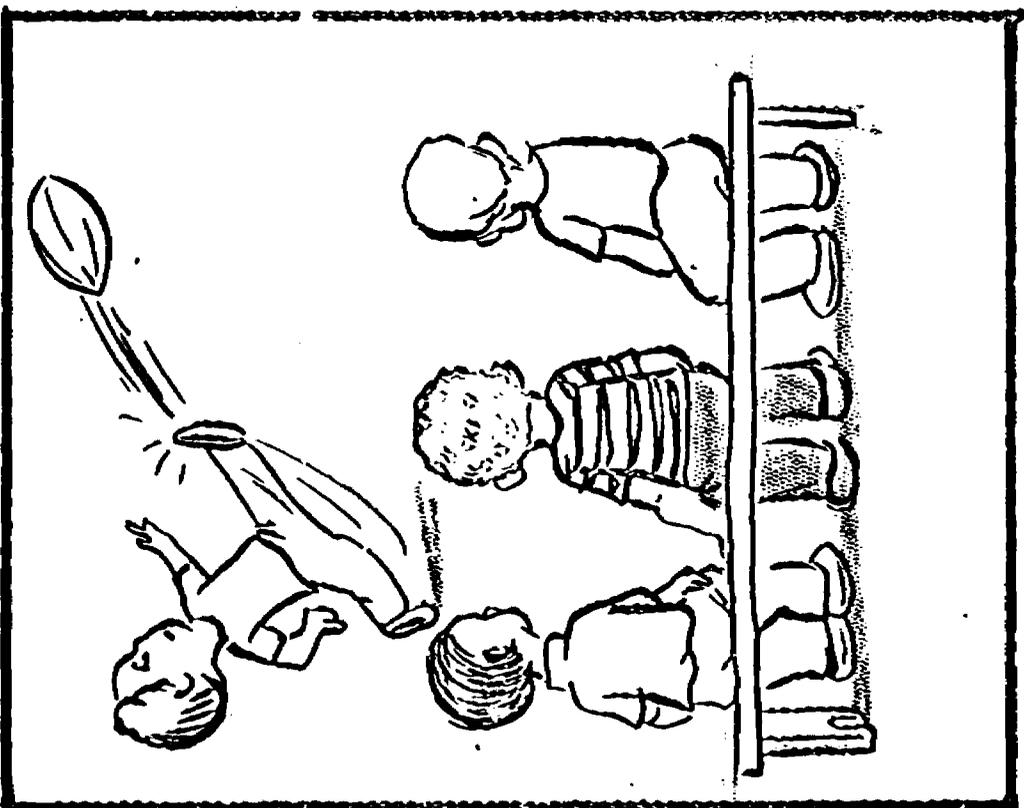
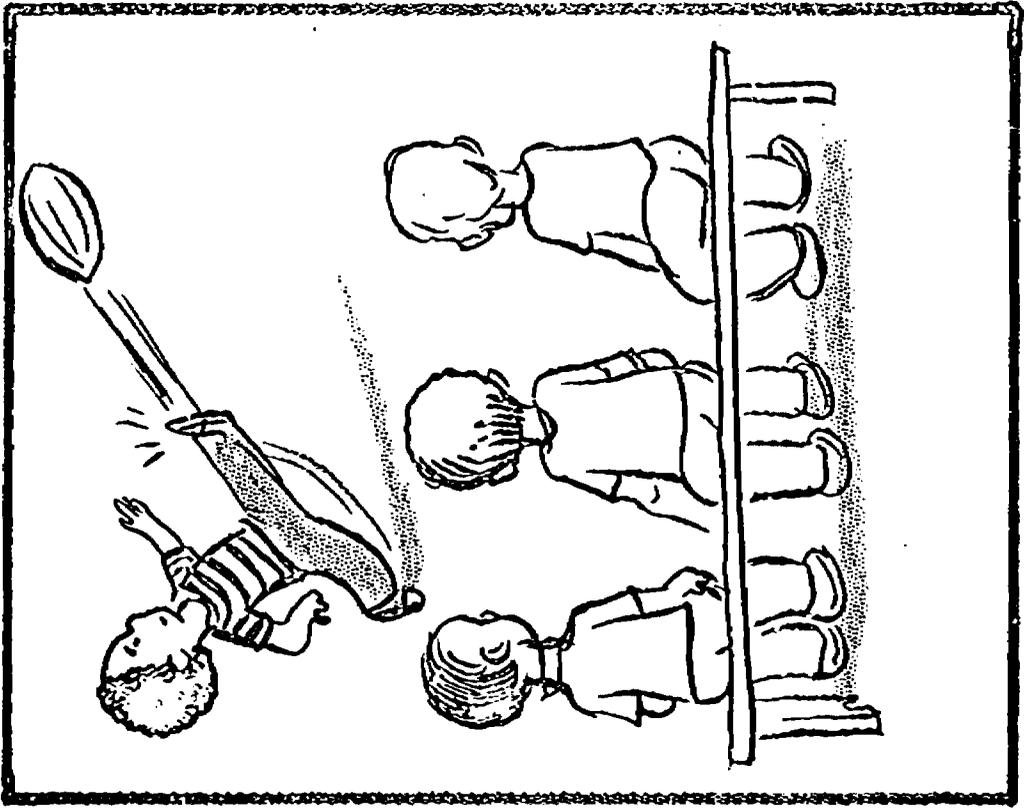


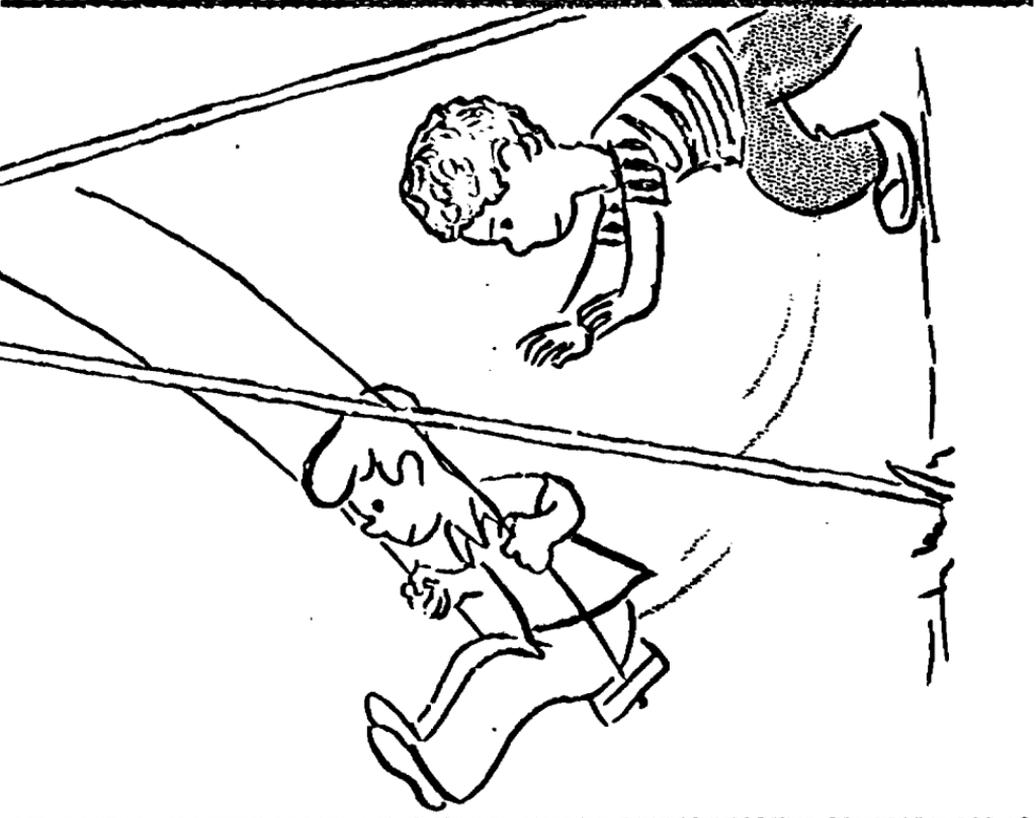
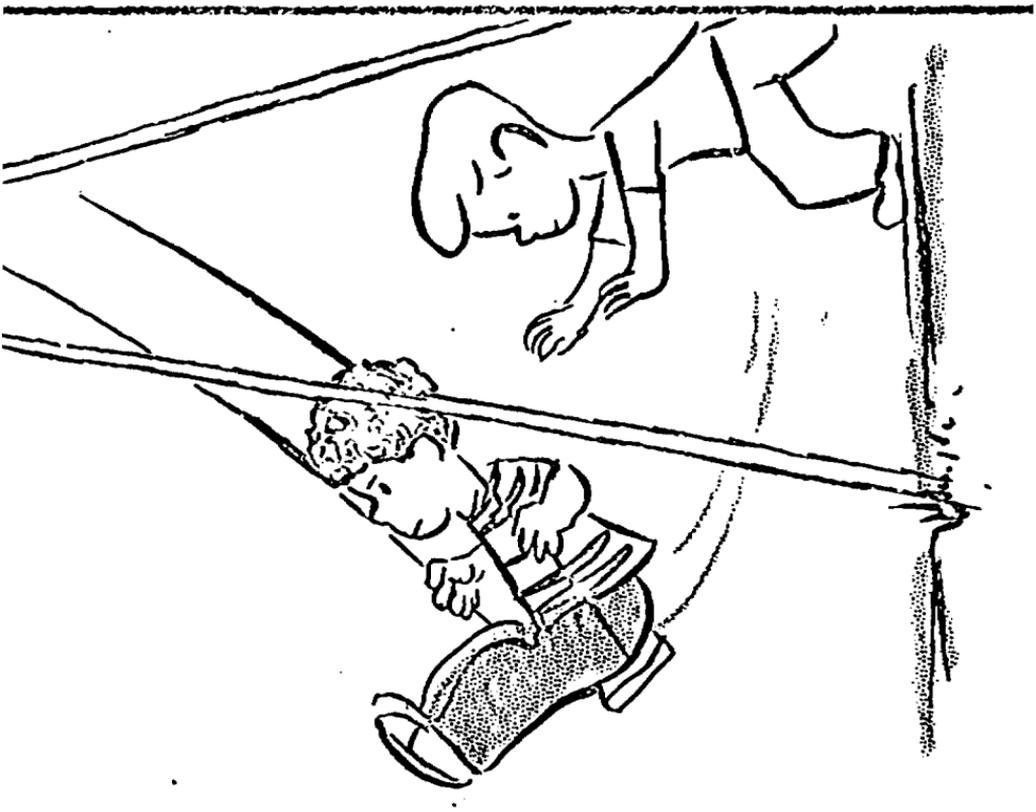


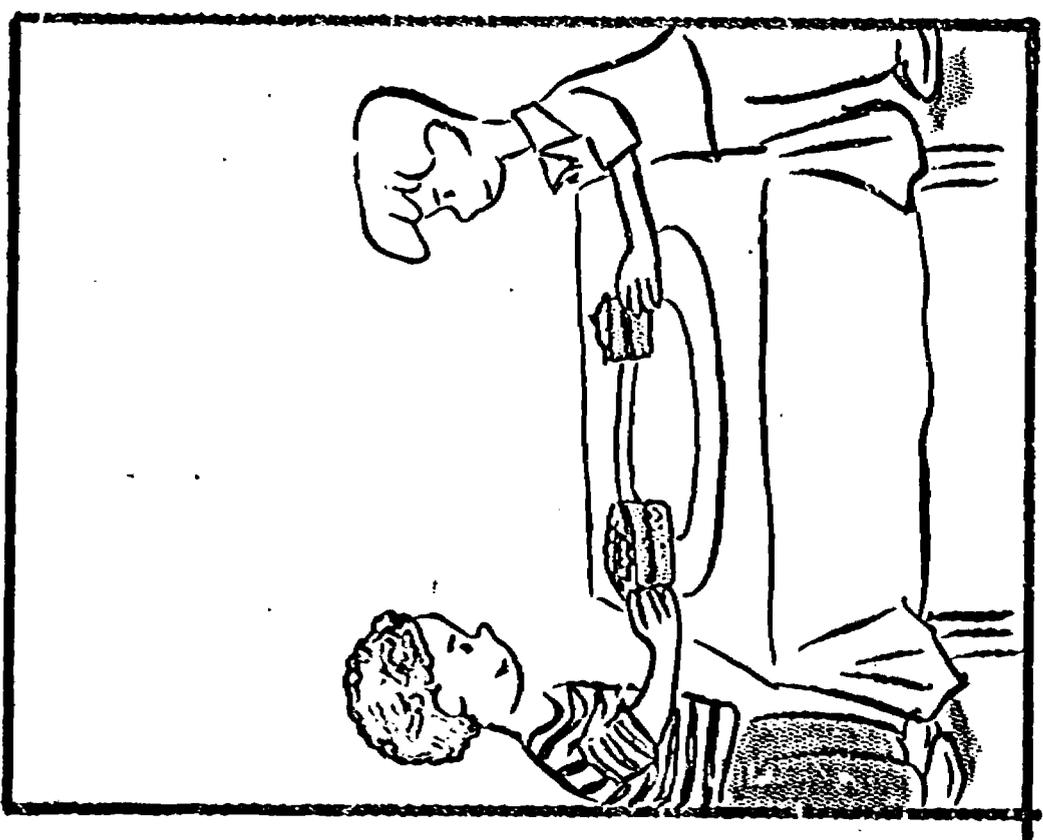
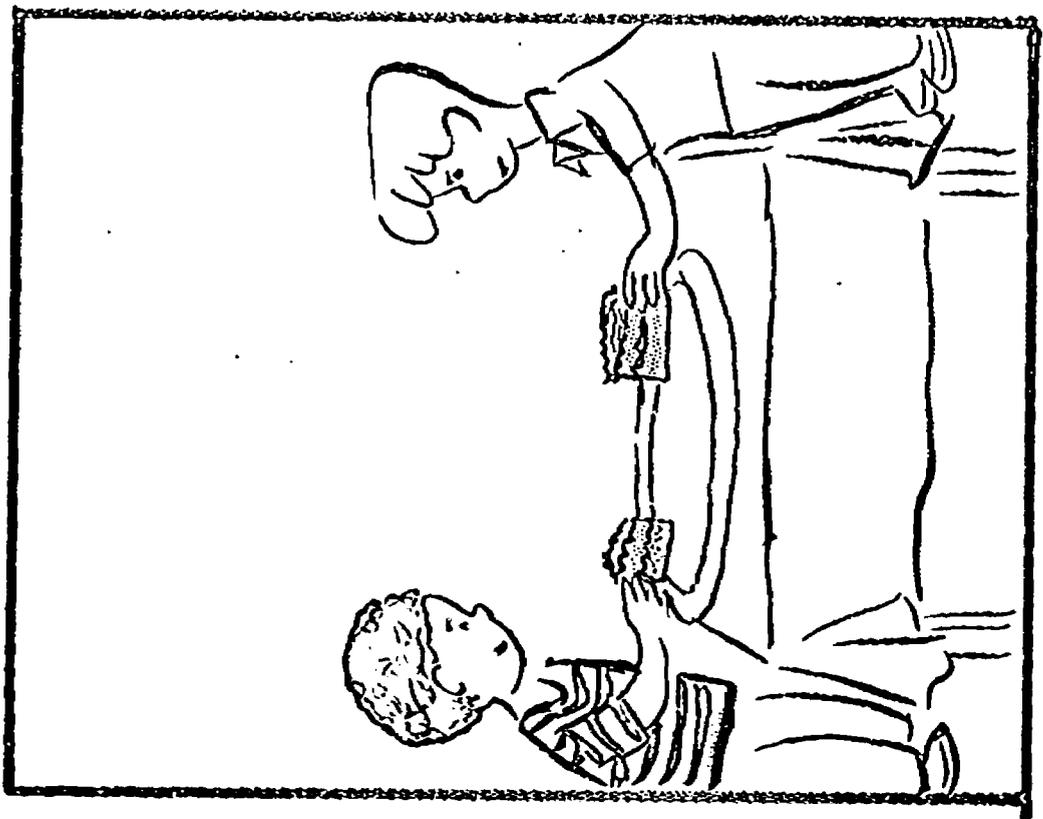


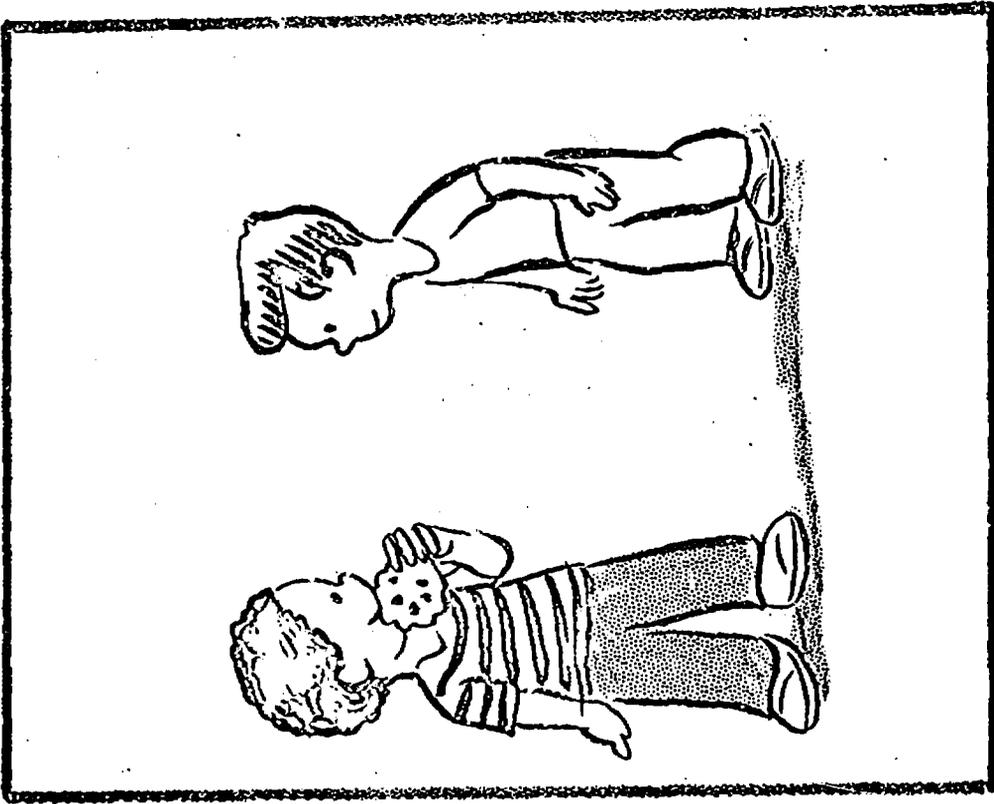
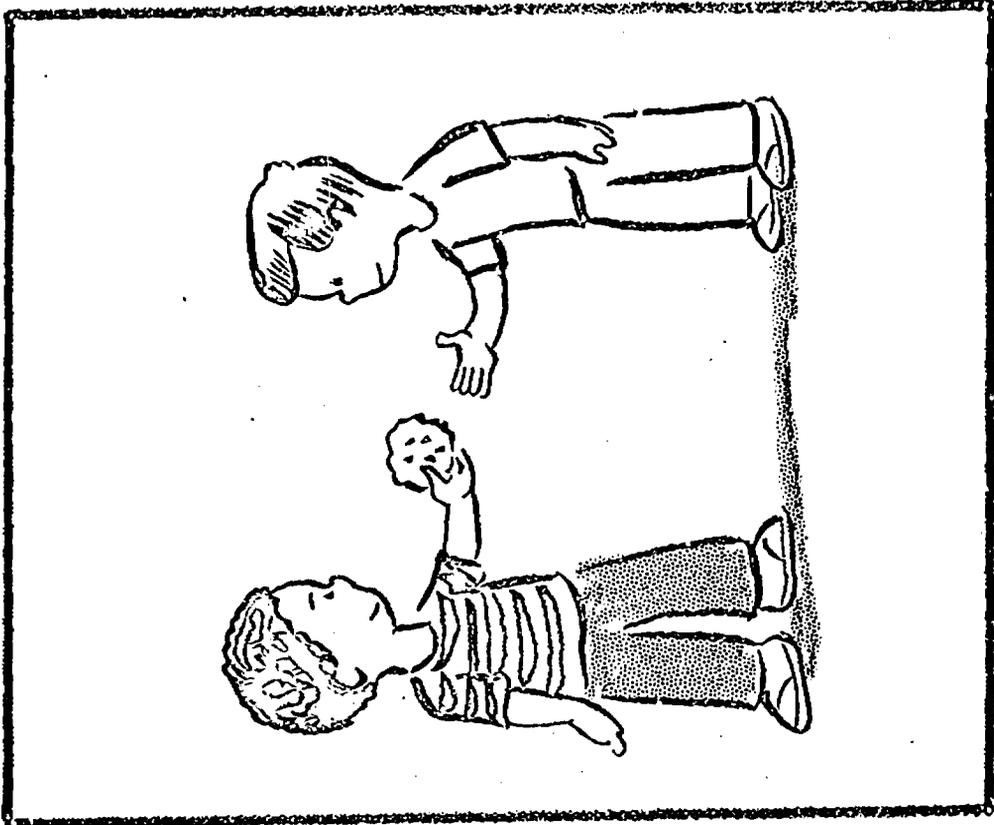


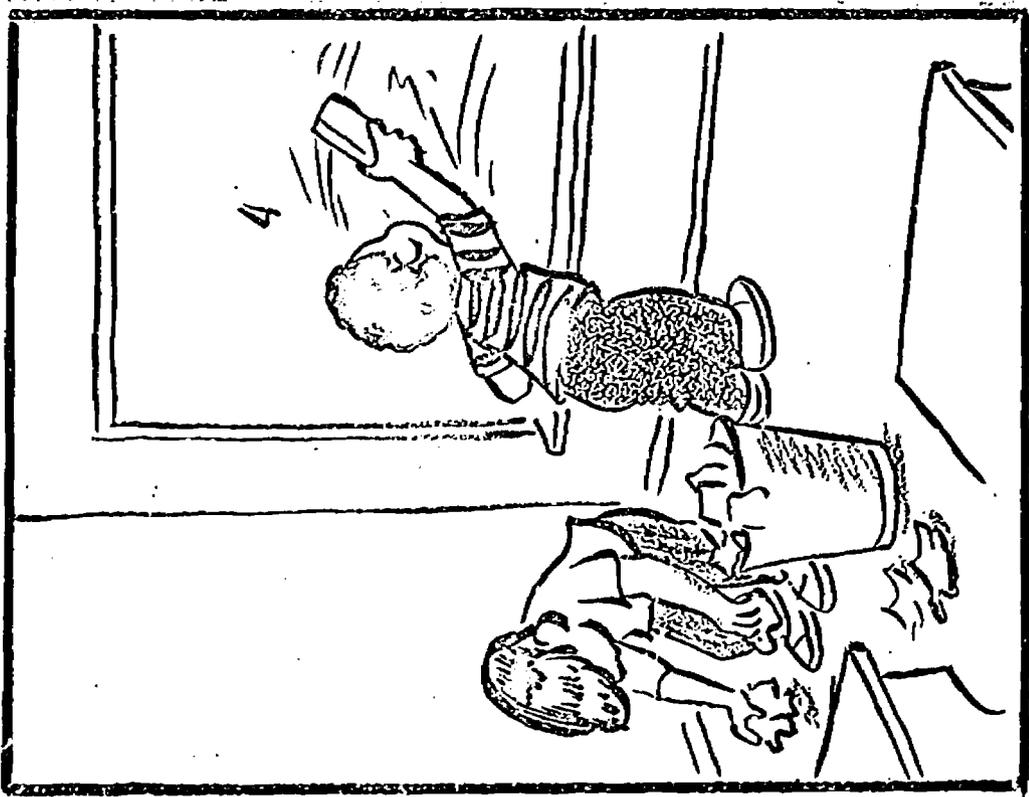
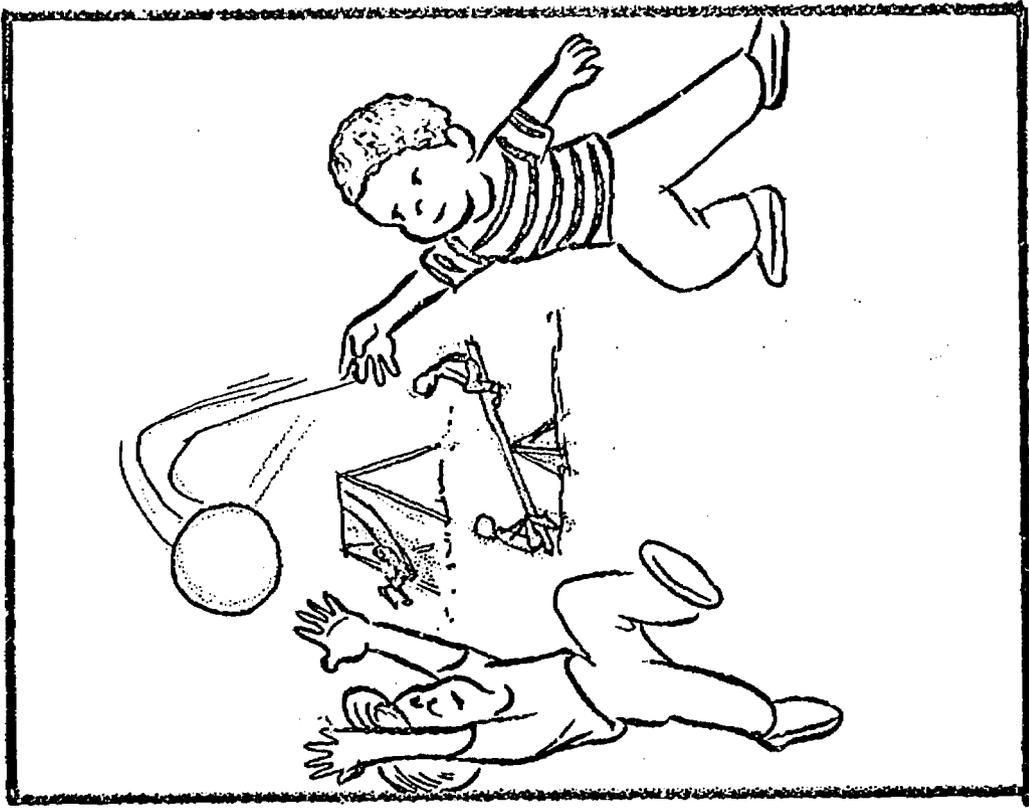




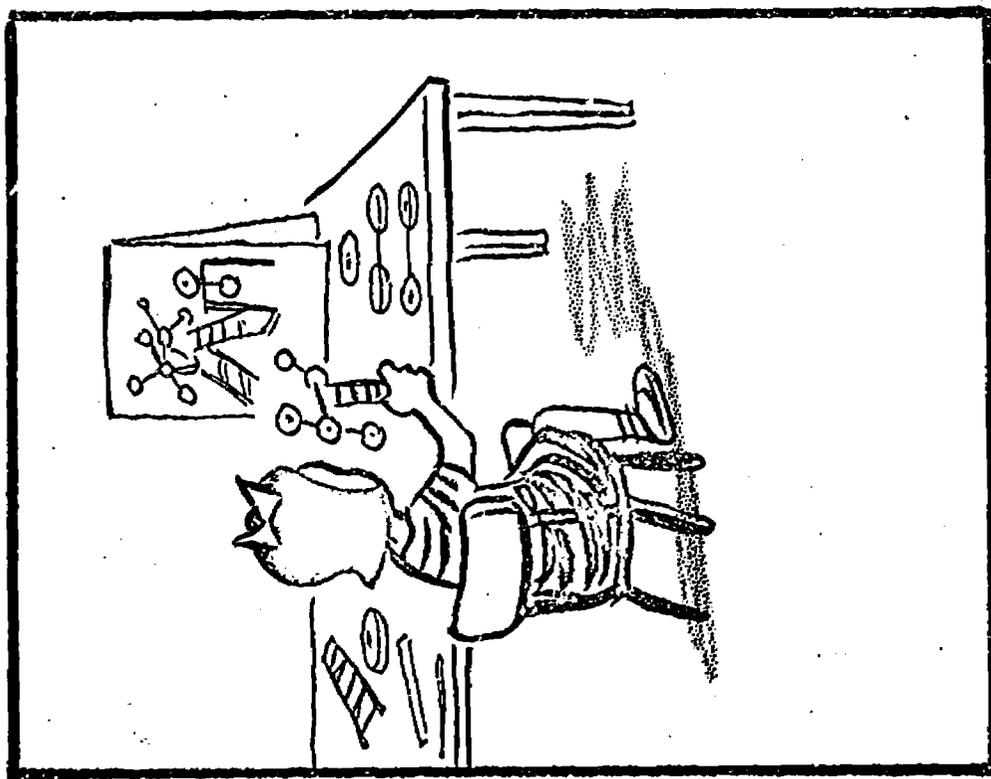
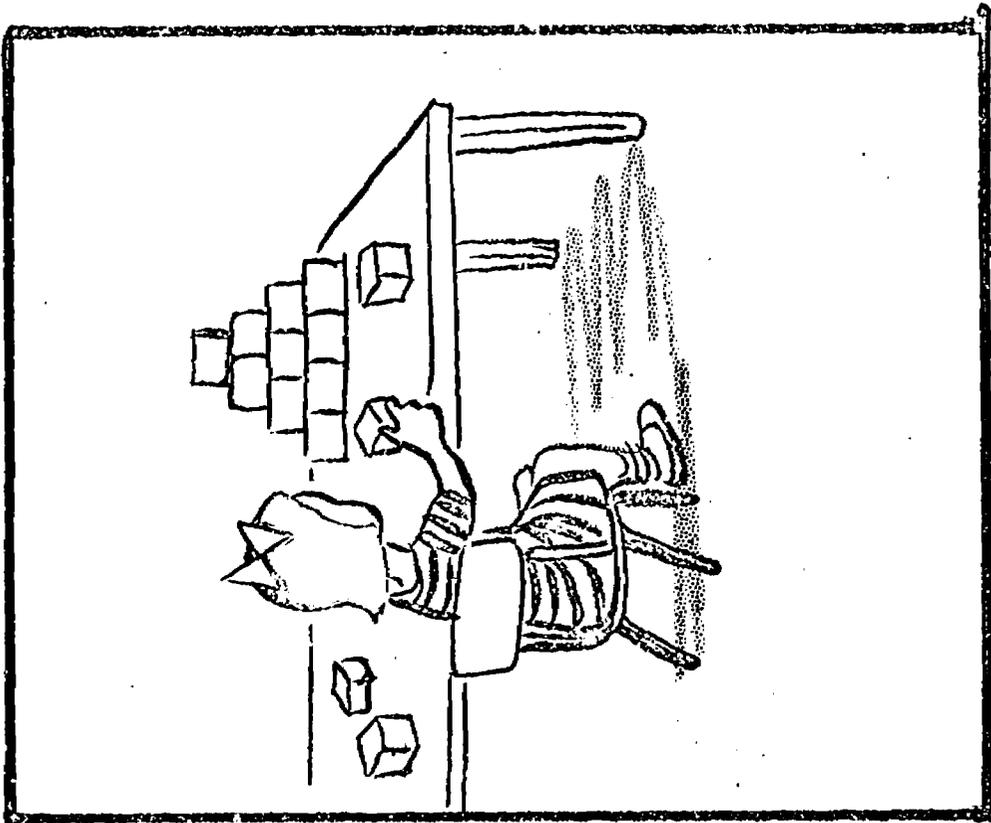


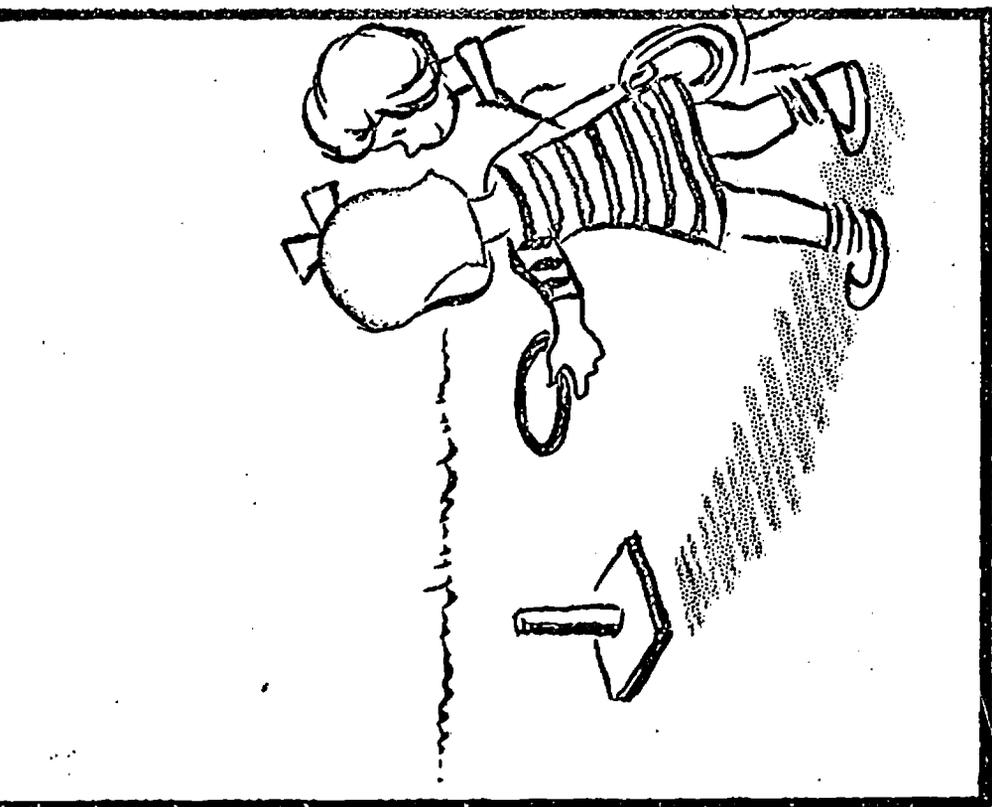
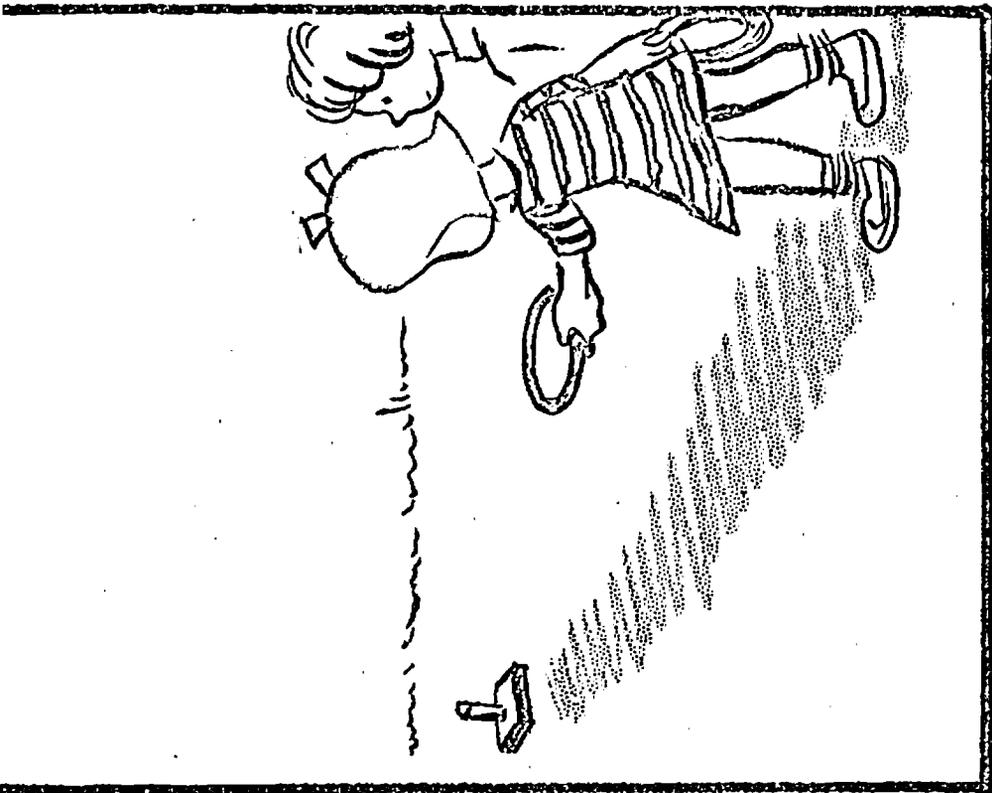


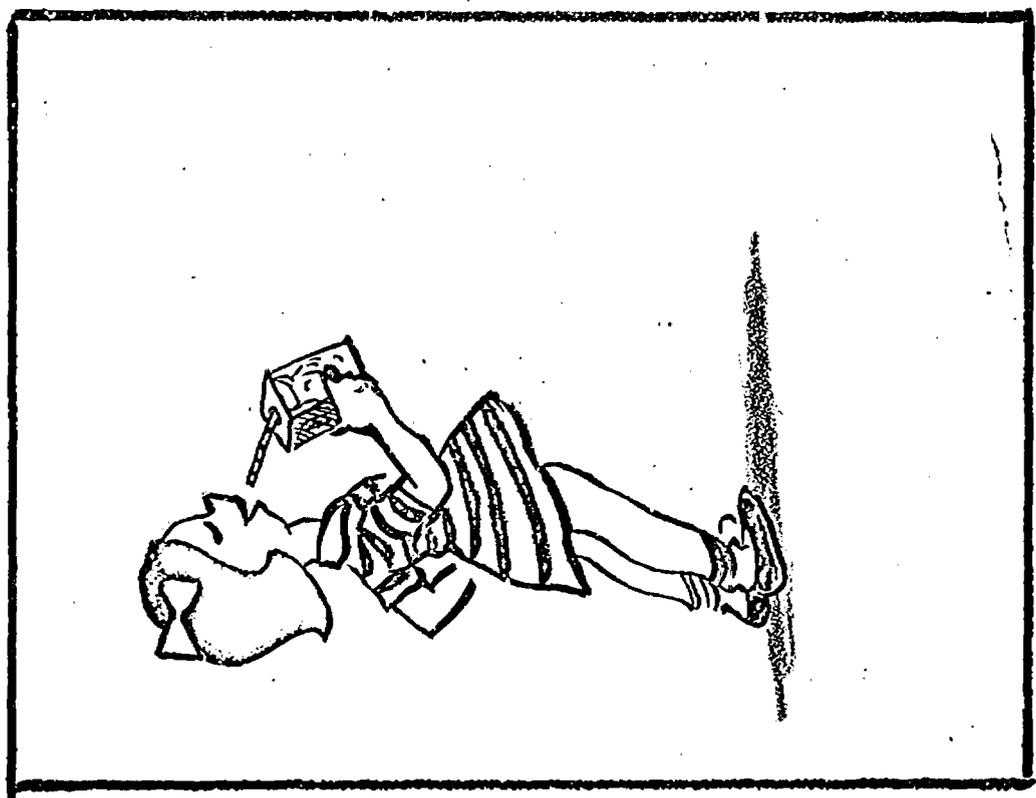
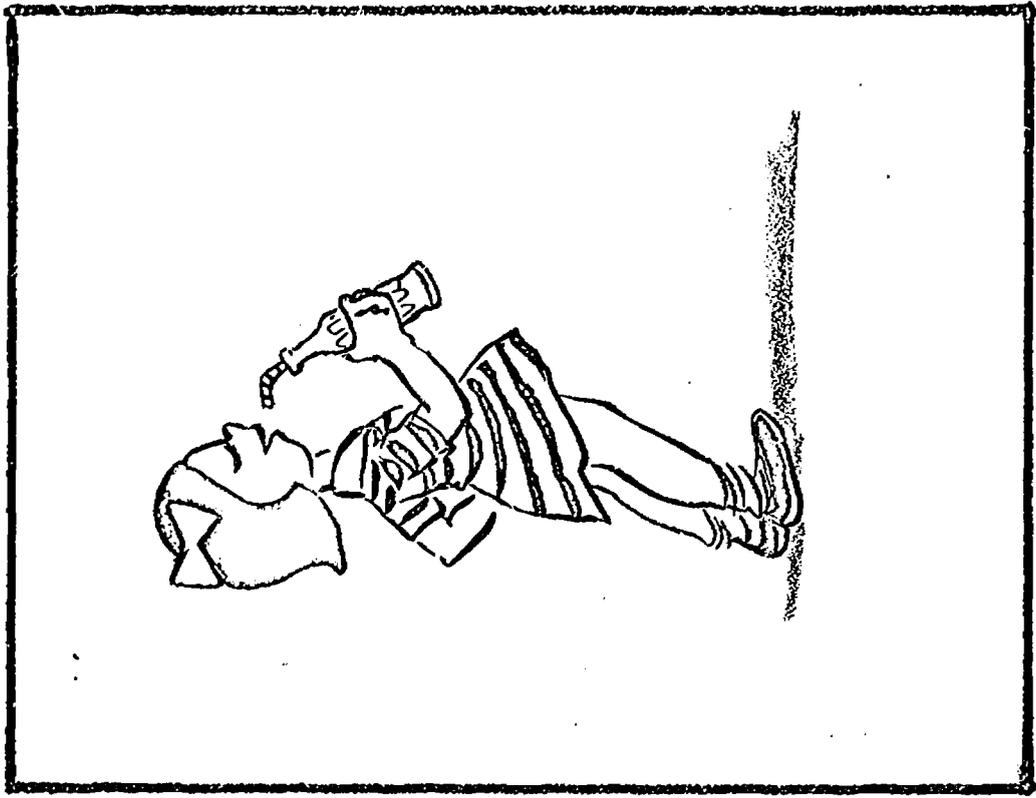




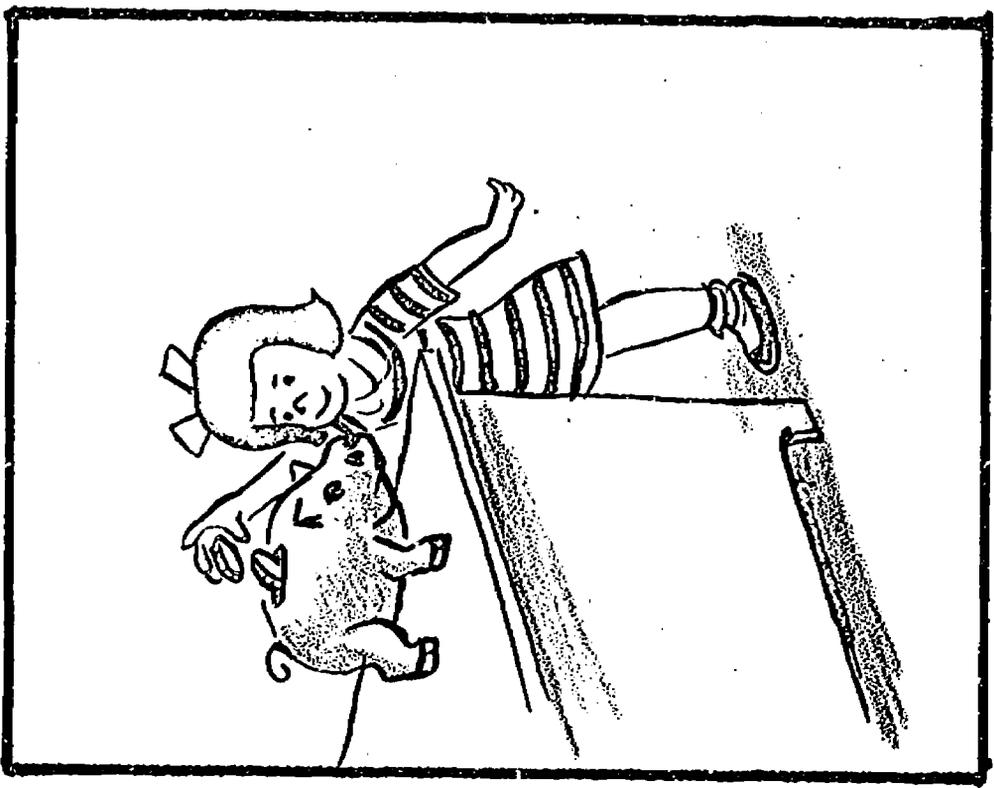
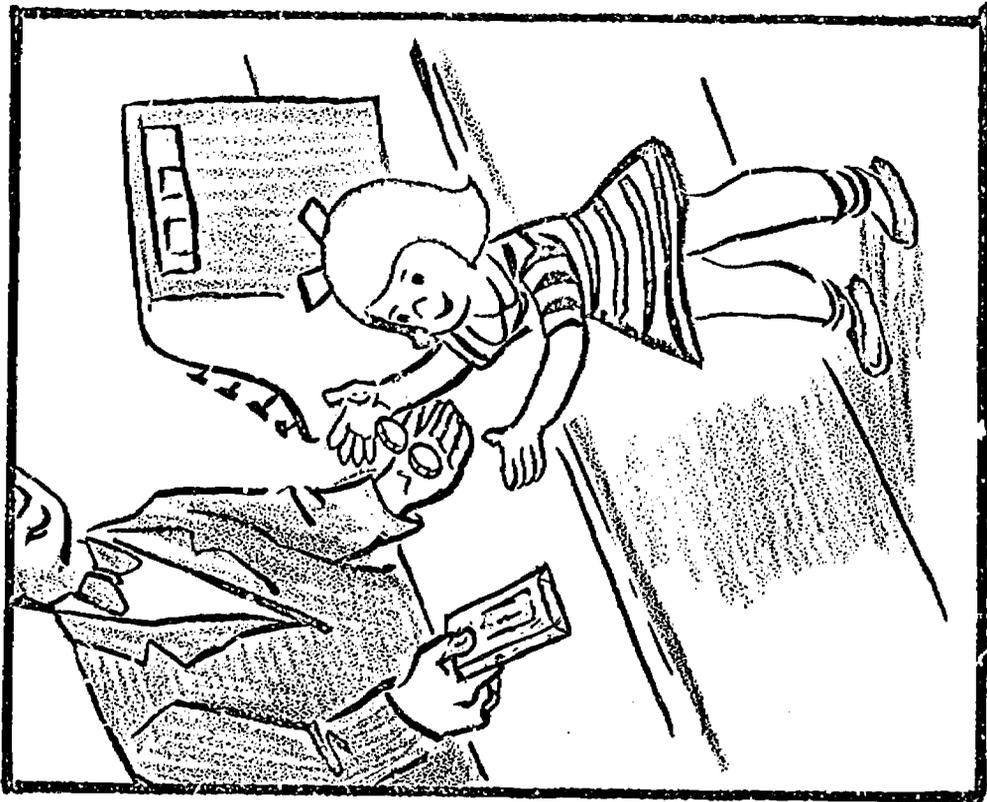




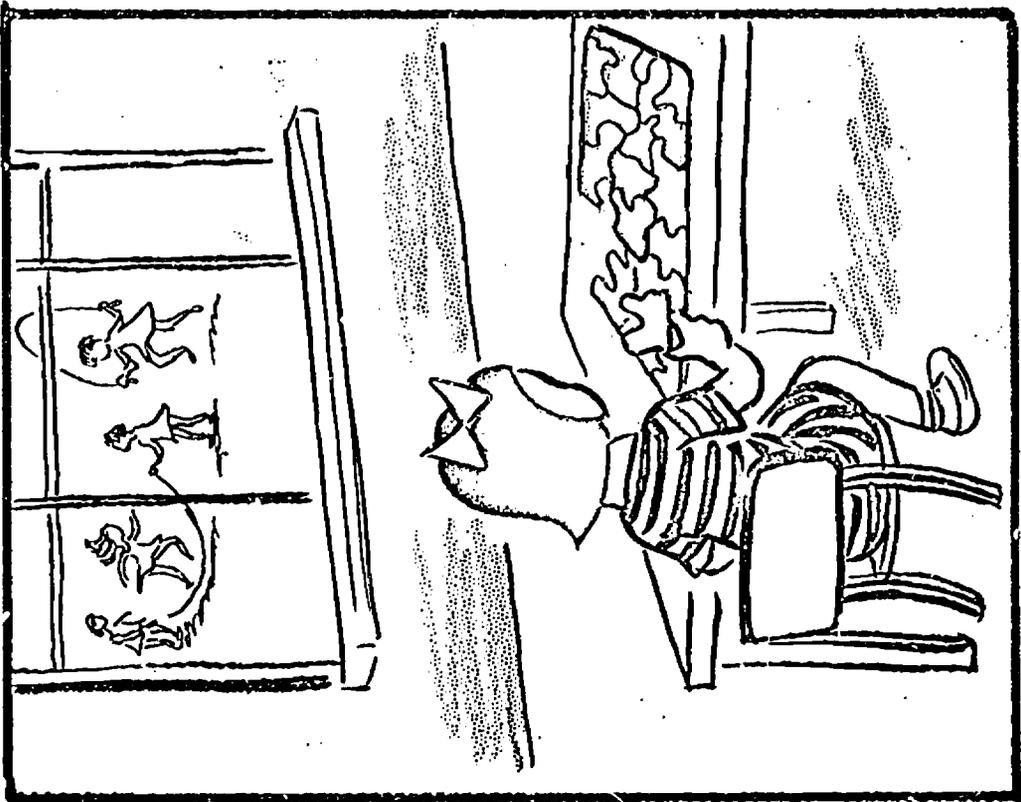
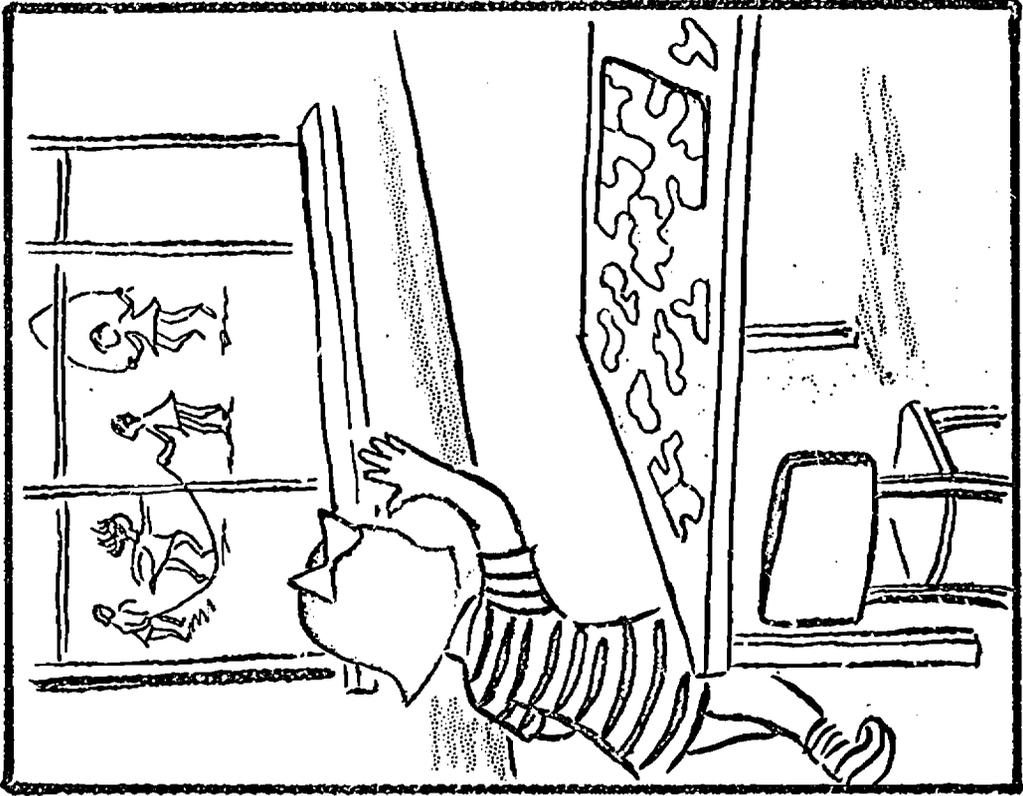




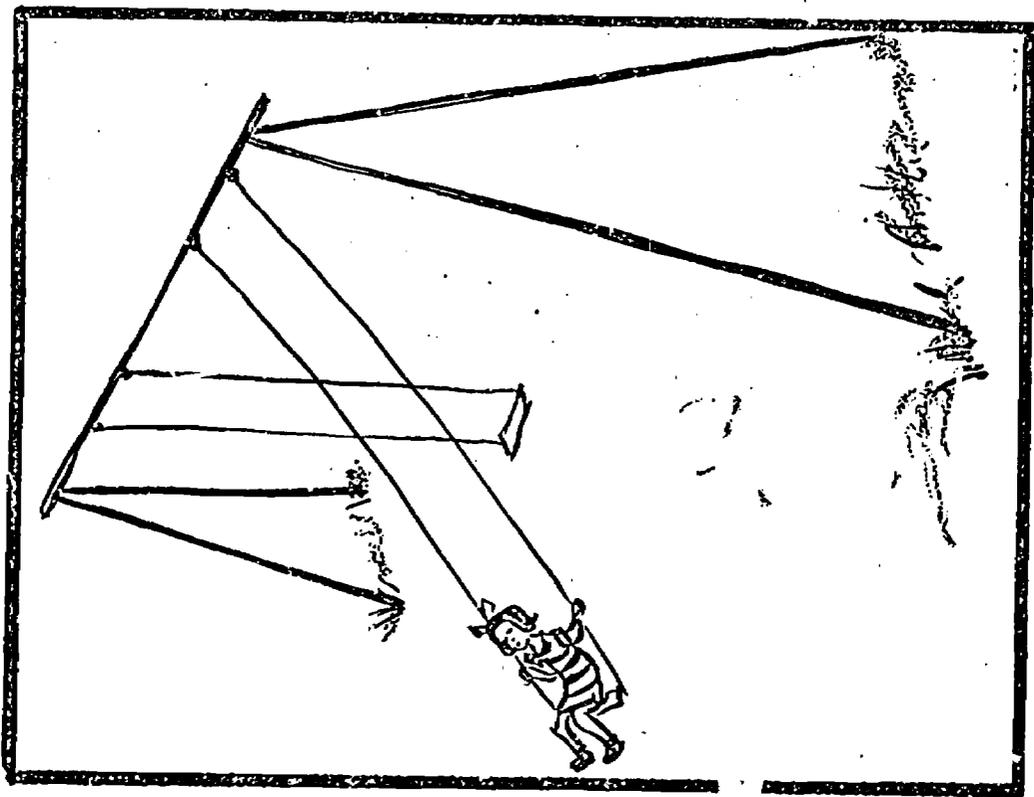
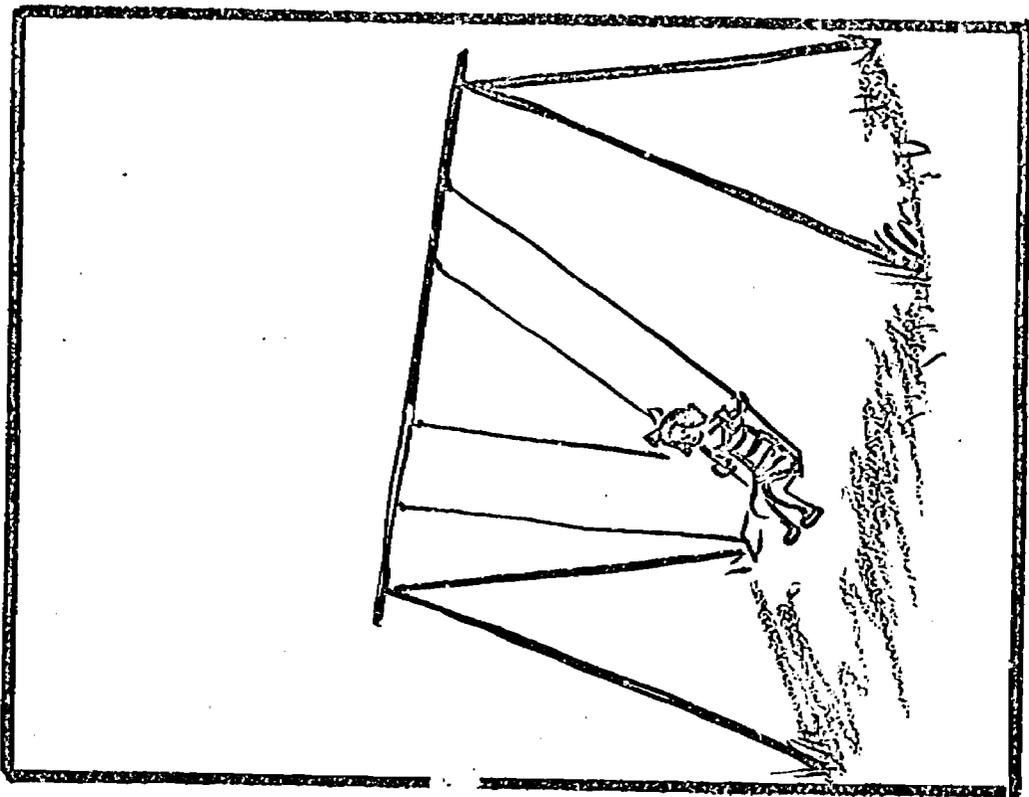
K108

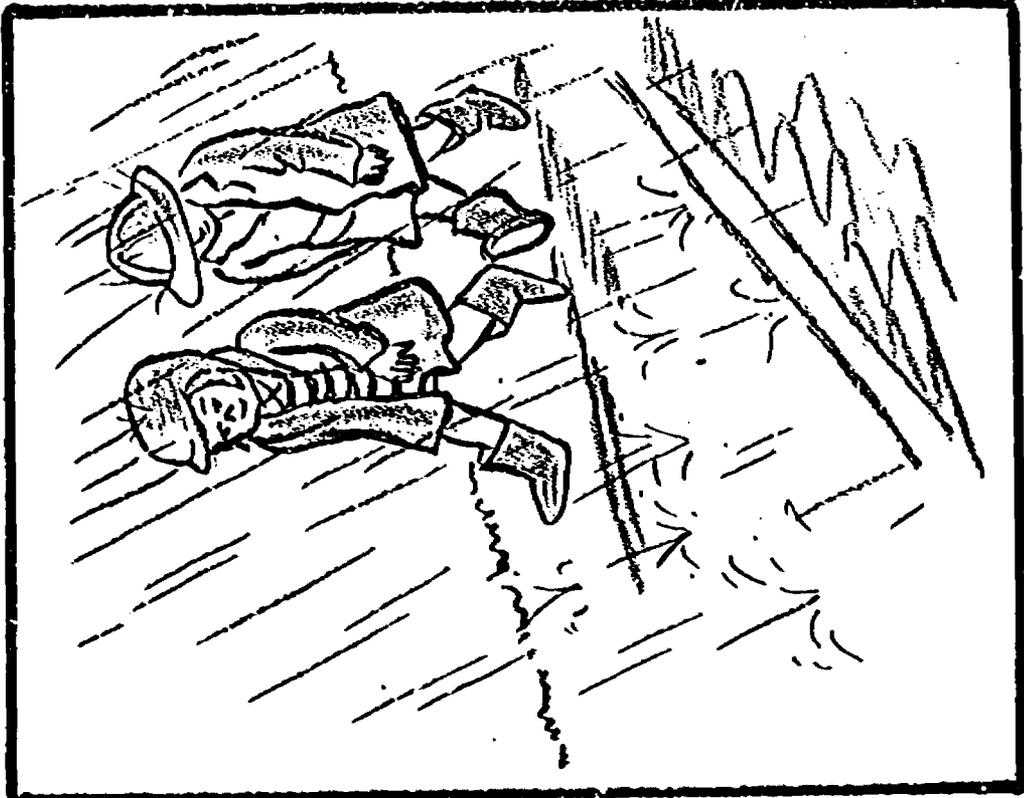
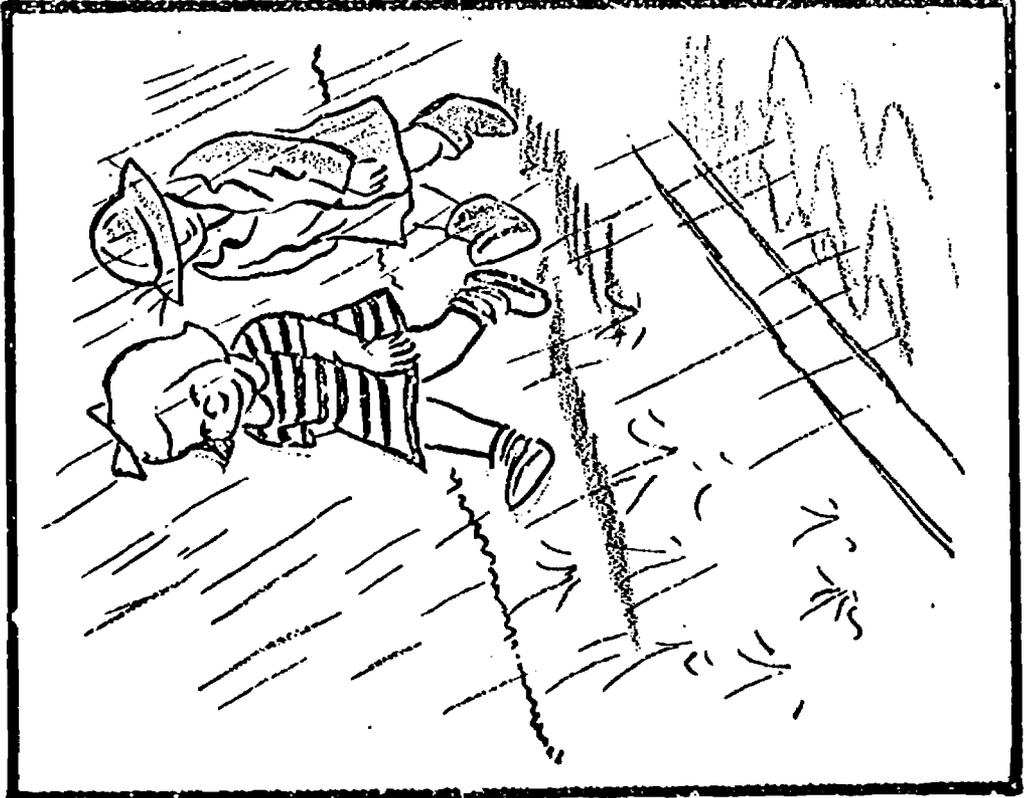


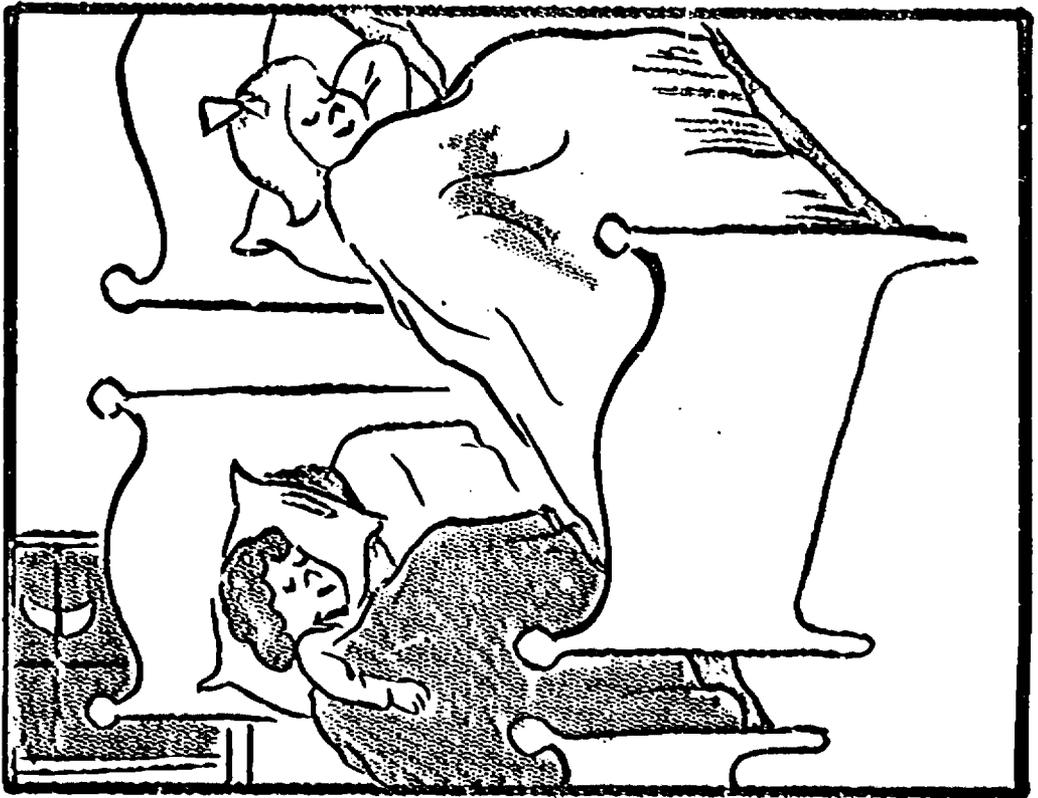
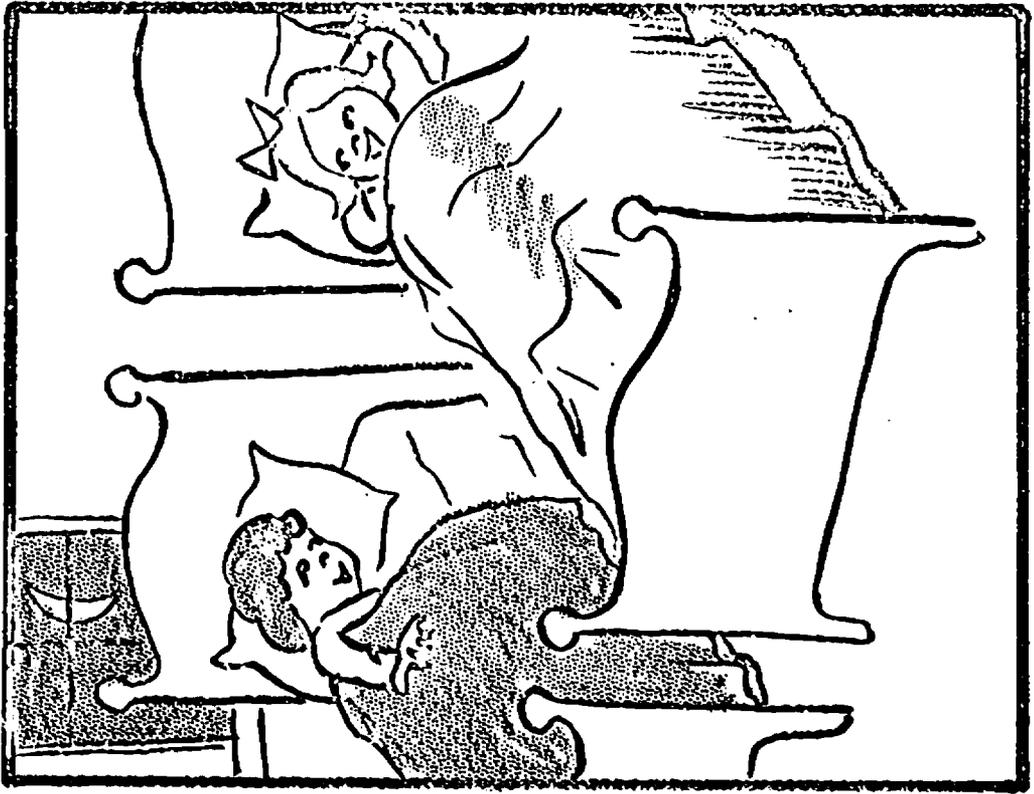
K47

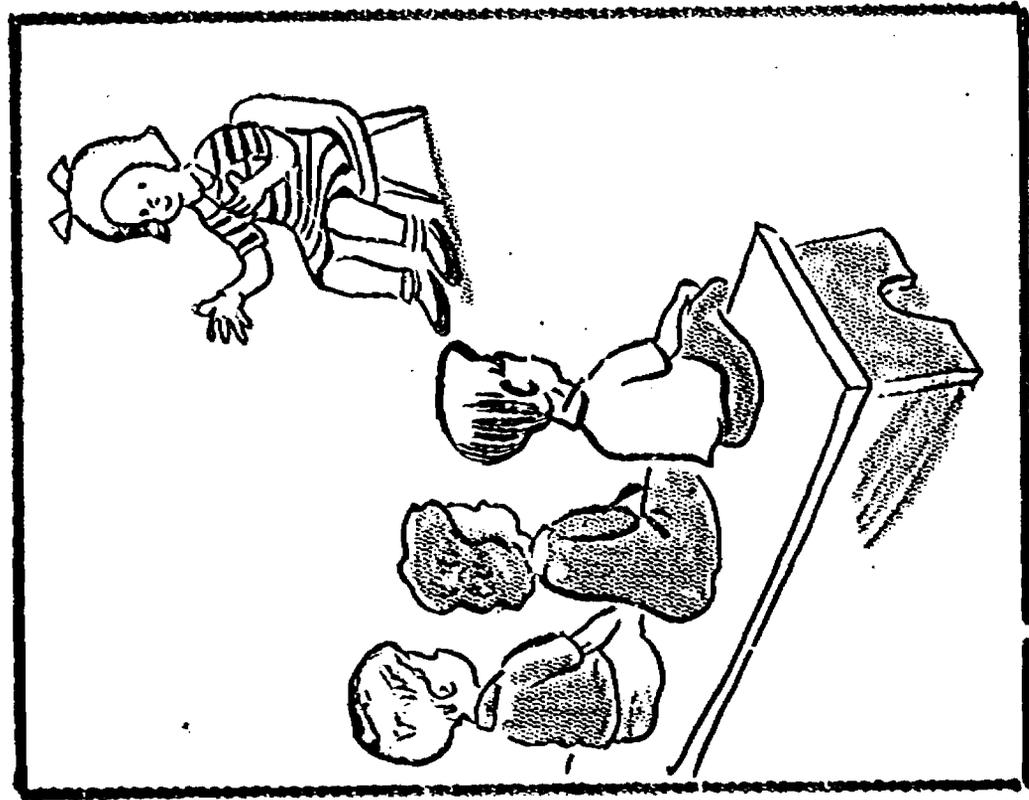
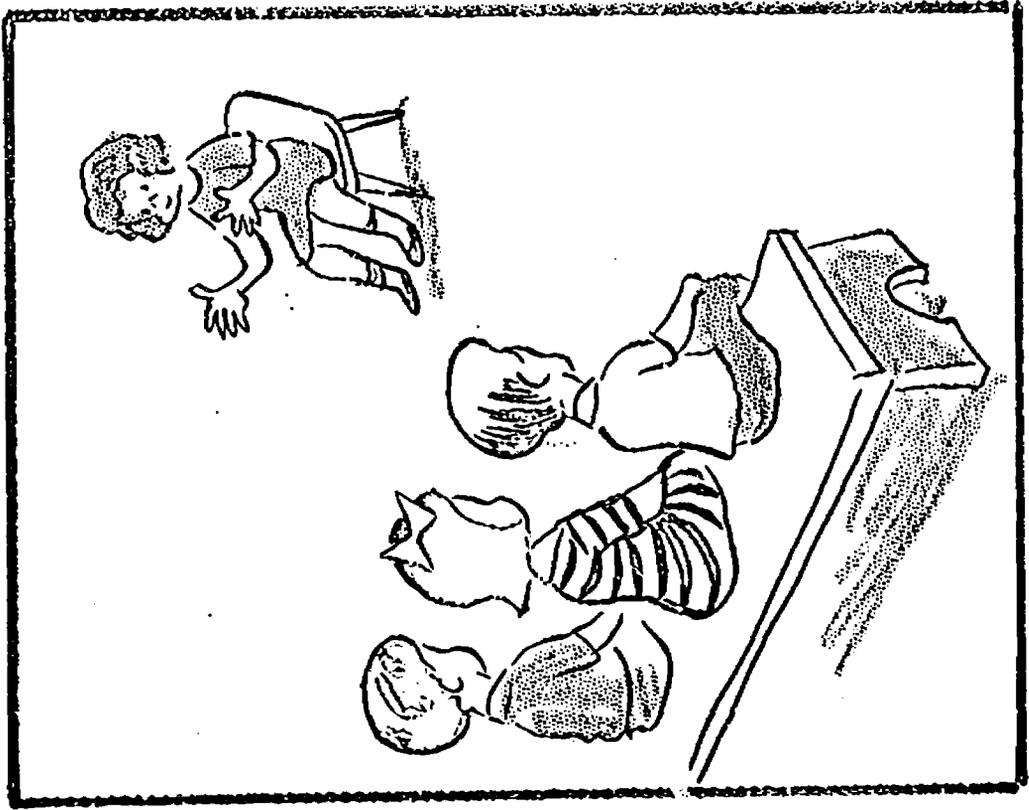


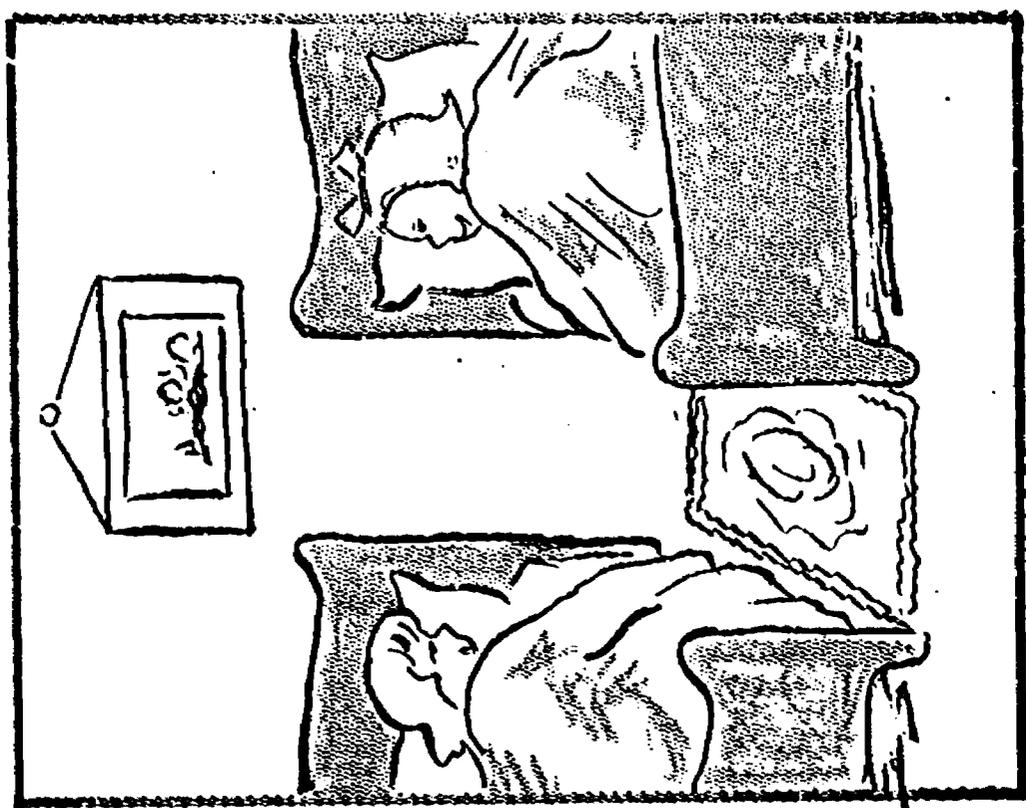
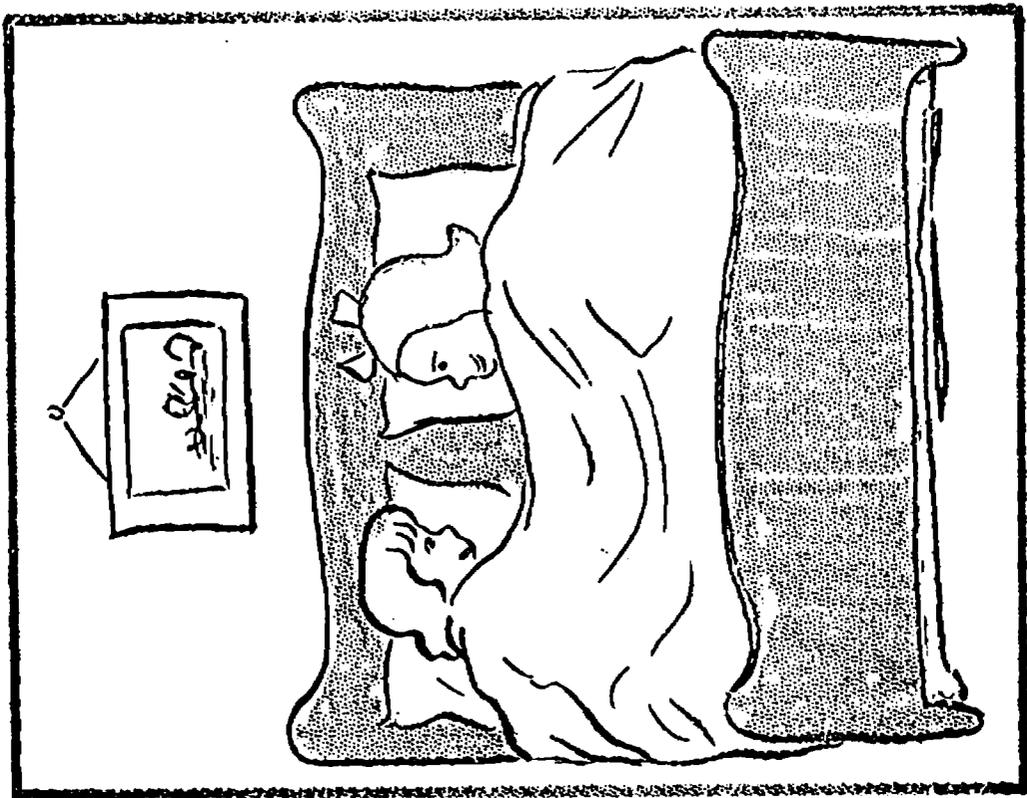
525

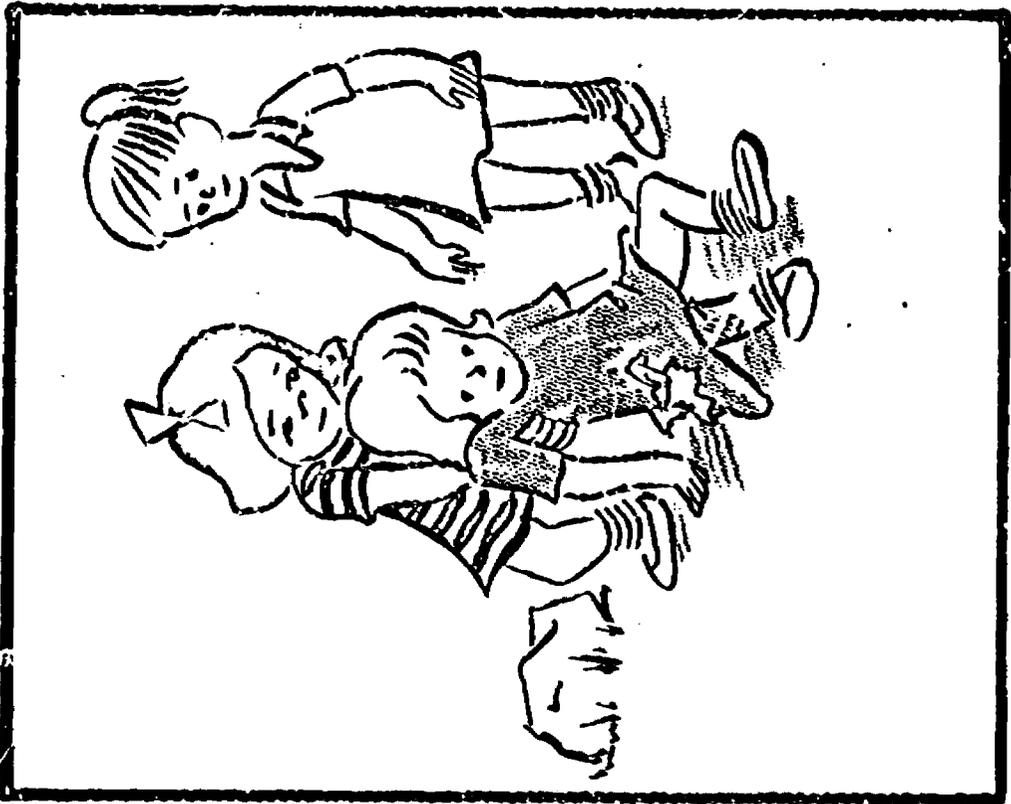
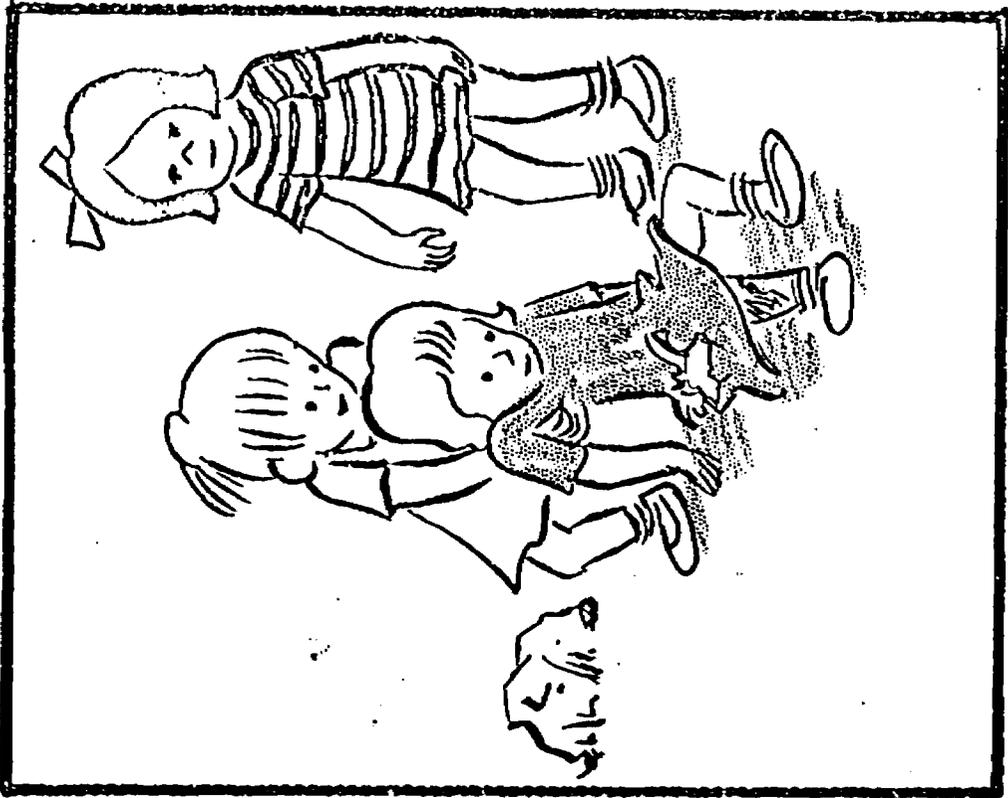


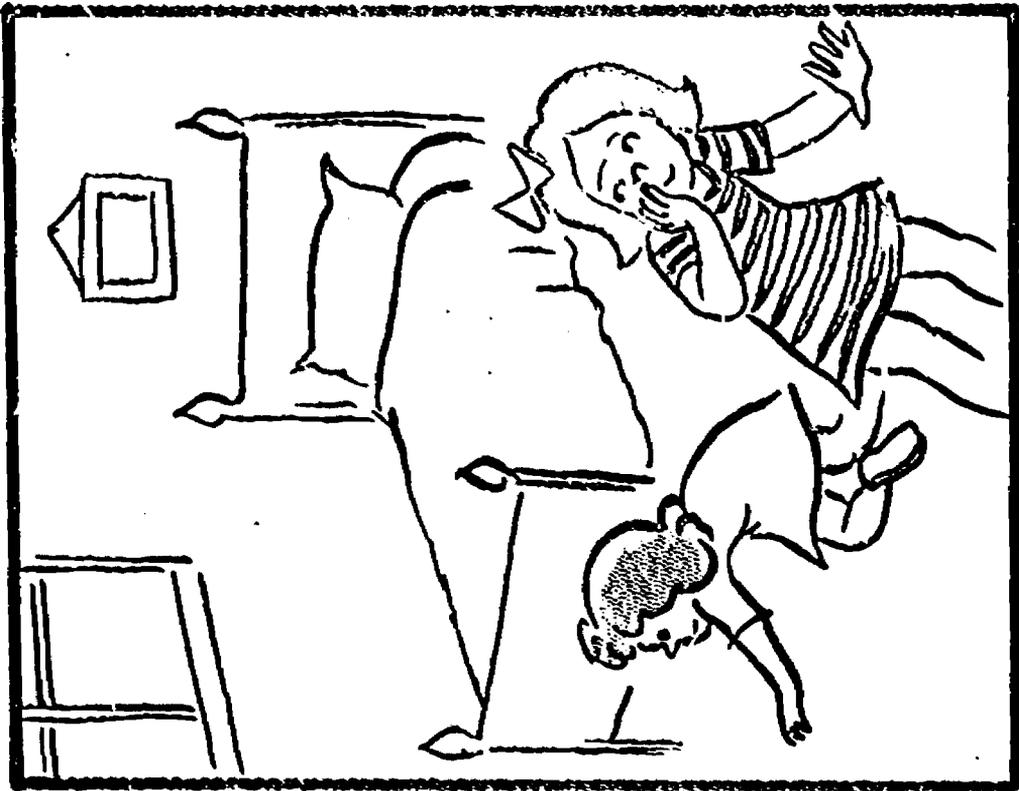


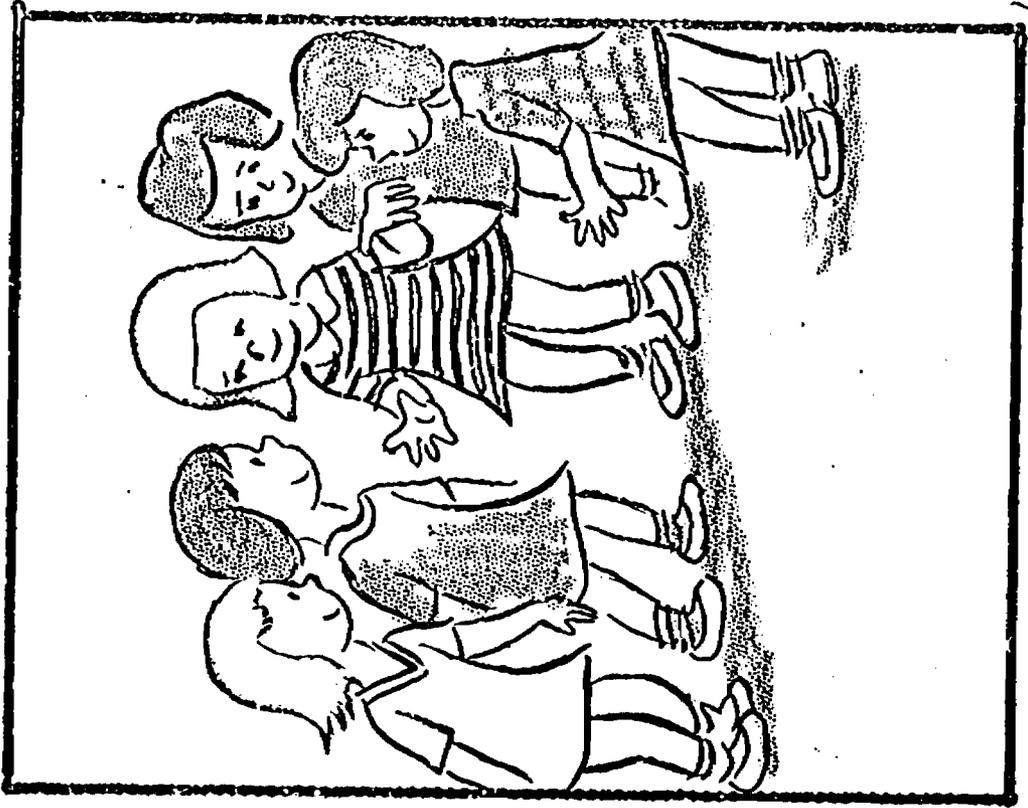


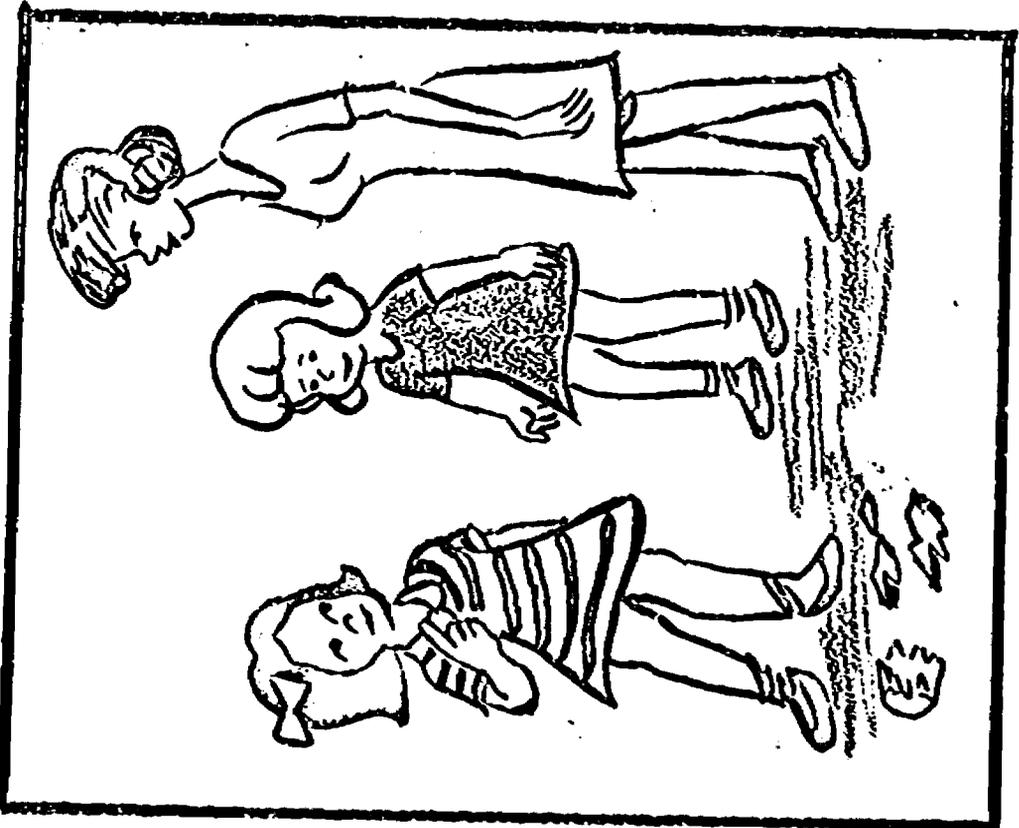
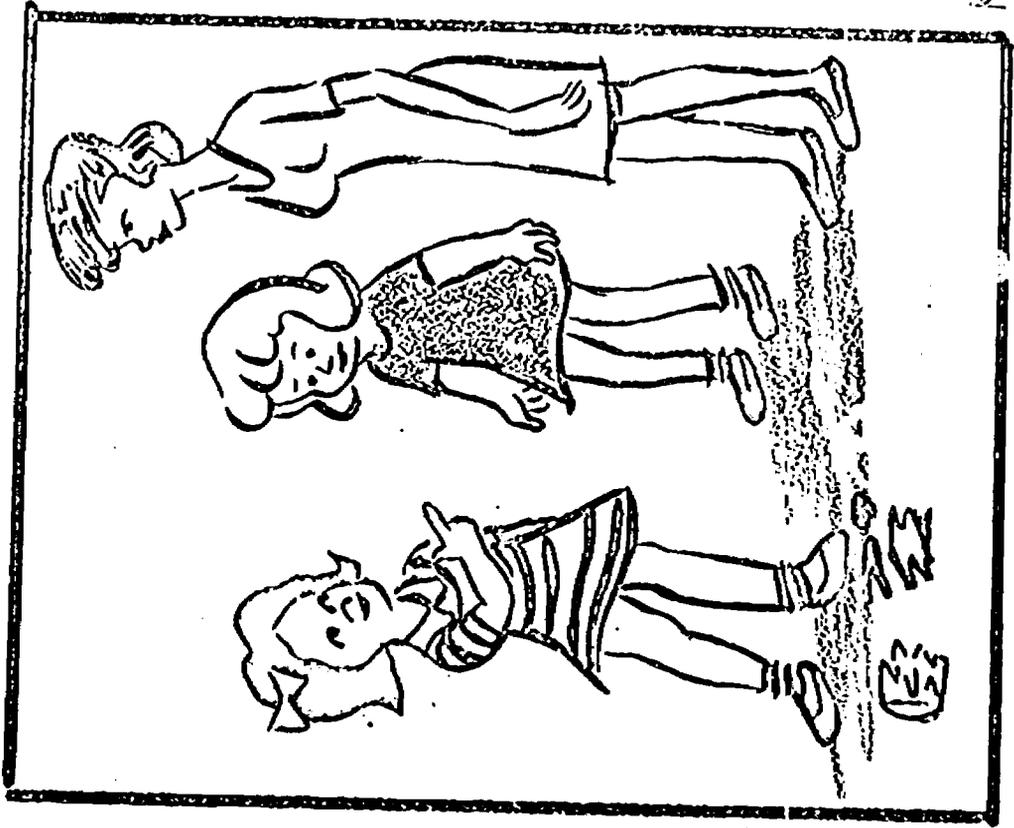




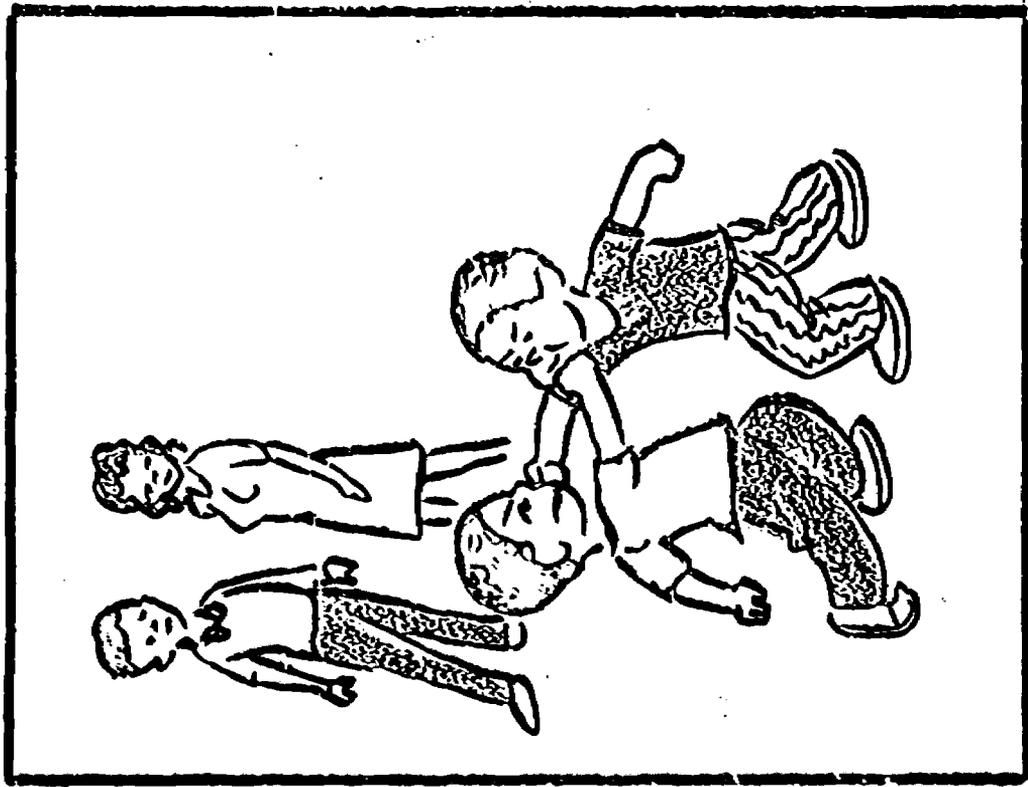
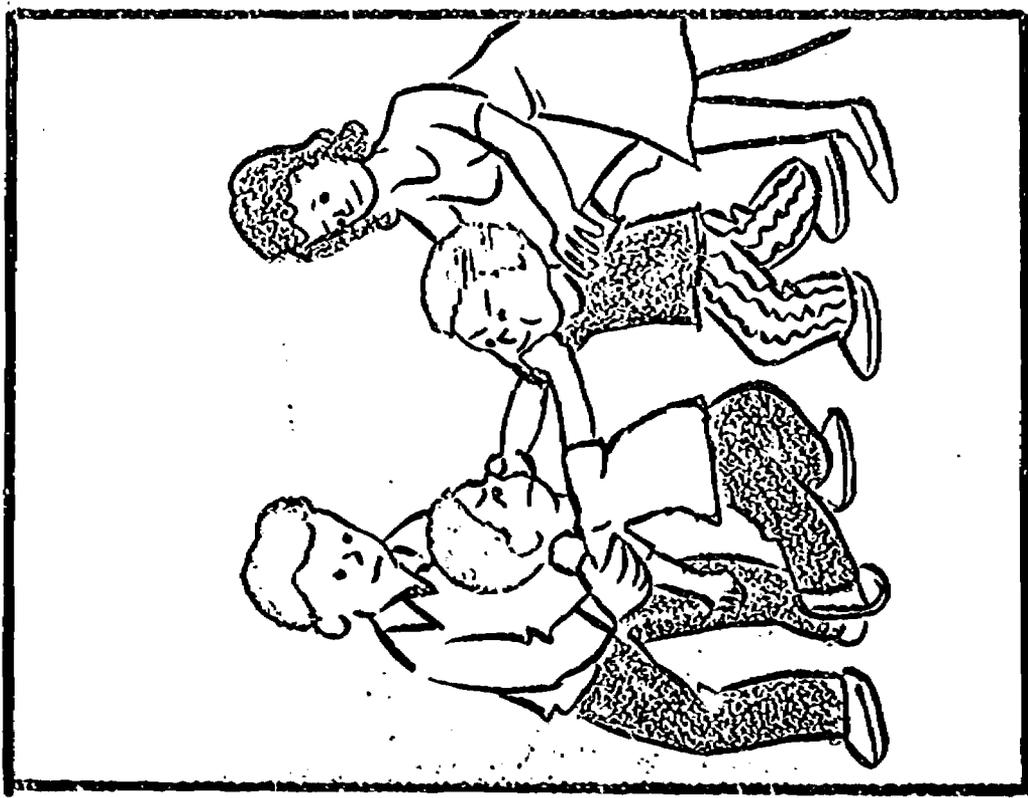


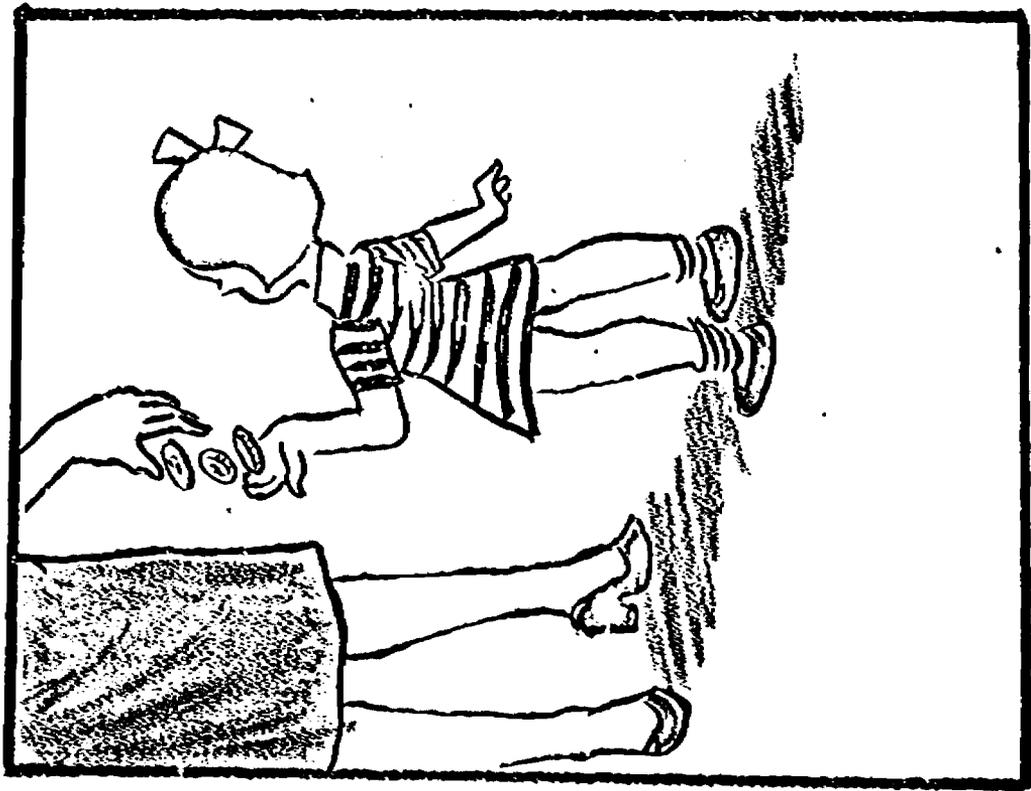
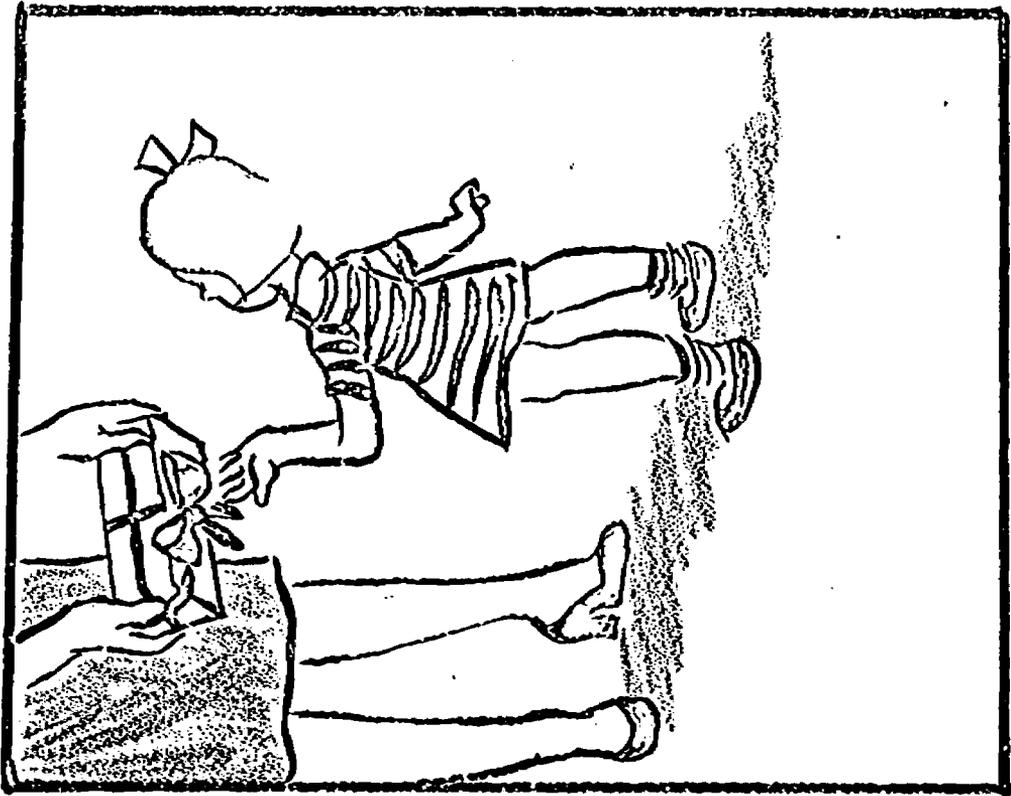


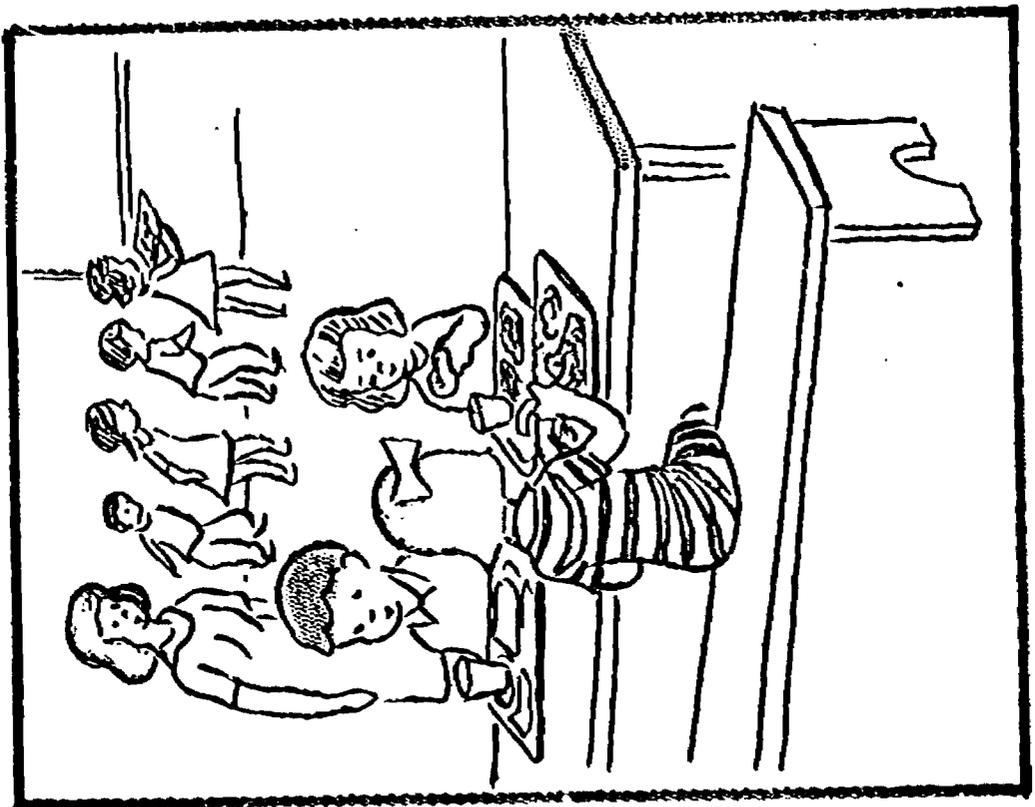
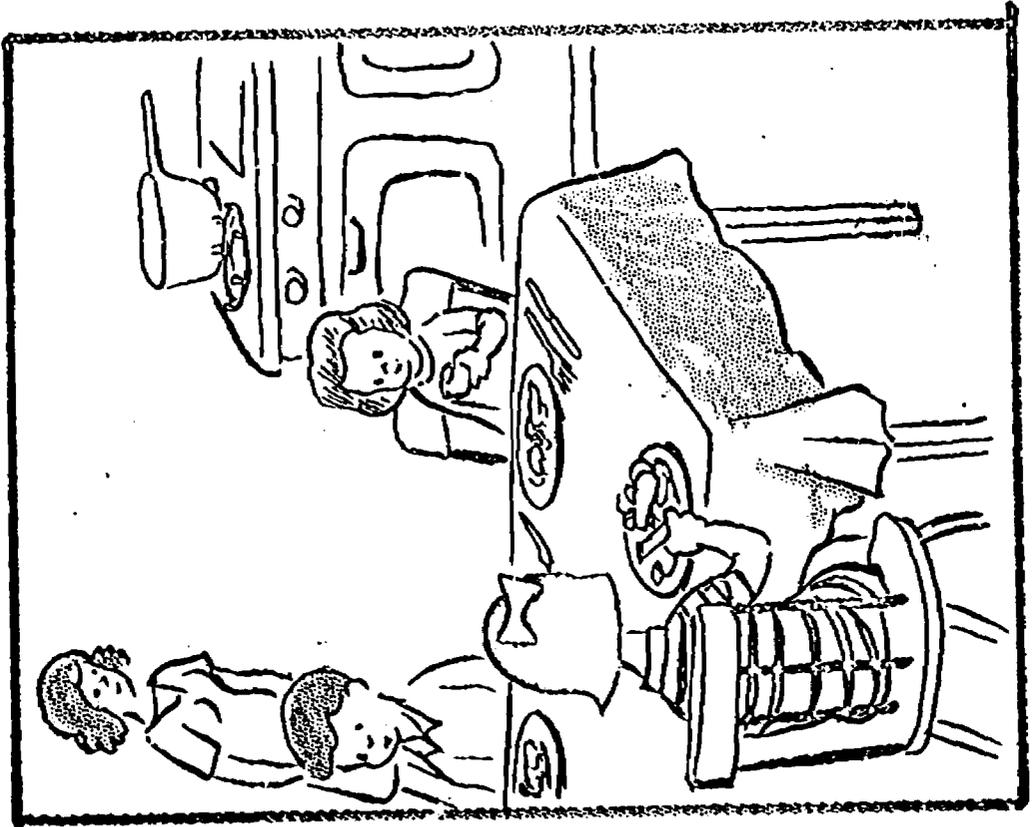


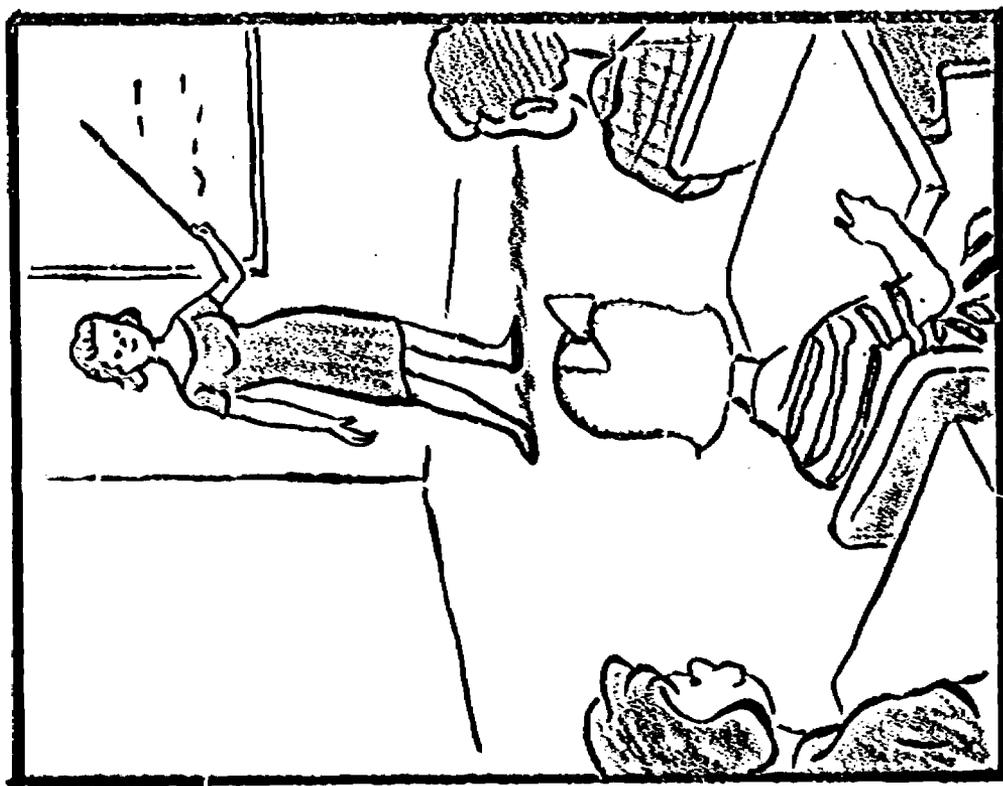
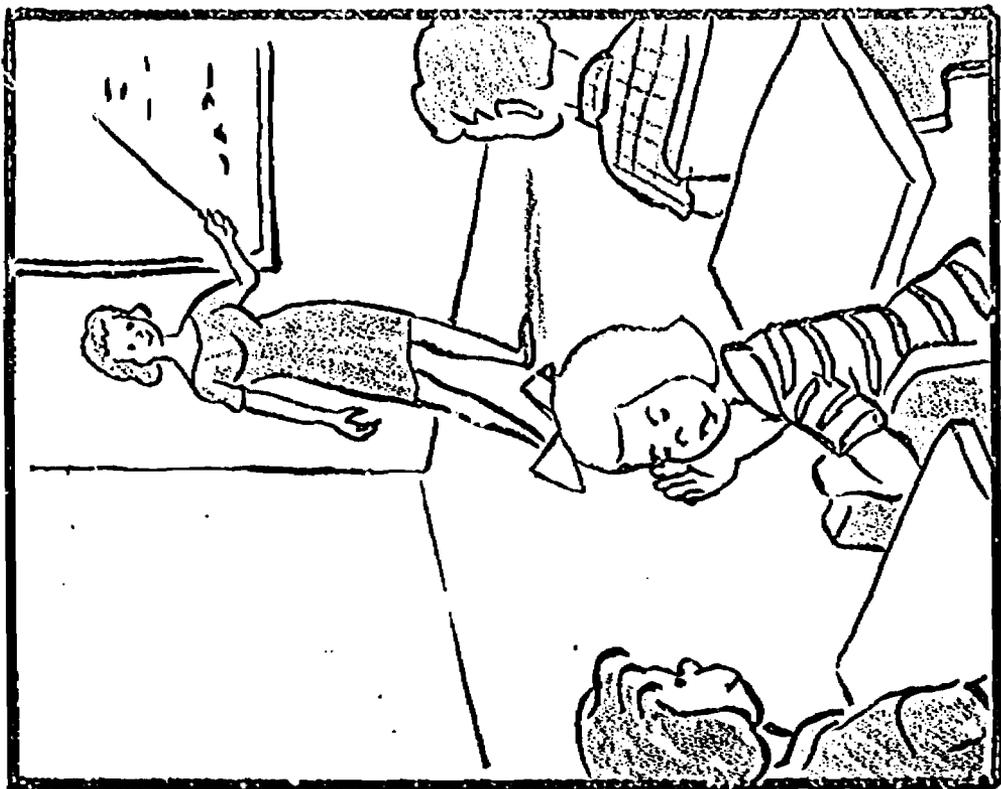


Hand

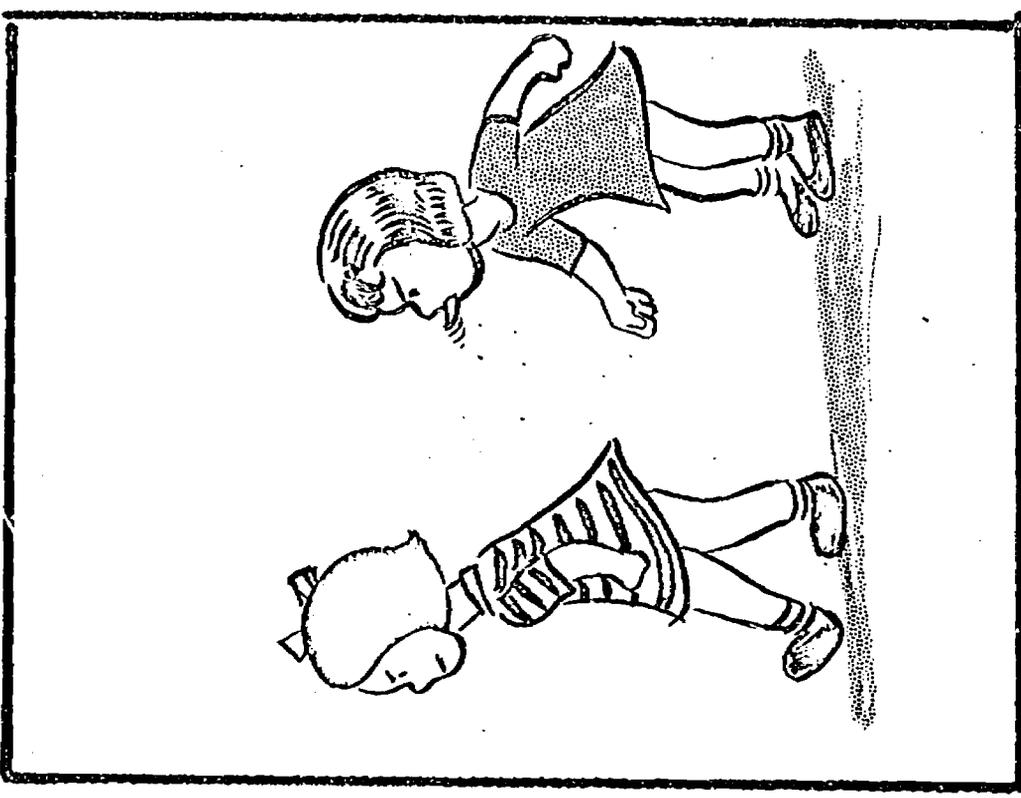
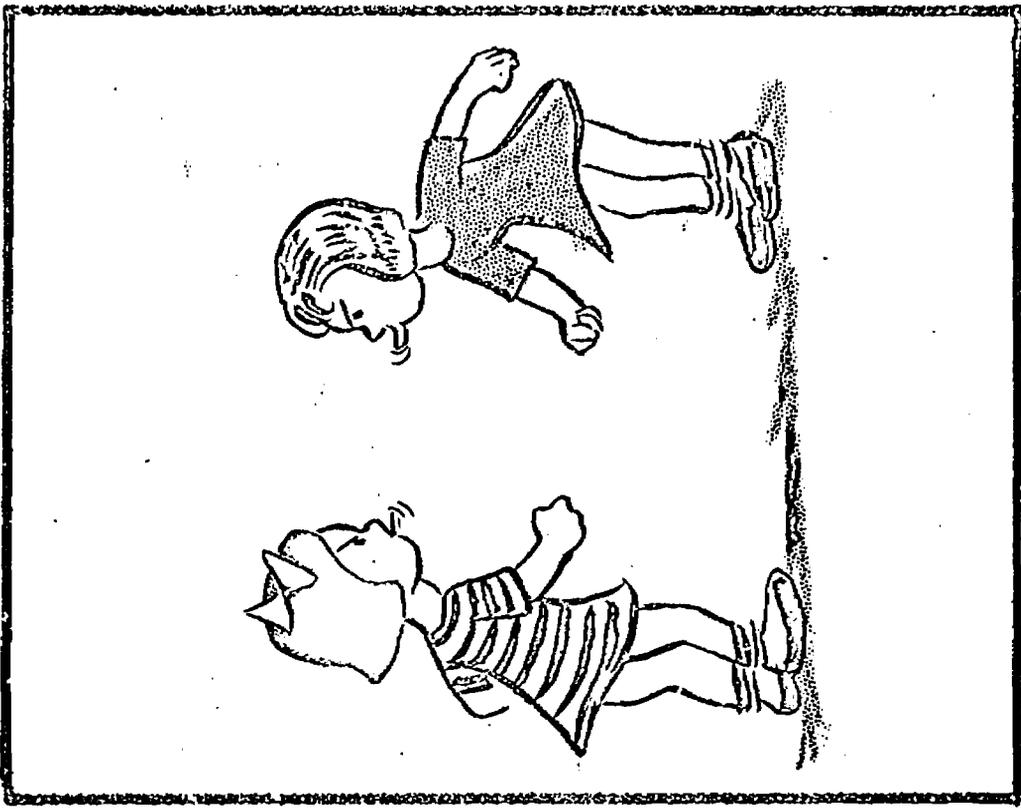


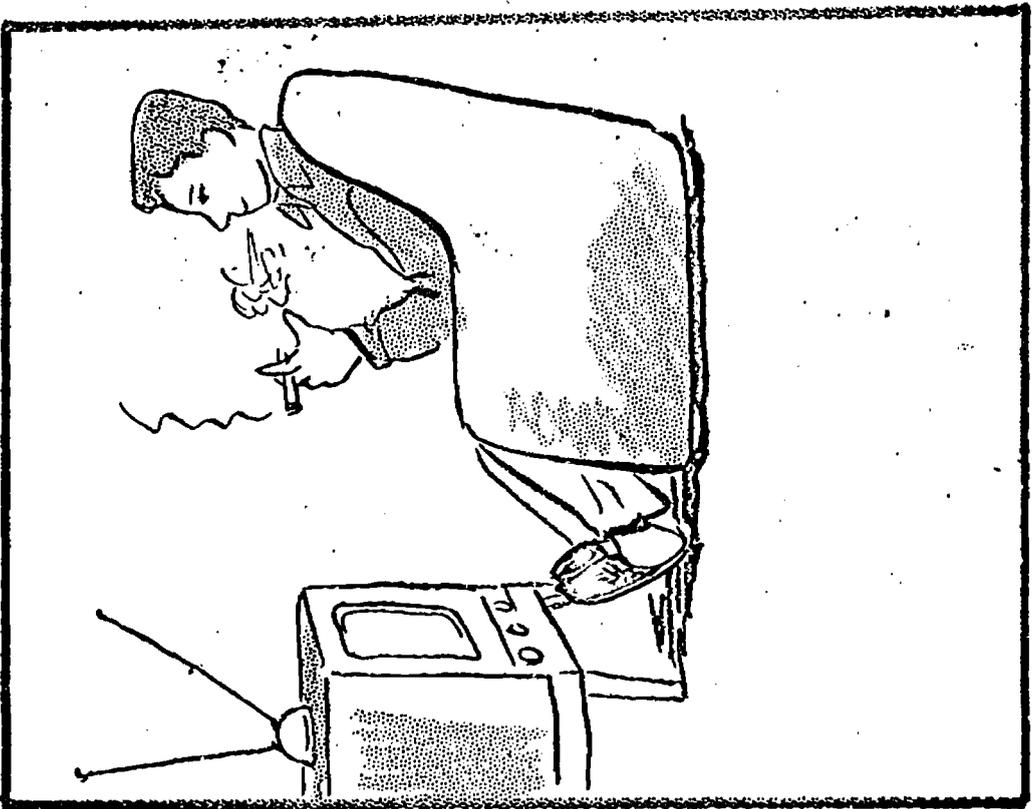
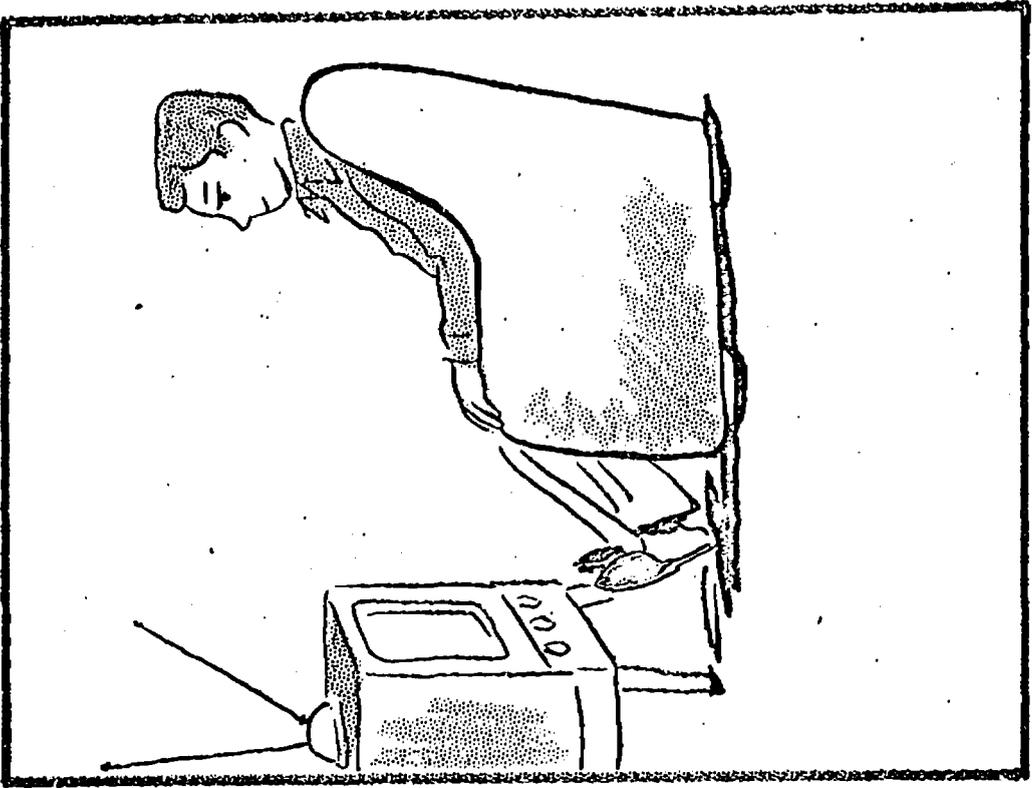


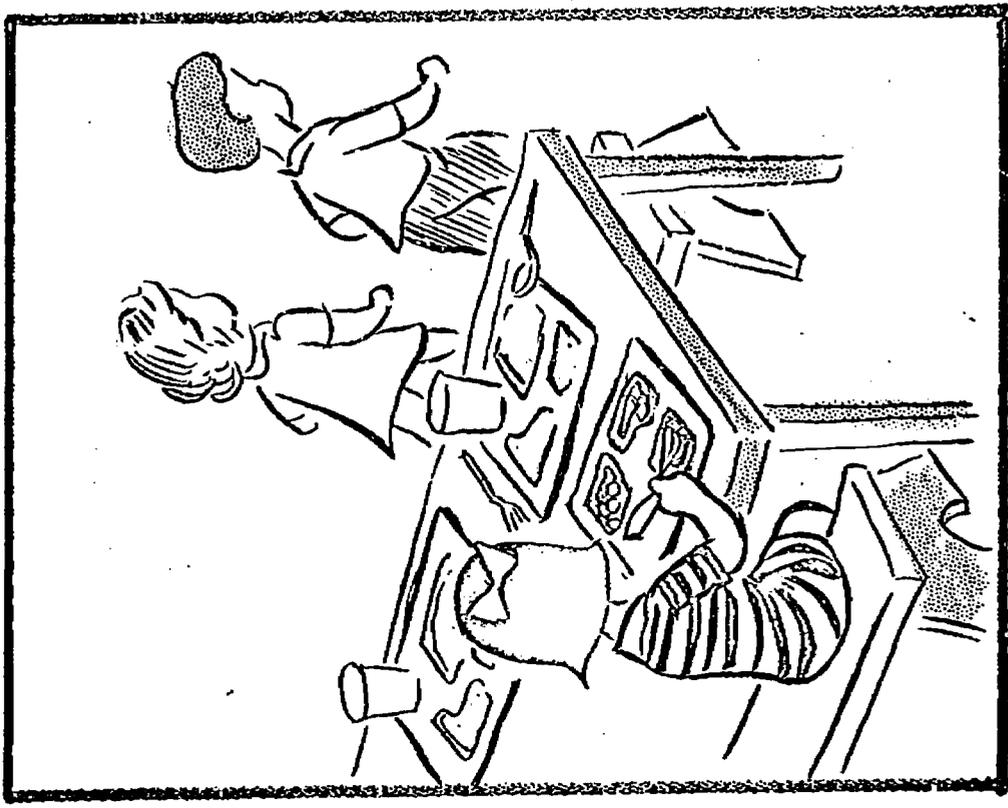
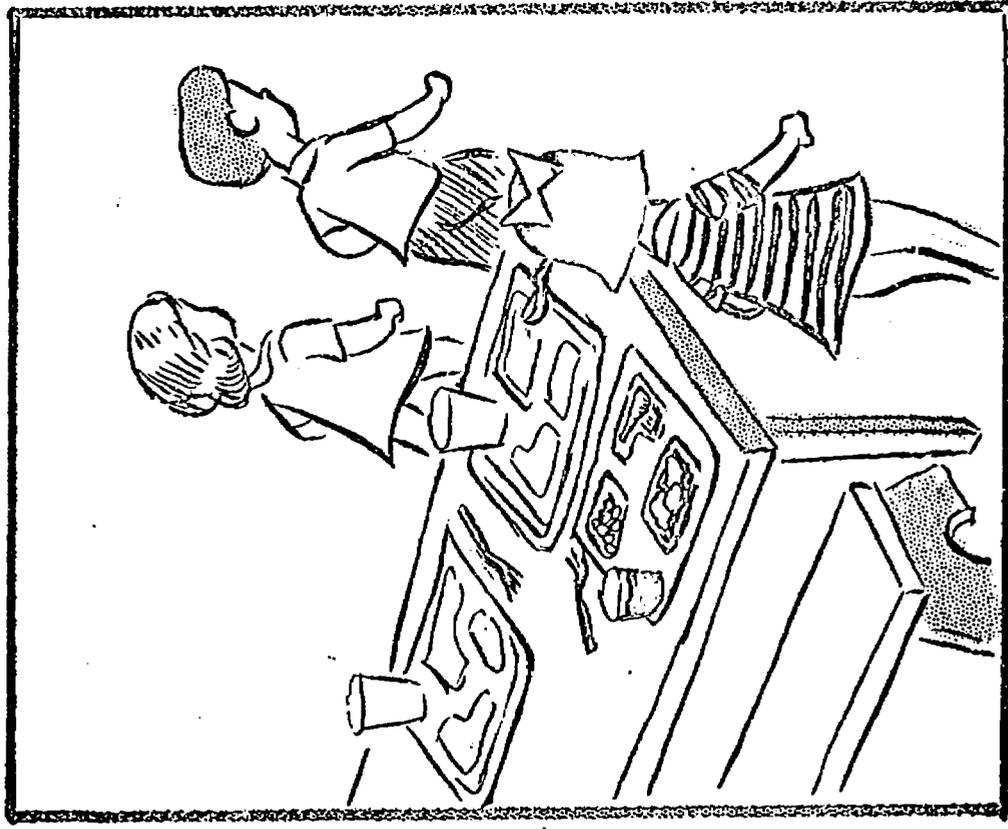


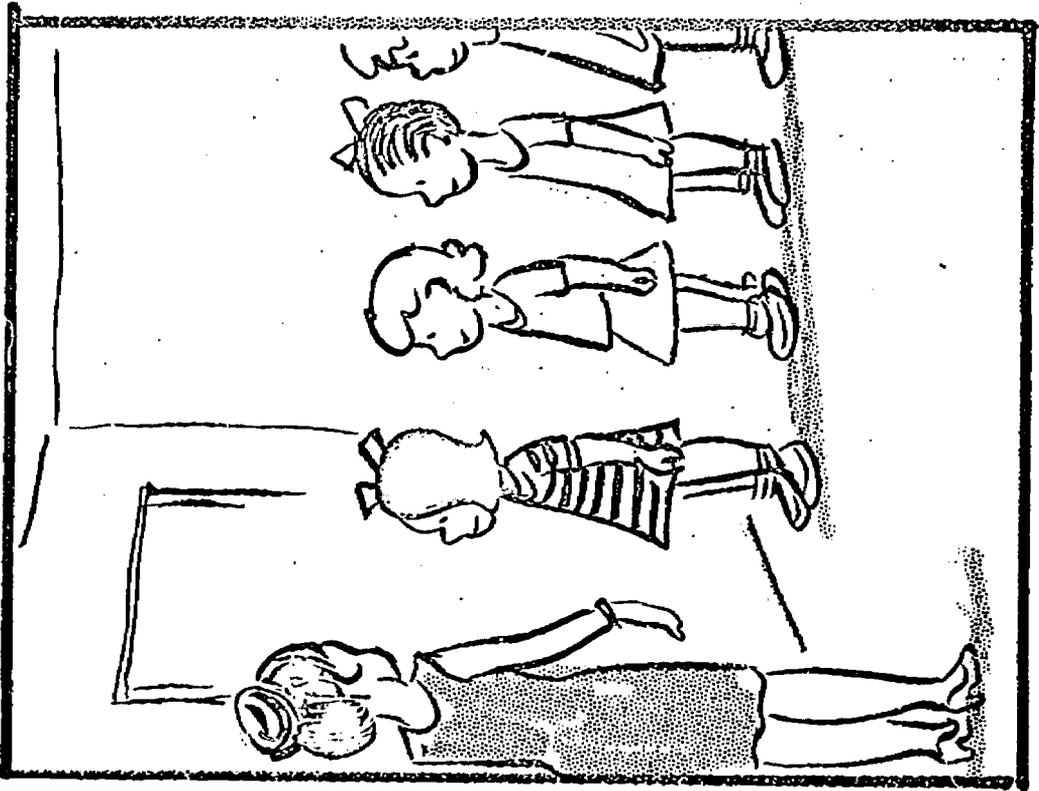
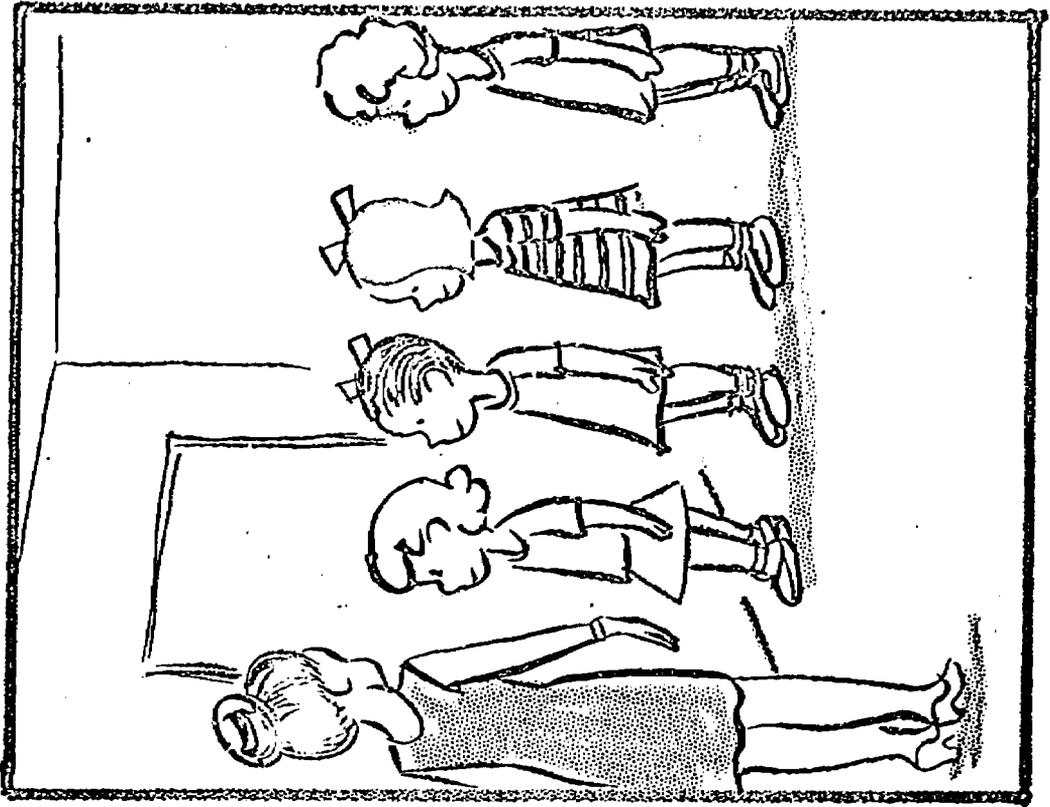


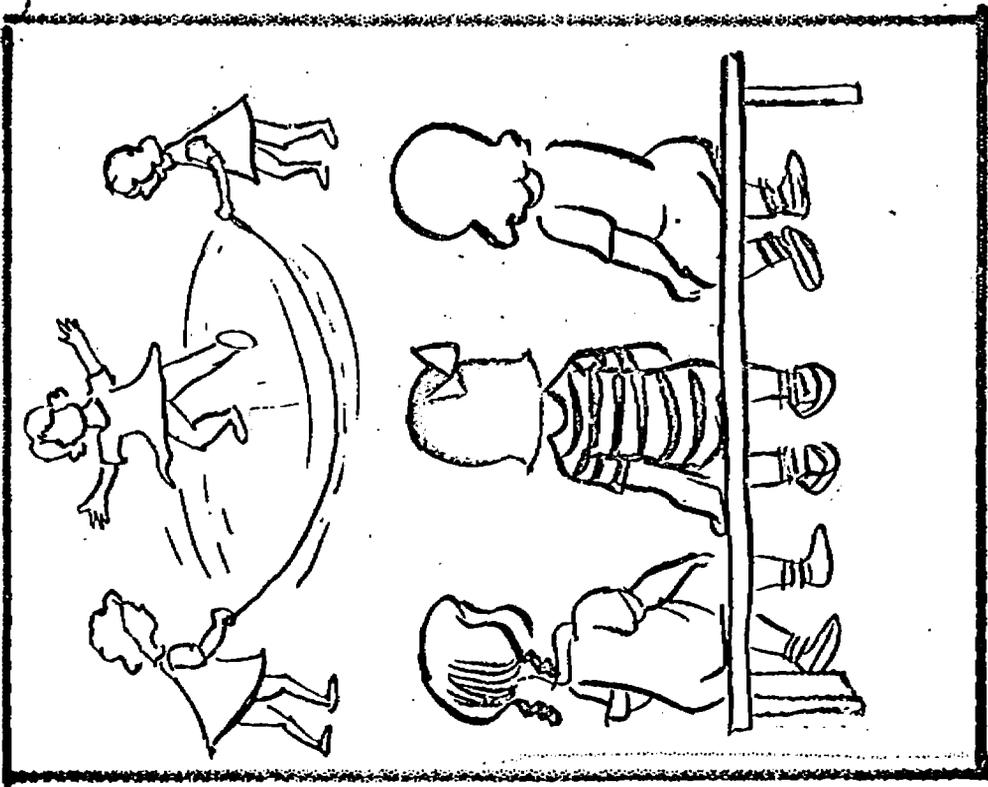
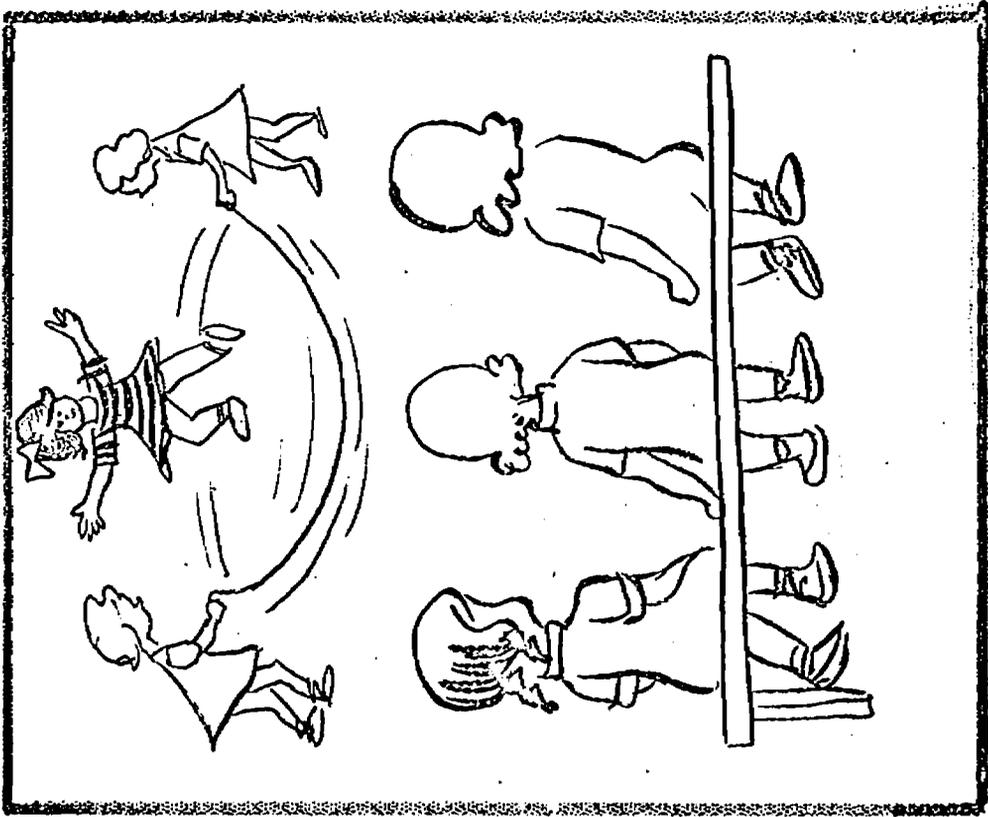












APPENDIX C

SCORE SHEETS AND ELIMINATED ITEMS (PRE-TEST)

The score sheets used in pretest contain abbreviations for the items pretested. X items were scored 1, 2, 4 or 5 depending upon the face chosen. Y items were scored 1 or 3 depending upon the picture chosen. Items remaining throughout pretest appear in Appendix B and are described in Appendix D.

The "I" column on the score sheet was used in cases where a child did not understand the item. In each such case, a score of 0 (zero) was given. The "V" column was used when the child answered the item in an invalid manner. In the case of both X and Y items this meant that he chose a face or picture which, upon cross-examination, did not represent his true feeling or choice. For example, if he chose a smiling face and then said that he didn't like the picture, he received a 0 (zero) score for validity on that item. Some children tended to be generally prone to invalidity. In such cases the items were not at fault. No tabulation was made of V scores; they were used to indicate whether or not children were either incapable of responding correctly or were responding to "face matches" (i. e., matching the face at the bottom to the face of the picture-subject above).

It will be noted that several X and Y items were eliminated very early in testing. These items are crossed out on the score sheet. They were removed either because they were generally misunderstood or because few or none of the children selected more than one alternative response. Descriptions of eliminated items and explanations as to what was done concerning them follow:

<u>Item No.</u>	<u>Description</u>	<u>Measure</u>	<u>Result</u>
5X	S dancing	(Aesthetic/Beauty)	Generally misunderstood
27X	S leader in follow-the-leader game	Leadership (Esteem)	Generally misunderstood; subject did not recognize his position
32X	S watching friend break window in house	Property damage (Aggression)	Rejected by almost all subjects
33X	S coming in second in race	Achievement (Esteem)	Generally misunderstood; subject did not recognize his position
37X	S gets report card with C's on it	Achievement (Esteem)	Generally misunderstood
45X	S gets card with two stars; one friend gets one; other gets three	Achievement (Esteem)	Generally misunderstood
46X	S gets one star; friend three	Achievement (Esteem)	Generally misunderstood

<u>Item No.</u>	<u>Description</u>	<u>Measure</u>	<u>Result</u>
9Y	(a) S is pushed by other; does nothing (b) S is pushed; hits back	(Aggression)	Generally misunderstood
12Y	(a) S in grandstand with other watching boy at bat (b) S at bat; others watching	Participation (Esteem)	Subject could not find self in picture
14Y	(a) S choosing team members (b) Other choosing team members; S chosen first	Leadership (Esteem)	Generally misunderstood
17Y	(a) S shows friends clay model (b) S hides clay model from friends	Exhibitionism (Esteem)	Generally misunderstood
21Y	(a) S and friend sticking tongues out at each other (b) Friend sticks out tongue; S hits him	(Aggression)	Both pictures rejected; hitting misinterpreted
24Y	(a) Man watching TV, smoking (b) Man watching TV, not smoking	Health habits (Physiological)	Irrelevant cues

Misunderstanding arose from various sources. Sometimes different children placed different interpretations on concepts. For example, in the case of item 17Y, some children thought the clay model was a "gingerbread man" and didn't want their friends to eat it. It was redrawn to represent a dog. Another child said, "It isn't nice to hide things from your friends," while another said "I'm hiding it so I can show it to them and surprise them". Often they did not understand that it was something they had made.

Other problems arose from the fact that children were basically non-competitive. They did not mind being beaten in a race, receiving less stars than other children, etc. The exception to this was a very small handful of competitive children who not only grasped the fact that they were second best, but resented it. Report card grades were unfamiliar to many. Stars (designed to replace grades) were interpreted as "reading about starfish" or "reading about stars".

Cases of extreme aggression in which S was involved were rarely chosen. The breaking-window item (32X) was changed to throwing vegetables at an old fence (43X) which met with more approval. The sticking out tongue/hitting item (21Y) was changed to an item (35Y) in which S could walk

away or return the insult. This also proved to be better accepted.

Item 24Y which contained the smoking or non-smoking man was redrawn to eliminate cues and appears as 36Y.

Item 12Y in which the picture-subject was either at bat or observing was changed to 39YB and 39YG in which the boy either watches another kick a football or kicks it himself and the girl either watches another jump rope or jumps rope herself.

Item 27X (follow-the-leader) was substituted for by 38Y in which the picture-subject appears either first or third in a line.

Failure of 33X (second in the race) led to substitution of 44X in which the picture-subject receives a second prize ribbon while his friend gets first prize.

Since the star award items (45X and 46X) were designed to substitute for the report card item (37X) and did not work, either, no attempt was made to replace them. Awards for academic achievement do not seem to be universally understood by children this young and therefore cannot be tested in this type of inventory.

No attempt was made to replace other eliminated items since it was felt that the concepts represented were already included in the currently acceptable item pool. It is possible that some attempt will be made to add an "exhibition" item with further pretesting of selected children during the summer months.

XXX

School

Grade

ID

Name

Teacher

G R S C A L

Age

Birth:

CA

Language:

Race

Sex

Mo

Fa

SI

Bro

Other

#	Key	Resp.	I	V		#	Key	Resp.	I	V	
1.	record	1 2 4 5				25.	mother	1 2 4 5			
2.	reading	1 2 4 5				26.	tug-war	1 2 4 5			
3.	break	1 2 4 5				27.	leader	1 2 4 5			ELIMINATED
4.	dog	1 2 4 5				28.	drop cone	1 2 4 5			
5.	dance	1 2 4 5			ELIMINATED	29.	stealing	1 2 4 5			
6.	hurt cat	1 2 4 5				30.	tripping	1 2 4 5			
7.	smelling	1 2 4 5				31.	B-strong G-pretty	1 2 4 5			
8.	snake	1 2 4 5				32.	break-win	1 2 4 5			ELIMINATED
9.	ghosts	1 2 4 5				33.	second	1 2 4 5			ELIMINATED
10.	littering	1 2 4 5				34.	painting	1 2 4 5			
11.	mud	1 2 4 5				35.	classroom	1 2 4 5			
12.	cave	1 2 4 5				36.	teacher +S	1 2 4 5			
13.	nature	1 2 4 5				37.	report-ed	1 2 4 5			ELIMINATED
14.	knife	1 2 4 5				38.	going home	1 2 4 5			
15.	cars	1 2 4 5				39.	studying	1 2 4 5			
16.	guitar	1 2 4 5				40.	brush teeth	1 2 4 5			
17.	father	1 2 4 5				41.	bath	1 2 4 5			
18.	water man	1 2 4 5				42.	prayers	1 2 4 5			
19.	soldier	1 2 4 5				43.	throw vegetables	1 2 4 5			
20.	doctor	1 2 4 5				44.	2nd prizo	1 2 4 5			
21.	boxing	1 2 4 5				45.	stars-(3)	1 2 4 5			ELIMINATED
22.	policeman	1 2 4 5				46.	stars-(2)	1 2 4 5			ELIMINATED
23.	church	1 2 4 5				47.		1 2 4 5			
24.	nurse	1 2 4 5				48.		1 2 4 5			

(YYY) School _____ Grado _____ ID _____
 Name _____ Teacher _____ G RS CA L
 Age _____ Birth: _____ CA _____ Language: _____
 Race _____ Sex _____ Mo Fa Si Bro Other _____

#	Key	Resp	I	V		#	Key	Resp	I	V	
1.	tree high-low	1 3				25.	truth-lie	1 3			
2.	tinkor -blk	1 3				26.	hug-pat	1 3			
3.	ring-far	1 3				27.	watch-sep	1 3			
4.	milk - pop	1 3				28.	help-self	1 3			
5.	bank-candy	1 3				29.	eat-leave	1 3			
6.	finish	1 3				30.	money-pres	1 3			
7.	swing high-low	1 3				31.	pat-hug	1 3			
8.	rain coat-none	1 3				32.	eat schl-home	1 3			
9.	push-hic	1 3			ELIMINATED	33.	listen-tlk	1 3			
10.	sleep-talk	1 3				34.	playing one-many	1 3			
11.	teach-studt.	1 3				35.	turn away- tongue	1 3			
12.	watch-play	1 3			ELIMINATED	36.	smoke-not	1 3			
13.	self-share	1 3				37.	eat-leave	1 3			
14.	choose-not	1 3			ELIMINATED	38.	lineup 1st-3rd	1 3			
15.	duty-play	1 3				39.	watch-play	1 3			
16.	2bed-1 bed	1 3				40.	push-swing	1 3			
17.	show-hide	1 3			ELIMINATED	41.	large-small	1 3			
18.	help-not	1 3				42.	eat-share	1 3			
19.	hide-rot.	1 3				43.	duty-play	1 3			
20.	friends one-many	1 3				44.		1 3			
21.	tongue- hit	1 3			ELIMINATED	45.		1 3			
22.	sick/bed-up	1 3				46.		1 3			
23.	admired-not	1 3				47.		1 3			
24.	smoke-not	1 3			ELIMINATED	48.		1 3			

APPENDIX D

ITEM NUMBERS AND DESCRIPTORS BY CATEGORY FOR
REMAINING PRETEST ITEMS

<u>Category</u>	<u>Item No.</u>	<u>Description</u>	<u>Measure of</u>
PHYSIOLOGICAL	11X	S playing in mud	Cleanliness
	20X	S being examined by M.D.	Treatment
	24X	S talking to nurse	Treatment
	40X	S brushing teeth	Health habits
	41X	S going to take bath	Health habits
	4Y	(a) S with carton of milk (b) S with pop bottle	Food choice
	8Y	(a) S and friend walking in rain; both wearing rain clothes (b) S and friend walking in rain; S not wearing rain clothes	Health habits
	10Y	(a) S and friend sleeping in bed (b) S and friend talking in bed	Health habits
	22Y	(a) S sick. Friend calls. S stays in bed (b) S sick. Friend calls. S gets up	Health habits
	29Y	(a) S leaves table; food eaten (b) S leaves table; food left	Food habits
	36Y	(a) Man smoking (b) Man not smoking	Health habits
	37Y	(a) S eating with others; they finish and leave; S leaves (b) S eating with others; they finish and leave; S stays	Food habits
	SAFETY	3X	S drops glass; glass breaks
4X		S looking at big dog	Fear of animals

<u>Category</u>	<u>Item No.</u>	<u>Description</u>	<u>Measure of</u>	
SAFETY (cont.)	8X	S looking at snake	Fear of animals	
	9X	Ghosts coming out of haunted house	Fear of unknown	
	12X	S walking into dark cave	Fear of unknown	
	14X	S carving with knife	Fear of dangerous objects	
	15X	S stepping into street; cars coming	Fear of objects	
	22X	Policeman taking S by hand	Fear of people	
	1Y	(a) S high in tree (b) S low in tree	Risks	
	7Y	(a) S swinging high (b) S swinging low	Risks	
	LOVE	17X	S talking to father on couch	Feelings about father
		23X	S praying in church	Religion
25X		S talking to mother on porch	Feelings about mother	
38X		S approaching home	Feelings about home	
42X		S praying at bedside	Religion	
13Y		(a) S eats two cookies; friend, none (b) S gives one cookie to friend	Sharing	
16Y		(a) S and friend in separate beds (b) S and friend in one bed	Physical closeness	
18Y		(a) S picks up hurt friend (b) S watches another pick up hurt friend	Helping	
20Y		(a) S with one friend (b) S with several friends	Sociability	
26Y		(a) Mother hugs S (b) Mother pats S on head	Closeness/mother	

<u>Category</u>	<u>Item No.</u>	<u>Description</u>	<u>Measure of</u>	
LOVE (cont.)	31Y	(a) Father pats S on head (b) Father picks S up and hugs	Closeness/father	
	32Y	(a) S eats at school (b) S eats at home	Feelings about home	
	34YG B	(a) S plays with one friend (b) S plays with several friends (B=marbles;G=dolls)	Sociability	
	40Y	(a) S pushes other in swing (b) S swings; other pushes	Helping/sharing	
	41Y	(a) S takes large piece of cake (b) S takes small piece of cake	Sharing	
	42Y	(a) S eats one cookie; friend has none (b) S gives cookie to friend	Sharing	
	AGGRESSION	6X	Cat with tin can tied to tail	Sadism
		18X	S watering flowers; man gets wet	Aggression toward adults
19X		Soldier with gun	War	
21X		Boxing match	Adult aggression	
28X		Girl drops ice cream; other laughs	Peer aggression	
43X		S watching friend throw vegetables at fence	Defacing property	
19Y		(a) S hides lunch pail; friend searches (b) S returns lunch pail	Peer aggression	
27Y		(a) Kids fighting; parents (adults) watch (b) Kids fighting; parents (adults) separate	Peer aggression	

<u>Category</u>	<u>Item No.</u>	<u>Description</u>	<u>Measure of</u>
AGGRESSION (cont.)	35Y	(a) Friend sticks tongue out; S walks away (b) Friend sticks tongue out; S sticks out tongue	Peer aggression
ESTEEM	26X	S and other in tug of war	Competition
	31XB	S (boy) chinning self on bar	Strength
	31XG	S (girl) admiring self in mirror	Beauty
	44X	S gets second prize; other, first	Competition
	3Y	(a) S tossing rings--near (b) S tossing rings--far	Achievement
	11Y	(a) S explaining to three on bench (b) Other explaining to S and two on bench	Leadership
	23Y	(a) S painting; two admiring (b) S painting; two ignoring	Exhibition
	38Y	(a) S in front of line (b) S third place in line	Leadership
	39YB	(a) S watches other boy kick football (b) S kicks football; others watch	Participate/observe
	39YG	(a) S watches others jump rope (b) S jumps rope; others watch	
AESTHETICS (BEAUTY)	1X	S listening to record	Listening/music
	7X	S smelling flowers	Smelling
	13X	S under tree in park looking at clouds	Enjoyment of nature
	16X	S listening to guitar	Listening/music
	34X	S painting picture	Artistic/creative

<u>Category</u>	<u>Item No.</u>	<u>Description</u>	<u>Measure of</u>
KNOWING; UNDER- STANDING; SELF- ACTUALIZATION	2X	S reading	Learning
	10X	S dropping apple core in litter	Responsibility
	29X	S stealing from store	Honesty
	35X	Teacher in front of class	School
	36X	Teacher bending over S in class	School
	39X	S doing homework at desk	Learning
	2Y	(a) S assembling tinker toys with pattern (b) S building with blocks	Complexity/problem- solving
	5Y	(a) S puts coin in bank (b) S spends coin on can- dy	Saving
	6Y	(a) S doing puzzle; friends outside play- ing; S stays (b) S leaves puzzle to join friends	Persistence
	15Y	(a) S and friend clean- ing classroom (b) S and friend playing in dirty classroom	Responsibility
	25Y	(a) S takes blame for breaking glass (b) S blames friend for breaking glass	Honesty
	28Y	(a) Mother ties S's shoes (b) S ties own shoes; mo- ther watches	Independence
	30Y	(a) S receives money (b) S receives present	Curiosity
	33Y	(a) S attentive in class (b) S talks in class	Responsibility/ Obedience
	43Y	(a) S and friend clean classroom (b) S and friend play on playground	Responsibility

Appendix E

Item Distributions (Pre-Test)

The tables contained in this Appendix present the responses of children to each test item that was not discarded. Since in the majority of cases, items were not drawn for both sexes by pretest time, boys and girls are combined in the tallies of frequencies. Therefore, sex differences cannot be shown. The two major breakdowns for this analysis are by ethnic group and grade level. Where trends appear, they will be noted. The most general trend noted is the increasing understanding of items with increase in grade level. This is to be expected. Item distributions are given in terms of proportions of each subsample giving each response. Where misunderstanding occurred, the child was given a zero score and his response selection was not tallied. "Understanding" was defined as an acceptable interpretation of the picture so that the child's response was in accord with the concept being assessed.

The discussion covers each item separately. It should be kept in mind that these items underwent rather constant revision (in many cases) based upon feedback from children as pretest proceeded. In this manner, irrelevant cues could be eliminated, relevant cues made clear, etc. The entire pretest phase was one in which the major goals were to (1) revise potentially useful items, (2) accept obviously useful items and eliminate them from further pretest in order to cut down on testing time, and (3) eliminate and substitute for obviously unuseful items. Consequently, early in pretesting some items seemed so acceptable in terms of validity, reliability, and variance that they were dropped from pretest. Others were redrawn and readministered (and sometimes redrawn a second or third time). Additional items were created at various stages to replace items which were obviously not interpretable by the subjects tested. For these reasons, subject counts for various items differ markedly. Also, no attempt has been made to perform statistical analyses since it would be presumptuous to do so in view of the flexibility of the procedure used.

It should be particularly noted that in a number of cases pretested items did not meet the 95% understanding criterion. In most of these cases, failure to attain the validity criterion occurred before redrawing and the source of it is known and either has been or will be compensated for by improvement in the drawing. In other cases, the item may lack criterion validity to some degree but is so critical to the measurement of an essential value that the reduced validity can be tolerated. In the case of these critical items, a decision has been made to retain them based upon their relationship to other items designed to measure the same (or similar) characteristics. Some of the lack of validity in these items occurs because of the stringency of requirement for "understanding." In retrospect (reviewing protocols) it is evident that misunderstanding as defined here actually represented rationalization or denial on the part of the child or, in some cases, an inability to verbalize what might be a socially unacceptable response.

The discussion which follows pertains only to those items which had attendant problems. Those not discussed are acceptable. Some of them were eliminated early from pretest and thus have low N counts. Items which

were eliminated entirely from further consideration were discussed in Appendix C.

Item 6X (Hurt cat).

This item had 12 percent misunderstanding due to three problems. First, the cat was drawn to look "ugly" and "mean" and children responded to the appearance of the cat. Second, some children did not get the concept of the cat's being hurt. Third, some focused on the fact that the cat tied to its tail would "make noise." This item will probably be eliminated.

Item 10X (Littering).

This item had 9 percent misunderstanding due to several features. First, some responded to the fact that the apple core being thrown away wasn't really eaten and thought food was being wasted. Second, the lunch bag on the ground (as originally drawn) looked like a trash basket and some interpreted it as throwing the core into the proper place. Finally, the major problem was that the litter on the ground was difficult to see. With redrawing it is expected that this item will work very well.

Item 11X (Mud).

Unreliability of this item stemmed from the fact that the child did not always perceive the mud as mud. Redrawing and better reproduction should render this reliability figure higher than the .92 (misunderstanding 8 percent) it received in pretest.

Item 14X (Knife).

This item originally had 26 percent misunderstanding. It has been through several drawings. In the first versions the knife was not clear when the picture-subject was whittling a dog. Children responded to the activity of carving (i.e. "shaving the dog's hair") rather than the knife as a potentially dangerous object. After redrawing, the item had a good distribution and all of the 20 children tested correctly identified the cutting aspect of the knife.

Item 29X (Stealing).

This item was misunderstood by 9 percent of the children during pretest. Some of the problems had to do with the fact that originally the salesman at the cash register (now changed) in the background suggested that the boy had bought the toy he was stealing. Some children did not understand the concept of stealing. This is one of those critical items which, with revision, is expected to measure values crucial to children.

Item 30X (Tripping).

This item had a very one-sided distribution owing to the fact that most children reject such direct aggression as being desirable. This item has been eliminated.

Item 31XBG (Indicating Boy-Girl).

This item deserves comment. The boy picture differs from the girl picture but they are both designed to measure positiveness of self-concept on the theory that for girls, it is dependent on feeling "pretty" while for boys it is dependent on feeling "strong." Interviews prior to pretest confirmed this type of concept when children were asked what they admired in others of the same sex. Item 31G, therefore, depicted the girl picture-subject admiring herself in the mirror with a friend looking on (since self-concept is also a function of the perception of others) and 31B depicted the boy picture-subject lifting a heavy rock while his friend placed a smaller one in a wall. Children generally identified the pictures correctly in that girls knew they were looking at themselves and boys knew they were attempting a difficult task requiring strength. However, responses were generally positive for all children regardless of their appearance or popularity and further questioning revealed that the child was either answering on the basis of self-concept as strong or pretty (in a minority of cases) or wishful thinking (in the majority). The item does not seem to elicit a self-concept response and is a candidate for elimination.

Item 35X (Classroom).

This item failed with 7 percent of the children. This misunderstanding was largely attributable to the fact that in the original picture, the teacher was pointing to the board which contained a math problem. Children were responding to their liking for math rather than classroom and teacher. After the change was made, the remaining children responded correctly.

Item 41X (Bath).

This item had 7 percent failure because in the original drawing it was difficult to determine that the tub was in a bathroom. Redrawing remedied the problem at the end of pretest and this item is expected to attain the appropriate level of validity.

Item 42X (Prayers).

This item was misunderstood by 6 percent of the children. This misunderstanding generally had to do with unfamiliarity of the activity depicted. Since this is one of two items measuring feeling toward religion, this lack of validity may lead to a choice of the alternate item.

Item 44X (Ribbons).

This item was a replacement for the original item measuring the feeling about "coming in second" (33X). This item was misunderstood by 26 percent of the children. They did not recognize that someone had obtained something better than they had either because they did not "find" themselves in the picture or because they did not understand the difference between "1st" and "2nd" prize. It has been previously mentioned that children in this age range are not generally competitive and do not mind if they receive a lesser reward so long as they receive a reward. Several children responded

as if they were receiving the best prize even though they were not. This item will be eliminated from the final form.

Item 3Y (Ring toss - far/near).

This item was misunderstood by 13 percent of the children. This misunderstanding was largely attributable to the fact that the first drawing was so distorted with respect to perspective that it appeared that the "near" toss was actually dropping the ring on the post and the "far" was relatively so distant as to seem almost impossible to attain. Redrawing improved later responses to the extent that the reliability was improved to an acceptable level.

Item 4Y (Milk/pop).

This item failed with 16 percent of the children, again through inadequacy of the drawing. The pop bottle in the original was unclear, excessively large, and distorted. The milk carton was not identifiable. After a cow's head was placed on the carton and the pop bottle improved, reliability improved to an acceptable level.

Item 6Y (Finishing jigsaw puzzle).

This item had 11 percent invalid responses attributable to two factors. The first factor had to do with the fact that the puzzle was very unclear in the drawing and the difference between the almost-finished puzzle and the incomplete one was not obvious. Furthermore, this item was scored as "misunderstood" when the child expressed a preference for playing to doing the puzzle which does not do the concept justice.

Item 7Y (Swinging high and low).

This item had 6 percent failure but the other responses to it were so perfectly in line with the concept it measures (risk-taking) that it was one of the items eliminated early in pretesting because it proved so satisfactory. In the case of this item, this level of reliability is considered adequate because of its importance in measuring this concept.

Item 11Y (Teacher/student).

This item measures leadership. The 20 percent unreliability figure is attributable, again, to the original drawing which had two flaws. One was that the "teacher" in the first alternative looked like an older woman despite the fact that she was supposed to look like a child. The other was that it was difficult to find the subject in this alternative. After redrawing, responses improved to the extent that the item seemed acceptable. Furthermore, it is one of the two items which have succeeded to any extent in measuring this important characteristic.

Item 16Y (One bed/two beds).

This item had 13 percent failure. The reasons for failure were (1) some children interpreted it as preference for a larger bed over

a smaller one and (2) some could not see the difference. After redrawing, these problems disappeared and the item is now considered to be within the understanding of 95 percent of the children to be tested.

Item 22Y (Sick in bed).

This item had many problems and was redrawn several times. The original picture began with a child with a cold in bed or out playing. The cold was misinterpreted as "crying." Redraw number two had a friend in the room but without toy; children made many interpretations as to why he was there (e. g. "ordering the subject to get out of bed"). Redraw number three gave the picture-subject measles which looked like, according to children's interpretations, he had "scratches," "he was beat-up", etc. At the end of pretest an acceptable picture (given to very few subjects) seemed to be very reliable after scoring procedure was changed to give credit for the conclusion that the picture-subject was "better" in the second picture. This meant that the response of the child was to "getting out of bed" on a wish-fulfillment basis and a denial of the concept that if one is sick, one stays in bed.

Item 23Y (being admired).

This item failed with 8 percent of the children because of different interpretations. Some thought the friends in the "ignore" picture were "going to get more paint." A larger number responded to the difference in quality between the paintings. Redraw will solve the problem of picture differences which provide irrelevant cues.

Item 25Y (Admitting guilt vs blaming another).

This item worked well with 87 percent of the children. Part of the problem arose from the fact that some children refused to accept that they had broken the glass and this was interpreted by scorers to mean that they had not answered in a valid manner. Upon further consideration, however, this seemed to be the type of rationalization one would expect from a child who denied guilt. Another part of the problem stemmed from the fact that before redraw it was difficult to see at whom the picture-subject was pointing in the "blame" picture. This item is so critical to the measurement of the concept of assuming responsibility for guilt that it is worth retaining, particularly in view of the fact that a good many children were definite in not being willing to accept such responsibility.

Item 29Y (Finishing meal vs Leaving without finishing).

This item had only 6 percent misunderstanding but only one child would accept the possibility of leaving the table without having finished his meal. This item was replaced by 37Y which provided a situation in which there was less onus on leaving because the setting was not home (where such behavior is not permitted) and a good reason was given for leaving (friends were finished and leaving). Item 29Y will be dropped from the final form.

Item 32Y (Eating at school vs eating at home).

This item was designed to measure feelings about home. It received a 19 percent misunderstanding, primarily because there were so many irrelevant cues associated with the pictures. Several drawings were made throughout pretest to resolve the problems (e. g. Teacher and mother didn't look the same; school lunch was not the same as dinner; mother was waiting on children at home but not at school, etc.). These problems seem insurmountable and the item will probably be eliminated from the final test.

Item 38Y (First in line/third in line).

This item was created fairly late in pretest and had a 10 percent misunderstanding. Part of the problem lay in the mixing of sexes in the picture with a boy in the front of the line where the picture-subject was third. Since the item was given only to girls, a general feeling among those who did not understand was that "boys don't go first in line." This has been remedied by redrawing.

Item 39BG (Watch/play).

This item was created rather late in testing to substitute for 12Y which had failed because the subject could not see himself. The interesting aspect of this item is that girls generally locate themselves very easily and make the decision as to whether they would rather watch or play. The boys, on the other hand, see only the boy who is playing (i. e. kicking the football) and identify with him in both pictures. The cue they use is related to what they perceive as his ability to kick. Redrawing will help to highlight the picture-subject and the item is considered a valuable one despite its initial less-than-desirable showing.

Item 41Y (Small cake vs large cake).

This item had a 26 percent misunderstanding among the few (27) subjects tested. This was almost entirely due to the poor quality of the initial drawing in which it appeared that one had the entire cake and the other a large piece of it. Redrawing has made it more realistic and it is intended that this item be tested again on another sample of children since it seems to have potential for the "sharing" concept.

Item 43Y (Duty vs Play).

This item was created to overcome some of the problems encountered with 15Y which depicted the subject and friend either cleaning the classroom or playing in it. It would seem from the responses that the new item is measuring something different from the original: a difference between liking to help out in school vs. play (43Y) as opposed to liking to help out vs doing something fun but forbidden (15Y). This item will also be tested during the summer to see whether or not it is worth retaining.

**ITEM DISTRIBUTIONS BY ETHNIC GROUP AND GRADE LEVEL
IN PERCENTAGES OF TOTAL N FOR EACH X ITEM**

ITEM NO. 1X (Listening to Record)

	ETHNIC GROUP					
	N	1	2	4	5	?
M-A*	70	0%	0%	7%	23%	0%
O	44	.5	0	6	12	0
C	60	0	0	10	16	0
N	59	.5	0	6	19	0
T	233	1	0	29	70	0

	GRADE LEVEL					
	N	1	2	4	5	?
1st	120	0%	0%	13%	38%	0%
2nd	69	1	0	11	18	0
3rd	44	0	0	5	14	0
T	233	1	0	29	70	0

ITEM NO. 2X (Reading)

	ETHNIC GROUP					
	N	1	2	4	5	?
M-A	26	0%	2%	5%	15%	2%
O	22	0	1	10	11	0
C	32	0	1	16	14	0
N	23	1	2	7	13	0
T	103	1	6	38	53	2

	GRADE LEVEL					
	N	1	2	4	5	?
1st	46	0%	3%	20%	19%	2%
2nd	37	1	3	14	18	0
3rd	20	0	0	4	16	0
T	103	1	6	38	53	2

ITEM NO. 3X (Breaking a glass)

	ETHNIC GROUP					
	N	1	2	4	5	?
M-A	71	22%	6%	0%	0%	0%
O	47	18	3	0	0	0
C	58	21	4	0	0	0
N	58	18	6	2	0	0
T	234	0	72	16	12	0

	GRADE LEVEL					
	N	1	2	4	5	?
1st	121	40%	11%	2%	0%	0%
2nd	69	24	5	2	0	0
3rd	44	15	3	0	0	0
T	234	79	19	2	0	0

ITEM NO. 4X (dog)

	ETHNIC GROUP					
	N	1	2	4	5	?
M-A	16	0%	44%	12%	8%	0
O	6	0	16	4	4	0
C	0	0	0	0	0	0
N	3	0	12	0	0	0
T	25	0	72	16	12	0

	GRADE LEVEL					
	N	1	2	4	5	?
1st	12	0%	36%	4%	8%	0%
2nd	4	0	12	4	0	0
3rd	9	0	24	8	4	0
T	25	0	72	16	12	0

* M-A= Mexican-American, O=Oriental, C=Caucasian, N=Negro, T-Total

ITEM NO. 6X (hurt cat)

		ETHNIC GROUP					
		N	1	2	4	5	?
M-A	37	16%	5%	2%	2%	5%	
O	27	14	5	1	1	1	
C	33	14	8	2	3	1	
N	25	10	3	1	1	5	
T	122	54	21	6	7	12	

		GRADE LEVEL					
		N	1	2	4	5	?
1st	67	29%	14%	2%	3%	7%	
2nd	26	11	4	2	3	2	
3rd	29	14	3	2	1	3	
T	122	54	21	6	7	12	

ITEM NO. 7X (smelling flowers)

		ETHNIC GROUP					
		N	1	2	4	5	?
M-A	37	0%	1%	6%	30%	0%	
O	21	0	0	9	12	0	
C	26	0	3	8	15	0	
N	16	0	0	6	10	0	
T	100	0	4	29	67	0	

		GRADE LEVEL					
		N	1	2	4	5	?
1st	45	0%	2%	10%	33%	0%	
2nd	26	0	1	14	11	0	
3rd	29	0	1	5	23	0	
T	100	0	4	29	67	0	

ITEM NO. 8X (snake)

		ETHNIC GROUP					
		N	1	2	4	5	?
M-A	37	13%	7%	7%	3%	2%	
O	27	10	6	5	3	0	
C	32	9	7	7	4	2	
N	16	10	3	2	0	0	
T	112	42	23	21	10	4	

		GRADE LEVEL					
		N	1	2	4	5	?
1st	57	21%	11%	13%	4%	2%	
2nd	26	9	5	4	4	1	
3rd	29	12	7	4	2	1	
T	112	42	23	21	10	4	

ITEM NO. 9X (Ghosts)

		ETHNIC GROUP					
		N	1	2	4	5	?
M-A	69	17%	6%	4%	3%	0%	
O	43	11	5	2	2	0	
C	58	15	6	3	4		
N	48	11	5	1	5	0	
T	218	54	22	10	14	0	

		GRADE LEVEL					
		N	1	2	4	5	?
1st	105	28	10%	5%	5%	0%	
2nd	69	16	8	2	6	0	
3rd	44	10	4	3	3	0	
T	218	54	22	10	14	0	

ITEM NO. 10X (littering)

		ETHNIC GROUP					
		N	1	2	4	5	?
M-A	31	10%	9%	2%	4%	2%	
O	22	12	4	2	0	1	
C	35	17	10	1	0	2	
N	28	9	3	6	2	4	
T	116	48	26	11	6	9	

		GRADE LEVEL					
		N	1	2	4	5	?
1st	58	20%	14%	6%	3%	7%	
2nd	38	14	10	4	2	2	
3rd	20	14	2	1	1	0	
T	116	48	26	11	6	9	

ITEM NO. 11X (playing in mud)

		ETHNIC GROUP					
		N	1	2	4	5	?
M-A	25	7%	2%	7%	7%	3%	
O	23	4	3	5	12	1	
C	31	1	3	8	18	2	
N	16	1	2	5	7	2	
T	95	13	10	25	44	8	

		GRADE LEVEL					
		N	1	2	4	5	?
1st	48	4%	5%	13%	20%	8%	
2nd	22	4	1	5	14	0	
3rd	25	5	4	7	10	0	
T	95	13	10	25	44	8	

ITEM NO. 12X (entering cave)

		ETHNIC GROUP					
		N	1	2	4	5	?
M-A	10	3%	2%	3%	2%	0%	
O	22	7	5	5	2	0	
C	42	3	10	13	10	1	
N	39	6	6	9	13	0	
T	113	19	23	30	27	1	

		GRADE LEVEL					
		N	1	2	4	5	?
1st	51	8%	9%	14%	13%	1%	
2nd	37	4	11	8	9	0	
3rd	25	7	3	8	5	0	
T	113	19	23	30	27	1	

ITEM NO. 13X (nature appreciation)

		ETHNIC GROUP					
		N	1	2	4	5	?
M-A	37	0%	1%	9%	27%	0%	
O	21	0	3	7	11	0	
C	26	0	1	6	19	0	
N	16	0	0	5	11	0	
T	100	0	5	27	68	0	

		GRADE LEVEL					
		N	1	2	4	5	?
1st	45	0%	2%	9%	34%	0%	
2nd	26	0	3	11	12	0	
3rd	29	0	0	7	22	0	
T	100	0	5	27	68	0	

ITEM NO. 14X (using knife)

		ETHNIC GROUP					
		N	1	2	4	5	?
M-A	32	4%	4%	6%	9%	12%	
O	18	3	2	3	5	6	
C	15	3	2	3	2	5	
N	28	4	7	4	13	3	
T	93	14	15	16	29	26	

		GRADE LEVEL					
		N	1	2	4	5	?
1st	57	9	11%	12%	17%	13%	
2nd	28	3	4	4	8	11	
3rd	8	2	0	0	4	2	
T	93	14	15	16	29	26	

ITEM NO. 15X (crossing street, cars approaching)

		ETHNIC GROUP					
		N	1	2	4	5	?
M-A	40	15%	4%	6%	8%	0%	
O	22	12	4	2	1	0	
C	25	7	3	7	4	1	
N	31	7	6	5	8	0	
T	118	41	17	20	21	1	

		GRADE LEVEL					
		N	1	2	4	5	?
1st	63	20%	8%	14%	12%	0%	
2nd	31	12	3	4	7	1	
3rd	24	9	6	2	2	0	
T	118	41	17	20	21	1	

ITEM NO. 16X (listening to guitar)

		ETHNIC GROUP					
		N	1	2	4	5	?
M-A	37	1%	1%	4%	31%	0%	
O	21	0	0	3	18	0	
C	26	0	0	4	22	0	
N	16	0	0	1	15	0	
T	100	1	1	12	86	0	

		GRADE LEVEL					
		N	1	2	4	5	?
1st	45	0%	1%	4%	40%	0%	
2nd	26	0	0	4	22	0	
3rd	29	1	0	4	24	0	
T	100	1	1	12	86	0	

ITEM NO. 17X (talking to father)

		ETHNIC GROUP					
		N	1	2	4	5	?
M-A	18	0%	0%	4%	23%	0%	
O	13	0	0	3	17	0	
C	11	0	1	3	13	0	
N	23	0	2	5	29	0	
T	65	0	3	15	82	0	

		GRADE LEVEL					
		N	1	2	4	5	?
1st	41	0%	1%	8%	54%	0%	
2nd	19	0	2	3	25	0	
3rd	5	0	0	4	3	0	
T	65	0	3	15	82	0	

ITEM NO. 18X (watering man accidentally)

		ETHNIC GROUP					
		N	1	2	4	5	?
M-A	24	18%	4%	2%	0%	0%	
O	18	15	2	0	0	0	
C	26	15	7	1	1	0	
N	36	20	6	4	5	0	
T	104	68	19	7	6	0	

		GRADE LEVEL					
		N	1	2	4	5	?
1st	61	39%	11%	5%	4%	0%	
2nd	26	15	7	1	1	0	
3rd	17	14	1	1	1	0	
T	104	68	19	7	6	0	

ITEM NO. 19X (soldier)

		ETHNIC GROUP					
		N	1	2	4	5	?
M-A	37	15%	4%	4%	9%	0%	
O	27	11	3	4	4	0	
C	32	10	9	7	4	0	
N	17	7	3	4	2	0	
T	113	43	19	19	19	0	

		GRADE LEVEL					
		N	1	2	4	5	?
1st	58	22%	9%	10%	11%	0%	
2nd	26	14	3	4	2	0	
3rd	29	7	7	5	6	0	
T	113	43	19	19	19	0	

ITEM NO. 20X (doctor examining subject)

		ETHNIC GROUP					
		N	1	2	4	5	?
M-A	16	9%	11%	4%	6%	0%	
O	12	4	7	7	4	0	
C	16	8	4	6	13	0	
N	9	2	4	4	7	0	
T	53	23	26	21	30	0	

		GRADE LEVEL					
		N	1	2	4	5	?
1st	29	15%	11%	9%	19%	0%	
2nd	14	4	11	6	6	0	
3rd	10	4	4	6	5	0	
T	53	23	26	21	30	0	

ITEM NO. 21X (boxing)

		ETHNIC GROUP					
		N	1	2	4	5	?
M-A	12	1%	1%	4%	8%	0%	
O	19	7	4	2	8	0	
C	31	5	9	9	11	0	
N	27	9	4	2	16	0	
T	89	22	18	17	43	0	

		GRADE LEVEL					
		N	1	2	4	5	?
1st	53	14%	10%	9%	27%	0%	
2nd	18	4	5	5	7	0	
3rd	18	4	3	3	9	0	
T	89	22	18	17	43	0	

ITEM NO. 22X (policeman holding subject by hand)

		ETHNIC GROUP					
		N	1	2	4	5	?
M-A	37	11%	4%	6%	11%	1	
O	27	12	1	6	4	0	
C	32	11	3	7	6	2	
N	16	4	3	3	4	1	
T	112	38	11	22	25	4	

		GRADE LEVEL					
		N	1	2	4	5	?
1st	57	2.1%	7%	8%	13%	3%	
2nd	26	9	1	8	4	1	
3rd	29	8	3	6	8	0	
T	112	38	11	22	11	4	

ITEM NO. 23X (praying in church)

		ETHNIC GROUP					
		N	1	2	4	5	?
M-A	38	0%	1%	5%	27%	1%	
O	22	1	1	5	11	2	
C	26	3	2	5	12	2	
N	25	1	3	4	14	0	
T	111	5	7	19	64	5	

		GRADE LEVEL					
		N	1	2	4	5	?
1st	55	2%	3%	10%	31%	4%	
2nd	32	2	2	4	20	1	
3rd	24	1	2	5	13	0	
T	111	5	7	19	64	5	

ITEM NO. 24X (nurse talking to subject)

		ETHNIC GROUP					
		N	1	2	4	5	?
M-A	16	2%	7%	6%	13%	2%	
O	12	2	4	11	6	0	
C	16	2	4	13	12	0	
N	8	0	4	8	4	0	
T	52	6	19	38	35	2	

		GRADE LEVEL					
		N	1	2	4	5	?
1st	29	6%	9%	21%	17%	2%	
2nd	13	0	4	11	10	0	
3rd	10	0	6	6	8	0	
T	52	6	19	38	35	2	

ITEM NO. 25X (talking to mother)

		ETHNIC GROUP					
		N	1	2	4	5	?
M-A	25	0%	0%	5%	20%	1%	
O	18	0	0	1	17	0	
C	24	0	1	8	15	0	
N	31	0	1	5	25	1	
T	98	0	2	19	77	2	

		GRADE LEVEL					
		N	1	2	4	5	?
1st	54	0	1%	9%	43%	2%	
2nd	27	0	1	6	21	0	
3rd	17	0	0	4	13	0	
T	98	0	2	19	77	2	

ITEM NO. 26X (tug of war)

ETHNIC GROUP

	N	1	2	4	5	?
M-A	40	8%	6%	9%	11%	0%
O	22	3	3	4	8	0
C	25	2	3	7	9	0
N	30	8	6	1	12	0
T	117	21	18	21	40	0

GRADE LEVEL

	N	1	2	4	5	?
1st	62	12%	10%	8%	22%	0%
2nd	31	7	4	5	10	0
3rd	24	2	4	8	8	0
T	117	21	18	21	40	0

ITEM NO. 28X (laughing at dropped ice cream)

ETHNIC GROUP

	N	1	2	4	5	?
M-A	39	21%	6%	1%	3%	1%
O	26	18	2	0	0	0
C	33	16	5	2	4	0
N	27	14	4	0	2	1
T	125	69	17	3	9	2

GRADE LEVEL

	N	1	2	4	5	?
1st	70	39%	10%	1%	5%	1%
2nd	26	12	3	2	2	1
3rd	29	18	4	0	2	0
T	125	69	17	3	9	2

ITEM NO. 29X (stealing)

ETHNIC GROUP

	N	1	2	4	5	?
M-A	39	24%	1%	1%	3%	1%
O	26	17	1	1	0	3
C	33	15	4	2	1	3
N	27	17	2	1	1	2
T	125	73	8	5	5	9

GRADE LEVEL

	N	1	2	4	5	?
1st	70	36%	6%	3%	4%	6%
2nd	26	18	1	0	1	2
3rd	29	19	1	2	0	1
T	125	73	8	5	5	9

ITEM NO. 30X (one boy trips another)

ETHNIC GROUP

	N	1	2	4	5	?
M-A	39	29%	1%	1%	1%	1%
O	21	17	1	0	0	0
C	32	21	4	1	0	0
N	27	18	1	1	3	0
T	119	85	7	3	4	1

GRADE LEVEL

	N	1	2	4	5	?
1st	64	44%	3%	1%	3%	1%
2nd	26	18	3	1	1	0
3rd	29	23	1	1	0	0
T	119	85	7	3	4	1

ITEM NO. 31X (boy=strong; girl=pretty)

		ETHNIC GROUP					GRADE LEVEL							
		N	1	2	4	5	?	N	1	2	4	5	?	
M-A	14	1%	0%	2%	6%	1%		1st	55	1%	2%	10%	28%	0
O	24	1	1	5	11	0		2nd	47	1	3	7	23	2
C	47	1	4	7	22	1		3rd	31	1	1	4	17	0
N	48	0	1	7	29	0		T	133	3	6	21	68	2
T	133	3	6	21	68	2								

ITEM NO. 34X (painting a picture)

		ETHNIC GROUP					GRADE LEVEL							
		N	1	2	4	5	?	N	1	2	4	5	?	
M-A	37	0%	0%	5%	32%	0%		1st	45	0%	1%	5%	38%	1%
O	21	0	1	3	17	0		2nd	26	0	1	2	23	0
C	26	0	1	3	22	0		3rd	29	0	0	5	24	0
N	16	0	0	1	14	1		T	100	0	2	12	85	1
T	100	0	2	12	85	1								

ITEM NO. 35X (teacher in classroom)

		ETHNIC GROUP					GRADE LEVEL							
		N	1	2	4	5	?	N	1	2	4	5	?	
M-A	32	0%	0%	2%	19%	4%		1st	70	0%	3%	6%	44%	3%
O	23	0	0	4	14	2		2nd	40	1	1	6	21	2
C	27	1	2	5	14	0		3rd	15	0	1	2	8	2
N	43	0	3	3	26	1		T	125	1	5	14	73	7
T	125	1	5	14	73	7								

ITEM NO. 36X (talking to teacher)

		ETHNIC GROUP					GRADE LEVEL							
		N	1	2	4	5	?	N	1	2	4	5	?	
M-A	32	1%	2%	8%	15%	0%		1st	64	5%	6%	14%	29%	0%
O	21	0	1	8	10	0		2nd	36	1	2	13	15	0
C	34	2	4	8	15	0		3rd	19	0	1	3	11	0
N	32	3	2	6	15	0		T	119	6	9	30	55	0
T	119	6	9	30	55	0								

ITEM NO. 38X (going home)

		ETHNIC GROUP					
		N	1	2	4	5	?
M-A	30	0%	1%	6%	20%	0%	
O	22	1	1	4	15	0	
C	34	2	2	11	14	2	
N	23	1	2	3	13	2	
T	109	4	6	24	62	4	

		GRADE LEVEL					
		N	1	2	4	5	?
1st	50	4%	2%	11%	27%	3%	
2nd	39	0	3	9	24	0	
3rd	20	0	1	4	11	1	
T	109	4	6	24	62	4	

ITEM NO. 39X (doing homework)

		ETHNIC GROUP					
		N	1	2	4	5	?
M-A	39	0%	2%	7%	25%	0%	
O	22	1	0	6	13	0	
C	24	2	1	9	10	0	
N	25	1	4	5	14	0	
T	110	4	7	27	62	0	

		GRADE LEVEL					
		N	1	2	4	5	?
1st	56	3%	4%	10%	34%	0%	
2nd	30	1	1	9	16	0	
3rd	24	0	2	8	12	0	
T	110	4	7	27	62	0	

ITEM NO. 40X (brushing teeth)

		ETHNIC GROUP					
		N	1	2	4	5	?
M-A	31	3%	3%	6%	17%	0%	
O	22	1	1	7	11	0	
C	33	3	3	12	12	0	
N	23	2	4	5	10	0	
T	109	9	11	30	50	0	

		GRADE LEVEL					
		N	1	2	4	5	?
1st	51	6%	7%	13%	20%	0%	
2nd	38	3	4	11	17	0	
3rd	20	0	0	6	13	0	
T	109	9	11	30	50	0	

ITEM NO. 41X (taking a bath)

		ETHNIC GROUP					
		N	1	2	4	5	?
M-A	8	0%	0%	1%	8%	1%	
O	15	1	2	2	15	1	
C	24	2	8	14	8	2	
N	25	4	0	4	21	6	
T	72	7	10	21	52	10	

		GRADE LEVEL					
		N	1	2	4	5	?
1st	34	1%	7%	8%	23%	7%	
2nd	21	3	0	7	18	2	
3rd	17	3	3	6	11	1	
T	72	7	10	21	52	10	

ITEM NO. 42X (saying prayers at bedside)

	ETHNIC GROUP						GRADE LEVEL						
	N	1	2	4	5	?	N	1	2	4	5	?	
M-A	48	0%	0%	4%	20%	1%	1st	88	1%	0%	7%	33%	4%
O	39	0	1	4	14	2	2nd	63	0	2	5	24	2
C	56	0	2	6	19	1	3rd	40	0	2	4	16	0
N	48	1	1	2	20	1							
T	191	1	4	16	73	6	T	191	1	4	16	73	6

ITEM NO. 43X (throwing vegetables)

	ETHNIC GROUP						GRADE LEVEL						
	N	1	2	4	5	?	N	1	2	4	5	?	
M-A	18	17%	2%	6%	3%	0	1st	41	36%	10%	8%	8%	2%
O	13	14	3	2	2	0	2nd	19	15	2	4	7	0
C	11	14	2	0	1	0	3rd	5	6	2	0	0	0
N	23	12	7	4	9	2							
T	65	57	14	12	15	2	T	65	57	14	12	15	2

ITEM NO. 44X (obtaining second prize)

	ETHNIC GROUP						GRADE LEVEL						
	N	1	2	4	5	?	N	1	2	4	5	?	
M-A	32	2%	1%	5%	16%	10%	1st	57	3%	1%	9%	29%	19%
O	20	1	1	6	14	0	2nd	29	0	2	4	18	7
C	13	0	0	1	8	5	3rd	7	1	0	2	5	0
N	28	1	1	3	14	11							
T	93	4	3	15	52	26	T	93	4	3	15	52	26

ITEM DISTRIBUTIONS BY ETHNIC GROUP AND GRADE LEVEL
IN PERCENTAGES OF TOTAL N FOR EACH Y ITEM

ITEM No. 1Y (High in tree/Low in tree)

	Ethnic Group				Grade level				
	N	High	Low	?	N	High	Low	?	
M-A	24	13%	17%	4%	1st	38	32%	20%	3%
O	15	13	9	0	2nd	14	10	9	1
C	16	15	9	0	3rd	17	15	10	0
N	14	16	4	0					
T	69	57	39	4	T	69	57	39	4

ITEM NO. 2Y (Tinker Toys/Blocks)

	Ethnic Group				Grade Level				
	N	Toy	Blk.	?	N	Toy	Blk.	?	
M-A	36	22%	6%	4%	1st.	53	32%	14%	3%
O	23	17	4	0	2nd	33	22	6	2
C	25	17	6	0	3rd	24	16	5	1
N	26	14	9	1					
T	110	70	25	5	T	110	70	25	5

ITEM NO. 3Y (Ring Toss close/for)

	Ethnic Group				Grade Level				
	N	close	far	?	N	close	far	?	
M-A	22	11%	12%	1%	1st	50	25%	20%	8%
O	18	9	8	1	2nd	26	16	7	4
C	23	12	8	3	3rd	19	7	12	1
N	32	16	11	8					
T	95	48	39	13	T	95	48	39	13

ITEM NO. 4Y (Milk/Soda-pop)

	Ethnic Group				Grade Level				
	N	milk	pop	?	N	milk	pop	?	
M-A	17	11%	14%	6%	1st	33	18%	28%	12%
O	9	4	11	3	2nd	13	9	11	4
C	16	7	18	4	3rd	10	0	18	0
N	14	5	14	5					
T	56	27	57	16	T	56	27	57	16

ITEM NO. 5Y (Bank/Candy)

	Ethnic Group				Grade Level				
	N	bank	candy	?	N	bank	candy	?	
M-A	18	16%	10%	3%	1st	40	35%	22%	6%
O	9	10	5	0	2nd	13	13	8	0
C	17	19	6	1	3rd	10	11	5	0
N	19	14	14	2					
T	63	59	35	6	T	63	59	35	6

ITEM NO. 6Y (Puzzle-finish/Puzzle-leave)

	Ethnic Group				Grade Level				
	N	finish	leave	?	N	finish	leave	?	
M-A	20	13%	5%	2%	1st	48	32%	14%	3%
O	20	15	2	3	2nd	35	24	4	7
C	31	24	6	2	3rd	16	13	2	1
N	28	17	7	4					
T	99	69	20	11	T	99	69	20	11

ITEM NO. 7Y (Swing high/swing low)

	Ethnic Group				Grade Level				
	N	high	low	?	N	high	low	?	
M-A	16	20%	13%	0%	1st	26	35%	13%	6%
O	8	12	4	0	2nd	13	18	8	0
C	17	25	8	2	3rd	10	14	6	0
N	8	10	2	4					
T	49	67	27	6	T	49	67	27	6

ITEM NO. 8Y (Raincoat/No raincoat)

	Ethnic Group				Grade Level				
	N	coat	none	?	N	coat	none	?	
M-A	22	21%	5%	0%	1st	45	47%	5%	0%
O	18	21	0	0	2nd	20	22	1	0
C	31	31	4	0	3rd	22	22	3	0
N	16	18	0	0					
T	87	91	9	0	T	87	91	9	0

ITEM NO. 10Y (Sleep/Talk)

	Ethnic Group				Grade Level				
	N	sleep	talk	?	N	sleep	talk	?	
M-A	38	24%	7%	1%	1st	62	35%	14%	2%
O	23	13	7	0	2nd	33	21	6	1
C	26	16	5	0	3rd	24	14	7	0
N	32	17	8	2					
T	119	70	27	3	T	119	70	27	3

ITEM NO. 11Y (Teacher/Student)

	Ethnic Group				Grade Level				
	N	teach	Studdt/	?	N	teach.	studdt.	?	
M-A	33	15%	5%	8%	1st	62	35%	7%	9%
O	20	7	6	4	2nd	38	18	7	7
C	34	19	4	5	3rd	20	9	4	4
N	33	21	3	3					
T	120	62	18	20	T	120	62	18	20

ITEM NO. 13Y (Eat-cookie/share)

	Ethnic Group				Grade Level				
	N	eat	share	?	N	eat	share	?	
M-A	36	3%	42%	1%	1st	38	9%	37%	3%
O	19	4	19	1	2nd	21	3	23	1
C	15	4	13	3	3rd	19	0	23	1
N	8	1	9	0					
T	78	12	83	5	T	78	12	83	5

ITEM NO. 15Y (Duty/Play)

	Ethnic Group				Grade Level				
	N	duty	play	?	N	duty	play	?	
M-A	38	30%	1%	2%	1st	60	41%	9%	2%
O	23	19	0	1	2nd	33	22	4	1
C	25	16	3	1	3rd	24	19	1	1
N	31	17	10	0					
T	117	82	14	4	T	117	82	14	4

ITEM NO. 16Y (Two Beds/One Bed)

	Ethnic Group				Grade Level				
	N	2 beds	1 bed	?	N	2 beds	1 bed	?	
M-A	18	13%	11%	5%	1st	40	17%	35%	11%
O	9	5	9	0	2nd	13	11	8	2
C	17	9	16	2	3rd	10	10	6	0
N	19	11	13	6					
T	63	38	49	13	T	63	38	49	13

ITEM NO. 18Y (Help/Watch)

	Ethnic Group				Grade Level				
	N	help	watch	?	N	help	watch	?	
M-A	24	27%	4%	1%	1st	42	49%	7%	1%
O	15	20	0	0	2nd	15	16	4	0
C	16	19	3	0	3rd	17	23	0	0
N	19	22	4	0					
T	74	88	11	1	T	74	88	11	1

ITEM NO. 19Y (Hide lunch/Return lunch)

	Ethnic Group				Grade Level				
	N	hide	return	?	N	hide	return	?	
M-A	37	3%	26%	1%	1st	66	8%	39%	7%
O	23	1	15	3	2nd	32	3	20	3
C	26	2	17	2	3rd	24	1	16	3
N	36	6	17	7					
T	122	12	75	13	T	122	12	75	13

ITEM NO. 20Y (One friend/many friends)

	Ethnic Group				Grade Level				
	N	one	many	?	N	one	many	?	
M-A	58	6%	18%	3%	1st	107	14%	30%	7%
O	38	3	13	2	2nd	66	7	22	2
C	58	7	19	2	3rd	39	3	14	1
N	58	8	16	3					
T	212	24	66	10	T	212	24	66	10

ITEM NO. 22Y (Sick in bed/Sick getting up)

	Ethnic Group				Grade Level				
	N	bed	up	?	N	bed	up	?	
M-A	38	22%	5%	5%	1st	60	31%	12%	9%
O	23	12	3	5	2nd	33	21	3	3
C	25	16	3	2	3rd	24	14	3	4
N	31	16	7	4					
T	117	66	18	16	T	117	66	18	16

ITEM NO. 23Y (Picture admired/picture not admired)

	Ethnic Group				Grade Level				
	N	admires	not	?	N	admires	not	?	
M-A	38	27%	4%	2%	1st	60	39%	8%	5%
O	23	17	1	2	2nd	32	22	2	3
C	25	19	3	0	3rd	24	20	1	0
N	30	18	3	4					
T	116	81	11	8	T	116	81	11	8

ITEM NO. 25Y (Tell the truth/lie)

	Ethnic Group				Grade Level				
	N	truth	lie	?	N	truth	lie	?	
M-A	33	19%	3%	5%	1st	63	31%	13%	8%
O	20	11	5	1	2nd	38	22	6	4
C	34	18	7	2	3rd	20	12	3	1
N	34	17	7	5					
T	121	65	22	13	T	121	65	22	13

ITEM NO. 26Y (Mother hug/Mother pat)

	Ethnic Group				Grade Level				
	N	hug	pat	?	N	hug	pat	?	
M-A	37	27%	5%	2%	1st	53	37%	11%	0%
O	23	16	5	0	2nd	33	21	6	3
C	25	16	5	2	3rd	24	17	4	1
N	25	16	6	0					
T	110	75	21	4	T	110	75	21	4

ITEM NO. 27Y (Adults watch fight/separate)

	Ethnic Group				Grade Level				
	N	watch	sep.	?	N	watch	sep.	?	
M-A	40	3%	33%	0%	1st	56	4%	45%	1%
O	16	0	14	1	2nd	27	1	23	1
C	27	1	23	0	3rd	27	1	24	0
N	27	3	21	1					
T	110	7	91	2	T	110	6	92	2

ITEM NO. 28Y (Help from Mother/Do it self)

	Ethnic Group				Grade Level				
	N	help	self	?	N	help	self	?	
M-A	21	17%	19%	0%	1st	28	20%	27%	0%
O	15	9	17	0	2nd	14	9	15	0
C	15	10	15	0	3rd	17	10	19	0
N	8	3	10	0					
T	59	39	61	0	T	59	39	61	0

ITEM NO. 29Y (Eat dinner/Leave some)

	Ethnic Group				Grade Level				
	N	eat	leave	?	N	eat	leave	?	
M-A	21	39%	2%	0%	1st	21	36%	2%	2%
O	9	15	0	2	2nd	14	27	0	0
C	14	25	0	2	3rd	17	31	0	2
N	8	15	0	0					
T	52	94	2	4	T	52	94	2	4

ITEM NO. 30Y (Money/Present)

	Ethnic Group				Grade Level				
	N	money	pres.	?	N	money	pres.	?	
M-A	16	6%	27%	0%	1st	26	8%	43%	2%
O	8	2	14	0	2nd	13	6	21	0
C	17	12	21	2	3rd	10	8	12	0
N	8	2	14	0					
T	49	22	76	2	T	49	22	76	2

ITEM NO. 31Y (Father pat/Father hug)

	Ethnic Group				Grade Level				
	N	pat	hug	?	N	pat	hug	?	
M-A	38	8%	24%	1%	1st	60	8%	43%	1%
O	23	4	15	0	2nd	33	8	19	0
C	25	4	17	0	3rd	24	7	14	0
N	31	7	20	0					
T	117	23	76	1	T	117	23	76	1

ITEM NO. 32Y (Eat-school/Eat-home)

	Ethnic Group				Grade Level				
	N	school	home	?	N	school	home	?	
M-A	31	8%	14%	5%	1st	55	16%	22%	10%
O	20	3	14	1	2nd	38	9	18	7
C	34	9	14	7	3rd	20	3	13	2
N	28	8	11	6					
T	113	28	53	19	T	113	28	53	19

ITEM NO. 33Y (Listen to Teacher/Talk)

	Ethnic Group				Grade Level				
	N	listen	talk	?	N	listen	talk	?	
M-A	31	25%	1%	0%	1st	61	47%	5%	0%
O	20	17	0	0	2nd	38	30	1	1
C	34	26	2	0	3rd	20	15	1	0
N	34	24	4	1					
T	119	92	7	1	T	119	92	7	1

ITEM NO. 34Y (Playing with one friend/many friends)

	Ethnic Group				Grade Level				
	N	one	many	?	N	one	many	?	
M-A	32	9%	14%	1%	1st	73	19%	34%	2%
O	26	3	16	1	2nd	44	14	17	2
C	33	10	13	1	3rd	17	4	8	0
N	43	15	16	1					
T	134	37	59	4	T	134	37	59	4

ITEM NO. 35Y (Ignore/Stick tongue out)

	Ethnic Group				Grade Level				
	N	ignore	tongue	?	N	ignore	tongue	?	
M-A	16	22%	0%	0%	1st	40	45%	8%	1%
O	11	14	0	1	2nd	24	25	8	0
C	20	22	6	0	3rd	9	11	2	0
N	26	23	12	0					
T	73	81	18	1	T	73	81	18	1

ITEM NO. 36Y (Man smoking/Not smoking)

	Ethnic Group				Grade Level				
	N	smoke	not	?	N	smoke	not	?	
M-A	32	1%	22%	1%	1st	72	4%	49%	1%
O	25	2	17	0	2nd	44	5	28	0
C	33	1	24	0	3rd	17	1	12	0
N	43	6	26	0					
T	133	10	89	1	T	133	10	89	1

ITEM NO. 37Y (Eat food/leave unfinished food)

	Ethnic Group				Grade Level				
	N	eat	leave	?	N	eat	leave	?	
M-A	3	0%	6%	0%	1st	33	22%	26%	8%
O	9	7	7	2	2nd	17	12	16	2
C	20	10	17	6	3rd	8	9	5	0
N	26	26	17	2					
T	58	43	47	10	T	58	43	47	10

ITEM NO. 38Y (First in line/Third in line)

	Ethnic Group				Grade Level				
	N	first	third	?	N	first	third	?	
M-A	14	16%	5%	0%	1st	34	37%	6%	7%
O	11	10	6	0	2nd	25	25	9	3
C	23	22	6	6	3rd	9	4	9	0
N	20	18	7	4					
T	68	66	24	10	T	68	66	24	10

ITEM NO. 39Y (Watch activity/play)

	Ethnic Group					Grade Level			
	N	watch	play	?		N	watch	play	?
M-A	27	9%	35%	5%	1st	34	11%	45%	7%
O	11	7	9	4	2nd	15	4	22	2
C	5	2	8	0	3rd	5	7	2	0
N	11	4	17	0					
T	54	22	69	9	T	54	22	69	9

ITEM NO. 40Y (Push/Swing)

	Ethnic Group					Grade Level			
	N	push	swing	?		N	push	swing	?
M-A	8	18%	29%	0%	1st	12	35%	35%	0%
O	4	11	12	0	2nd	3	0	18	0
C	0	0	0	0	3rd	2	12	0	0
N	5	18	12	0					
T	17	47	53	0	T	17	47	53	0

ITEM NO. 41Y (Large piece of cake/small piece of cake)

	Ethnic Group					Grade Level			
	N	large	small	?		N	large	small	?
M-A	16	19%	22%	19%	1st	18	33%	15%	19%
O	4	7	7	0	2nd	7	4	15	7
C	1	0	4	0	3rd	2	4	3	0
N	6	15	0	7					
T	27	41	33	26	T	27	41	33	26

ITEM NO. 42Y (Eat/Share)

	Ethnic Group					Grade Level			
	N	eat	share	?		N	eat	share	?
M-A	16	11%	44%	4%	1st	18	22%	41%	4%
O	4	4	11	0	2nd	7	0	26	0
C	1	0	4	0	3rd	2	0	7	0
N	6	7	15	0					
T	27	22	74	4	T	27	22	74	4

ITEM NO. 43Y (Duty/Play outside)

Ethnic Group

Grade Level

	N	duty	play	?
M-A	15	23%	34%	0%
O	4	4	12	0
C	1	4	0	0
N	6	0	15	8
T	26	31	61	8

	N	duty	play	?
1st	18	15%	45%	8%
2nd	6	12	12	0
3rd	2	4	4	0
T	26	31	61	8