ABSTRACT

SELECTING AND DEVELOPING AUDIOVISUAL MATERIALS FOR THE EQUIPMENT UNIT OF A QUANTITY FOODS COURSE

by Marian E. Jardine

The possibilities of utilizing audiovisual materials to supplement and strengthen the teaching of the food service equipment unit of a quantity food preparation course in a selected two-year college were explored. Various teaching aids were integrated into a proposed instructional plan for the unit covering value, purpose, operation, care, and safety in relation to both large and small pieces of food service equipment.

The selection of audiovisual materials evolved from the consideration of unit content, students, teaching staff, physical facilities, and available audiovisual equipment. The literature was surveyed and food service equipment companies were contacted in search of available audiovisual materials. Feasible ready-made audiovisual materials for use in the equipment unit were almost non-existent except for a few films and filmstrips. Selected teaching aids were developed and integrated with the appropriate ready-made audiovisual materials into an instructional plan for the equipment unit.

The proposed instructional plan includes a bulletin board, overhead projector transparencies of large pieces of equipment, a set of slides showing selected pieces of small equipment, and a film. Use of the acetate roll on the overhead projector is suggested for communicating information graphically during the classroom presentations.

The new instructional plan for the equipment unit will be put into effect in the spring semester of 1966. It is anticipated that both benefits and problems will become evident when the proposed instructional plan is instituted as part of the quantity food preparation course. A limited evaluation of the effectiveness of the audiovisual materials is suggested to run concurrently with the initiation of the plan.

SELECTING AND DEVELOPING AUDIOVISUAL MATERIALS FOR THE EQUIPMENT UNIT OF A QUANTITY FOODS COURSE

by

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A PROBLEM

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TABLE OF CONTENTS

LIST OF EXHIBITS

Exhibit Page

INTRODUCTION

The primary aim of the Food Service Administration department in a selected two-year college is to prepare students for work at the supervisory level in school lunch operations, hospital dietary departments, college food services, and commercial restaurants. In most Food Service Administration courses, the students are taught the theoretical concepts related to a particular subject area and are given the opportunity to put these concepts and principles into practice in laboratory situations.

One of the required courses in the Food Service Administration curriculum is a three credit-hour quantity food preparation course which is taught in the second semester of the first year of the student's academic program. The course serves as an orientation to quantity foods work and provides basic tools for the advanced courses in the second year. The units included in the course are menu planning, use of standardized recipes, sanitation and safety, food service equipment, and quantity food preparation. The material is currently presented in two one-hour lectures and one two-hour laboratory per week for fifteen weeks.

This problem was chosen to explore the possibilities of utilizing audiovisual materials to supplement and strengthen the teaching of the food service equipment unit

of the quantity food preparation course. The equipment unit was selected because it is one of the difficult units to present in approximately one and one-half weeks. In the unit, both large and small pieces of equipment are considered in relation to value, purpose, operation, care, and safety.

In order to effectively teach the food service equipment unit in the allotted time, an efficient teaching method is necessary. W. Wittich and C. Schuller suggest the use of a variety of audiovisual materials and methods to improve learning efficiency (28). R. E. deKieffer defines audiovisual materials as "those experiences and devices used in a teaching situation which employ the use of sight and/or sound." He also points out that choosing suitable audiovisual materials depends upon the content to be taught, the background and understanding of the students, and the availability of the materials (5).

The selection of audiovisual materials for use in a proposed instructional plan for the equipment unit will evolve from the consideration of unit content, students, teaching staff, physical facilities, and available audiovisual materials and equipment. The experience and knowledge gained through the exploration and development of audiovisual materials may encourage the development of appropriate aids for use in teaching other units of the course.

REVIEW OF LITERATURE

During World War II, the armed forces made extensive use of training aids and devices in various training programs (19). The majority of materials used were visual aids, although some multi-sensory aids were also employed (12). The effective use of training aids to accelerate military training prompted educators to consider the use of audiovisual materials in teaching (8).

Educational research has positively shown the value of using audiovisual materials in the classroom, according to J. Kinder (13). J. Backman also emphasized the importance of using audiovisual materials in education:

> Essentially, audiovisual materials can be helpful because of one basic characteristic: they can provide sensory experiences. Whether they are offering a new experience or recapturing a forgotten one, they can convey, through eyes and ears, a more realistic and vivid impression than words alone are likely to create or recollect. . . . They are useful as experiences for the foundation and reorientation of learning (2).

F. D. McCluskey encouraged the use of audiovisual materials for all types of subject matter (18). M. Lindsey suggested the modification of the present lecture system to include instructional aids as one possible answer to some of the problems encountered with increasing college enrollments (16). However, C. Schuller cautioned that audiovisual materials should be regarded as means to an end,

rather than ends in themselves (24). Although instructional aids will not automatically insure improvements in the teaching-learning situation or necessarily replace the teacher, most audiovisual materials can help increase the teacher's power and extend his abilities (20).

Audiovisual materials may function as powerful and effective supporting aids to teaching. F. D. McCluskey emphasizes the importance of audiovisual materials since they 1) provide concrete experiences which are essential to enrich learning, 2) provide more accurate communication of ideas, 3) aid in accurate thinking, and 4) contribute to the development of attitudes (18). J. Kinder suggests that teaching aids should be instrumental in 1) overcoming physical and spatial limitations of the classroom, 2) awakening new desires and interests, and 3) motivating and stimulating the students (13).

Only a few references to audiovisual materials were related directly to food service equipment. A. Hummel developed slides for instructing quantity food students to operate a floor-model mixer and a single tank door-type dishwasher (11). A visual training guide showing the use of various pieces of cutlery was found in Institutions Magazine (10). H. Fleck suggested the preparation of sketches of equipment on overhead projector transparencies for purposes of identification (6).

General use of audiovisual materials was recommended in several references pertaining to food service training

programs (17, 26, 27). Audiovisual materials which related specifically to safety and sanitation were described in Institutions Magazine (1, 7, 22). M. Kingsberry suggested the use of a variety of audiovisual materials in dietetic internship programs (14). She advocated using programed instruction, educational films, overhead projector transparencies, posters, bulletin boards, and graphs to supply both background material and sensory experiences which would reinforce the intern's realistic experiences. M. Kingsberry also prepared a programed booklet, to acquaint the dietetic interns from foreign countries with American eating habits and customs. A limited study of E. Carter and A. Moore's basic food sanitation program indicated that the program was an effective tool for use in training unskilled food service employees (4).

A variety of audiovisual materials has been developed for use in the teaching of various skills. The training of skills was found to be more effective if the learner was shown how rather than told how to perform a particular skill (2). At Kent State University in Ohio, demonstrations of food production techniques were recorded on television tape, which proved beneficial to students, instructors, and the department (23). Programed instruction has proved effective for technical and production-line training in industry and field and operational military training (9). The successful substitution of overhead projector transparencies for demonstrations in college clothing construction classes was reported by J. Stam (25).

SELECTION AND DEVELOPMENT OF AUDIOVISUAL MATERIALS

The selection and development of audiovisual materials was undertaken in an attempt to supplement and strengthen the present method of teaching a unit on food service equipment. Certain audiovisual materials were developed and selected ready-made materials were integrated in a proposed instructional plan for the equipment unit.

Factors Considered in Selecting Audiovisual Materials

Audiovisual materials were selected for use in the equipment unit after consideration of the unit content, the students, the teaching staff, physical facilities, and available audiovisual equipment. These qualifying factors helped determine the audiovisual materials which were included in the proposed instructional plan.

Unit Content

The equipment unit of the quantity food preparation course includes the topics of value, purpose, operation, care, and safety of food service equipment. The value of food service equipment is considered in terms of expense and utility. Specific purposes for each piece of equipment are itemized, with emphasis on versatility of use. Operational instructions for selected pieces of equipment are

explained and illustrated or demonstrated. Simple maintenance, safety precautions, and sanitation are discussed.

The topics of value and purpose of food service equipment have been relatively easy to teach in the classroom lecture, but presenting specific information related to the identification, use, and operation of various large and small pieces of equipment has been problematical. Most of the subject matter was necessarily presented in the lecture, during which the students could not see or use the equipment. Moving the actual pieces of equipment from the Quantity Foods Laboratory to the classroom was difficult, and in some cases, impossible.

Students

Students usually enter the quantity food preparation course after completing one semester of a two-semester basic food preparation course. In the first semester, principles of food preparation are taught by preparing small quantities of products in regular foods laboratory. The subject matter related to food service equipment is therefore new material for most of the students. The equipment unit is scheduled immediately prior to the students' initial experience of preparing food in quantity in the Quantity Foods Laboratory.

Teaching Staff

The number of instructors and teaching assignments will be determined on the basis of numbers of students

enrolled in the quantity food preparation course. The anticipated enrollment in the course during the spring semester of 1966 is approximately sixty students. In order to accommodate this number of students, one or two lecture sections with four laboratory sections is being considered.

Physical Facilities

The quantity food preparation course is taught by the lecture-laboratory method. A well-equipped Quantity Foods Laboratory which will accommodate sixteen students is used for teaching the laboratory sections. If necessary, a private dining room adjoining the laboratory is available for small group discussions. The lecture room is located in another building on the campus.

Audiovisual Equipment

The audiovisual materials for the instructional plan of the equipment unit were planned to utilize the available audiovisual equipment. Facilities include movie projectors, overhead projectors, slide projectors, and screens. The equipment is portable and can be easily used in the lecture room. Use of audiovisual equipment in the laboratory is limited to small pieces, such as the slide projector and a small screen.

Types of Audiovisual Materials Considered and Selected

Books, journals, magazines, and film catalogues were searched and equipment companies were contacted for

examples and sources of ready-made audiovisual materials related to food service equipment. Although instructional aids were available for many subject areas, feasible ready-made audiovisual materials for use in the equipment unit were almost non-existent. The examination of publications yielded relatively few usable materials. Most equipment companies responded by sending materials such as specifications with line drawings, operational instructions, and lists of films and/or filmstrips. In one case, an equipment company sent slides of various pieces of equipment. The information derived from these companies and ideas gleaned from periodicals were helpful in the selection and development of the audiovisual materials for use in the equipment unit.

Ready-made audiovisual materials were selected and new materials were developed and integrated in an instructional plan for the equipment unit. The audiovisual materials selected and/or developed include a bulletin board, overhead projector transparencies of large pieces of equipment, a set of slides showing small pieces of equipment, and a film.

Bulletin Board

A bulletin board was prepared to introduce the equipment unit and to stimulate the students' interest (see Appendix, Exhibit A). Facts related to the main topics of the equipment unit were typed on cards and placed behind

"doors," which are actually line drawings of large pieces of food service equipment attached with plastic tape on the left side so they can be opened like doors. The bulletin board will be displayed approximately three days before the unit begins.

Overhead Projector Transparencies

The prime advantage of the overhead projector is that the machine is used in the front of a lighted classroom. Therefore, the instructor can maintain direct eye contact with the students and still control the sequence, timing, and manipulation of the visual material. The large, bright, and clear projected image is particularly helpful in large group instruction.

Several types of projectable materials are usable on the overhead projector. These materials may be prepared in color as well as in black and white. The instructor can write or draw additional information on the finished transparency to facilitate communication, or he can use overlays and coverlays to show developmental processes.

Some overhead projectors are equipped with an acetate roll which is built into the projector. The instructor can write or draw information on the acetate roll with a grease pencil or special colored pencils. The acetate roll can be wiped clean and re-used. During the first and last lecture in the proposed instructional plan, the overhead projector's acetate roll will be used as a visual aid.

Overhead projector transparencies are actually flat surfaces; therefore, only two dimensions can be shown. The simulation of motion is usually not feasible unless the overhead projector is equipped with "technamation" (a process utilizing polarization of light) (3).

Sets of transparencies were prepared to show the stack oven, broiler, range, mixer, and potato peeler (see Appendix, Exhibit B). The following steps were utilized to prepare the overhead projector transparencies:

1. Line drawings of the various pieces of equipment were selected. Unnecessary lines in these drawings were eliminated for purposes of simplification.
2. Each piece of equipment was drawn on a separate sheet of tracing paper with india ink.
3. The lettering was typed on the tracing paper with carbon paper with a primary-type electric typewriter.
4. The Ozalid method was used to reproduce the transparencies. Appropriate colors were selected for each of the transparencies. The designs were printed on transparent, color sensitive, diazo film by means of controlled exposure to ultraviolet light and developed in a sealed ammonia-vapor filled container.
5. The transparencies were placed in mats (cardboard frames) and attached with strips of masking tape. The finished product is referred to as a mask.
6. The overlays (combined sheets of acetate film into one transparency) were also reproduced using the Ozalid

method. Each overlay was hinged to the base mask in a designated order.

7. Coverlays, which in this case are single standard 10" x 10" transparencies prepared to cover other transparencies, were reproduced in various colors using the Ozalid method.
8. For some of the transparencies, movable parts were developed to help the instructor explain the operation of a particular piece of equipment. The parts to be moved were drawn on tracing paper with india ink and reproduced by the Ozalid method. Each was cut out of the sheet of film. Some parts (the stack oven temperature regulator and burner control) were fastened to the base mask by means of snap fasteners. This made it possible to turn the parts clockwise or counterclockwise. The other type of movable part, a broiler or range burner control knob, was inserted into slits which had been cut in the base mask. The simulated control knob can be slid horizontally.

Each set of transparencies for the stack oven, broiler, and range include three masks: a simplified black line drawing of the piece of equipment, a colored coverlay to somewhat block out the lines of the line drawing except those of the control panel, and an enlarged view of the control panel, drawn with colored lines to match the coverlay for the specific piece of equipment. A transparency consisting of a base mask and four attached overlays was

developed to illustrate the use of the mixer. A single transparency of the potato peeler was prepared.

The steps in the presentation of the overhead projector transparencies vary slightly for each piece of equipment. Copies of the transparencies and instructions for presenting them are included in the Appendix, Exhibit B.

Slides

A great variety of materials can be presented through slides. Equipment which would be impractical or impossible to display in the classroom can be photographed and presented through slides. Slides are convenient to organize since additions and omissions can be made without upsetting the sequential order of the slides.

A set of sixteen slides showing various pieces of small food service equipment was photographed by a professional photographer (see Appendix, Exhibit C). Permission has been granted to prepare an additional slide from Figure 4-4, page 107, in L. Kotschevar's book, Quantity Food Production (15).

The instructor will first prepare the students for viewing the slides by explaining the general nature of the content of the slides and pointing out the particular information which the students should look for as the slides are presented. The presentation of the slides will be accompanied by an oral explanation by the instructor. After the presentation, the instructor will ask questions to test

the students' understanding of the lesson and any points which were missed will be reviewed.

Film

Films and filmstrips which were pertinent to the subject matter of the equipment unit were previewed. Six films and one filmstrip were available:

"Cooking: Kitchen Safety," Young America Films, Inc., 18 East 41st St., New York 17, New York.

"Foods, Fats and Fryers," Food Service Division, Armour and Company, Union Stock Yards, Chicago 9, Illinois.

"Food Sanitation, Part II: Utensils and Equipment," Communicable Disease Center, Atlanta 22, Georgia.

"Menu for Growth," The G. S. Blodgett Co., Inc., 50 Lakeside Ave., Burlington, Vermont.

"Recipe for Profits," The G. S. Blodgett Co., Inc., 50 Lakeside Ave., Burlington, Vermont.

"Safety in the Laboratory" (a filmstrip), Educational Audio Visual, Inc., 29 Marble Ave., Pleasantville, New York.

"We Do It Better with Steam," Cleveland Range Co., 971 E. 63rd St., Cleveland 3, Ohio.

One film, "Foods, Fats and Fryers," was selected for use in the equipment unit instructional plan. Because demonstrating the operation of the fryer is not feasible in the limited laboratory time, the twenty-minute film was selected to present the information. The colored film shows how to operate and care for the fryer and demonstrates principles and procedures for frying various foods.

The instructor will interest the students in the film by giving a brief resumé of the content of the film and will explain anticipated unfamiliar terms. A short discussion will follow the viewing of the film.

Proposed Instructional Plan

An instructional plan was proposed to include various types of audiovisual materials for the equipment unit. Hopefully, the proposed plan will help the instructor effectively present the topics of value, purpose, operation, care, and safety of food service equipment in the allotted time of three one-hour lectures and one two-hour laboratory.

The equipment unit will be introduced three days before the first lecture by posting a bulletin board (see Appendix, Exhibit A). The lectures and laboratory will be presented according to the following plan. Specific audiovisual materials and equipment are referred to by asterisks and are explained at the end of each lesson plan. Copies of aids which were especially developed are included in the Appendix.

Lecture I: Value, Care, and Safety of Food Service Equipment

A. Value* (15 minutes)

1. utility

a. benefits to management

1. reduced labor costs

2. increased efficiency

3. increased production

4. product uniformity

5. equipment versatility

b. benefits to employees

1. decreased input

2. decreased preparation time

3. increased production

2. monetary

a. approximate costs of various pieces of equipment and equipment attachments

B. Care* (25 minutes)

1. sanitation

a. importance of equipment sanitation

b. equipment sanitation rules

c. cleaning of equipment

d. cleaning schedules

2. preventive maintenance

a. definition

b. factors involved

c. use of the senses to detect equipment problems**

d. equipment maintenance records***

C. Safety* (10 minutes)

1. importance of safety

2. safety awareness

3. equipment safety rules

4. general equipment safety precautions

AIDS: * Material written or drawn on the acetate roll of the overhead projector

** Series of flat pictures projected on opaque projector. (Source: Pirrie, P. Blueprint for Preventive Maintenance. New York: American Trade Publishing Company, 1961, pp. 35, 39) (21).

*** Samples of equipment maintenance records projected on opaque projector.

Lecture II: Large and Small Food Service Equipment

A. Large food service equipment* (30 minutes)

1. identification
2. purpose
3. operation
4. care
5. safety precautions

B. Small food service equipment** (20 minutes)

1. identification
2. purpose
3. care

AIDS: * Overhead projector transparencies of the stack oven, broiler, range, mixer, and potato peeler. (See Appendix, Exhibit B.)

Flat pictures showing the operation of the steamer projected on an opaque projector. (Source: Kotschevar, L. Quantity Food Production. Berkeley, California: McCutchen Publishing Corporation, 1964, p. 292) (15).

** A series of slides showing small pieces of equipment. (See Appendix, Exhibit C.)

Laboratory: Demonstrations and Use of Food Service Equipment

A. Weights and measures (15 minutes)

1. use of measures in quantity food preparation*

2. review equivalents

3. value of using weights in quantity food preparation

4. scales (balance; portion)*

a. purpose

b. operation

c. care

B. Demonstration of operation of slicing machine and trunnion kettles (15 minutes)

C. Production of simple menu items utilizing various pieces of food service equipment (70 minutes)

1. review equipment operation instructions

2. menu item production:

a. broiled meat -- broiler

b. sliced cucumbers -- slicing machine

c. chocolate cake (mix) -- mixer; stack oven

d. vanilla pudding (mix) -- trunnion kettles

e. boiled potatoes -- potato peeler; steamer

f. chicken noodle soup -- range

AIDS: * Slides of measures, balance scales, and portion scales. (See Appendix, Exhibit C.)

Lecture III: Operation and Use of the Fryer; Summary of the Equipment Unit

A. Operation and use of the fryer (30 minutes)

1. show slide of fryer*

2. show film related to fryer**

B. Summary of the equipment unit*** (20 minutes)

AIDS: * Slide of fryer. (Source: General Electric Company)

** Film: "Foods, Fats and Fryers." (Source: Food Service Division, Armour and Company, Union Stock Yards, Chicago 9, Illinois.)

*** Material written or drawn on the acetate roll of the overhead projector.

INITIATING THE PROPOSED PLAN

The proposed instructional plan for the equipment unit will be put into effect in the spring semester of 1966. Certain advantages and some problems are anticipated in the initial use of the audiovisual materials in the equipment unit. An examination of the effectiveness of the teaching aids will be considered in the initiation of the proposed instructional plan.

Hopefully, both the instructor and the students will realize advantages when the audiovisual materials are used in teaching the equipment unit. The use of audiovisual materials will help the instructor present specific equipment information so that all students will be able to perceive the materials being discussed. The laboratory may be more fully utilized for the actual use of food service equipment rather than for many time-consuming demonstrations. The bulletin board, overhead projector transparencies, and slides can be utilized for classroom presentations and for self-study purposes. Both the instructor and students may become interested in the development of audiovisual materials for other units of the course and for other courses.

The proposed plan will probably not influence certain aspects of teaching the unit and might create some

problems. The same topics will be covered in the same time as before; however, the increased amount of material may prove too ambitious for the teaching-learning situation. Some modifications of the instructional plan may be necessary to fit into the total teaching plan of the quantity food preparation course.

The limited scope of this special problem, the writer's limited statistical background, and the teaching responsibilities preclude a sound statistical evaluation of the effectiveness of the audiovisual materials. However, tentative plans are being made to grossly appraise the effectiveness of the teaching aids during the spring semester of 1966. The estimated sixty enrollees will be divided into two groups, one serving as the experimental group and the other as the control group. An attempt will be made to match the groups according to sex, age, intelligence, and food service work experience. The experimental group will be instructed by using the audiovisual aids, while the control group will be instructed according to the former method of lecturing and demonstrating. Test results will be compared to assess the learning effectiveness of the two groups.

After the initial use of the proposed instructional plan for the equipment unit, modifications of the instructional plan may be necessary. The limited results of the anticipated study of the effectiveness of the audiovisual materials and an evaluation of the instructional plan

within the total teaching plan for the quantity food preparation course will be important factors in deciding the necessary changes in the instructional plan.

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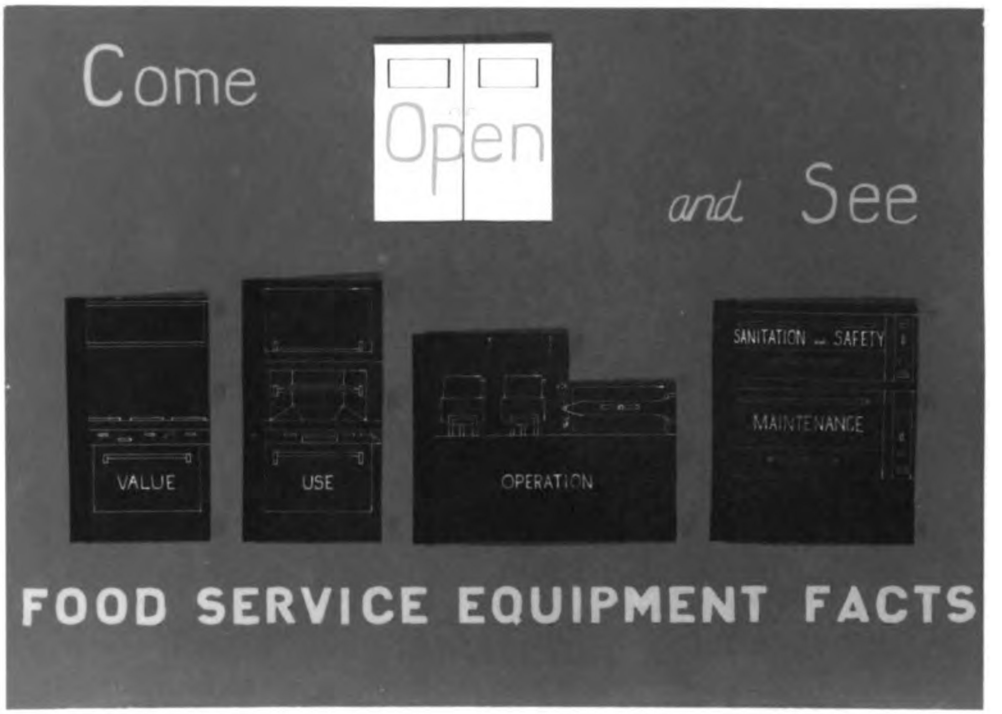
APPENDIX

Exhibit Page

EXHIBIT A

BULLETIN BOARD



(a)

(b)

Exhibit A. A photograph showing the bulletin board with a) the "doors" shut and b) the "doors" open.

EXHIBIT B

OVERHEAD PROJECTOR TRANSPARENCY COPIES

WITH INSTRUCTIONS FOR PRESENTATION

EXHIBIT B.1

TRANSPARENCY COPIES OF STACK OVEN AND INSTRUCTIONS FOR PRESENTATION

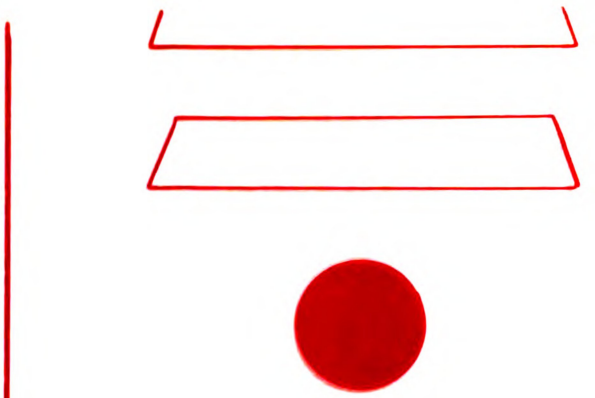
Instructions for Presenting the Stack Oven Transparencies

1. Place the simplified line drawing on the transparency table of the overhead projector. Identify the significant parts of the stack oven.
2. Cover the simplified line drawing with the colored coverlay to direct the attention of the students to the control panel of one compartment of the stack oven.
3. Remove both masks.
4. Place the enlarged view of the control panel on the transparency table and explain the operation of the controls. Move the burner control knob by turning the knob to the right from a vertical to a horizontal position. Turn the oven temperature regulator to the desired temperature. Turn the stack oven compartment off by turning the oven temperature regulator to off and then, turning the burner control off.
5. Explain the care of the stack oven. Point out specific safety precautions.

STACK OVEN

STACK OVEN

STACK OVEN CONTROL PANEL



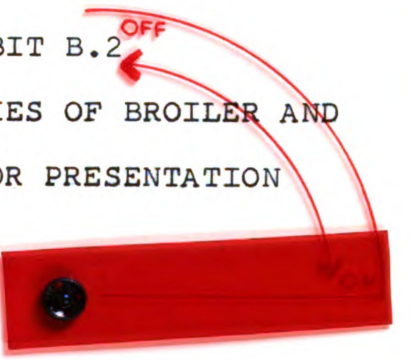


EXHIBIT B.2

TRANSPARENCY COPIES OF BROILER AND

INSTRUCTIONS FOR PRESENTATION

STACK OVEN CONTROL PANEL

EXHIBIT B.2

TRANSPARENCY COPIES OF BROILER AND INSTRUCTIONS FOR PRESENTATION

Instructions for Presenting the Broiler Transparencies

1. Place the simplified line drawing of the broiler on the transparency table. Identify the significant parts of the broiler.
2. Cover the simplified line drawing with the colored overlay to direct the attention of the students to the control panel.
3. Remove both masks.
4. Place the enlarged view of the control panel on the transparency table. Identify the burner controls and the broiler oven temperature regulator. Explain the function of each.
5. Explain the operation of the burner controls. Remove the enlarged view of the control panel and replace with the transparency showing the operational steps of the burner controls. Pull the burner control knob out by sliding the knob to the left. Turn the burner control from a horizontal to a vertical position using a clockwise motion. The amount of heat needed can be regulated by turning the knob counter-clockwise. To turn the burner control off, turn the knob to a horizontal position.
6. Explain the operation of the broiler oven temperature regulator. Explain that the regulator must first be pushed in and then turned to the desired temperature.
7. Explain the care of the broiler. Point out specific safety precautions.

Exhibit B.2.a. The broiler coverlay.

BROILER

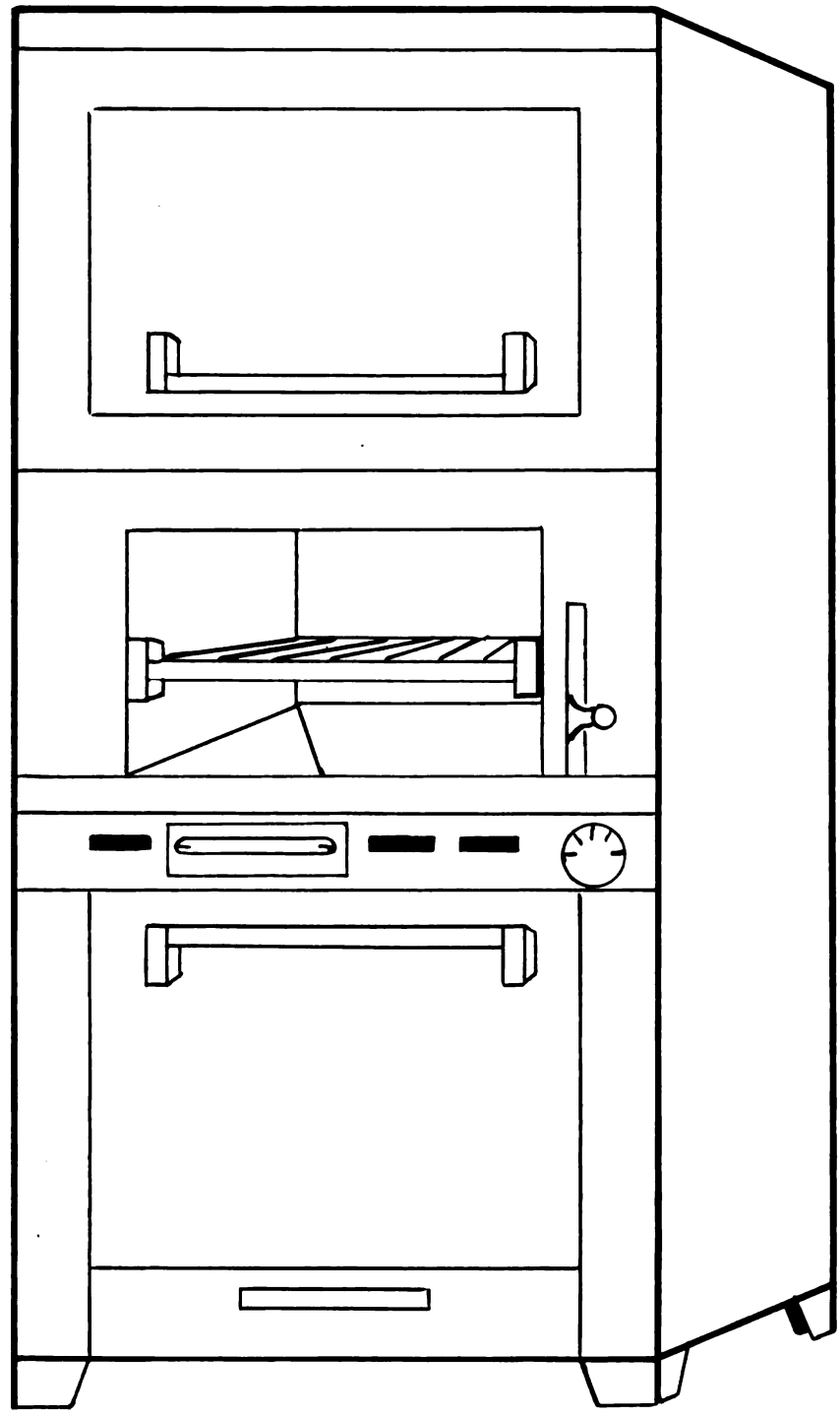


Exhibit B.2.b. A simplified line drawing of the broiler.

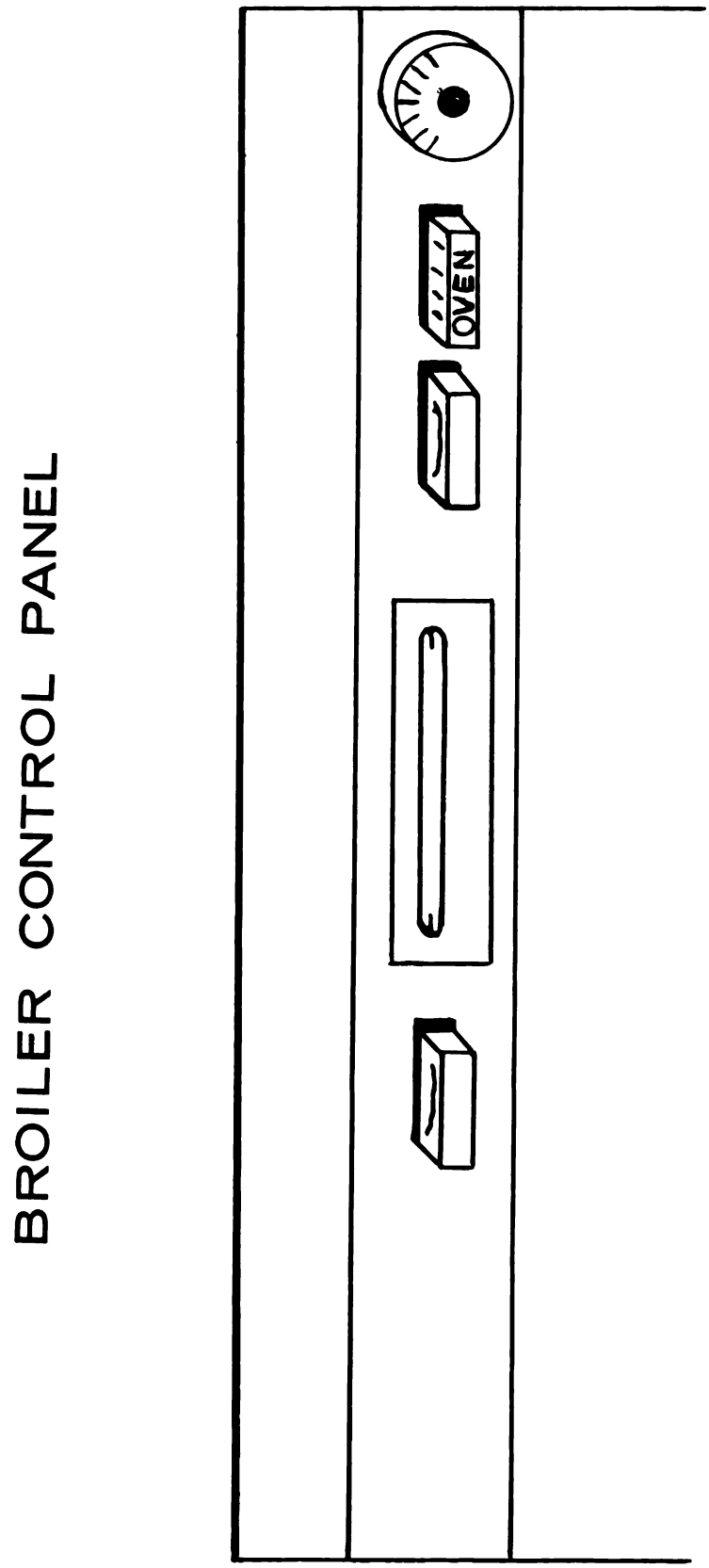
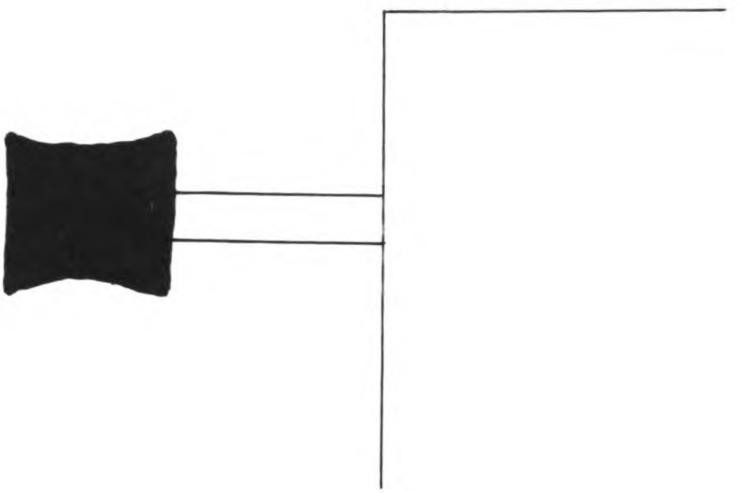


Exhibit B.2.c. An enlarged view of the broiler control panel.

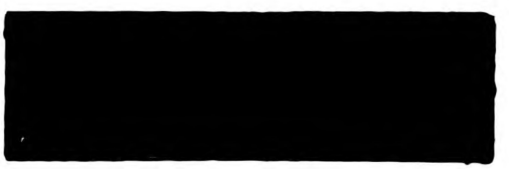
BURNER CONTROL KNOB

STEP 1



The burner control knob was cut separately and inserted into a slit in the base mask.

STEP 2



The burner control knob was cut separately and centrally fastened to the base mask with a snap fastener.

Exhibit B.3. Transparency copy of a burner control knob.

EXHIBIT B.4

TRANSPARENCY COPIES OF RANGE AND INSTRUCTIONS FOR PRESENTATION

Instructions for Presenting the Range Transparencies

1. Place the simplified line drawing of the range on the transparency table. Identify the significant parts of the range.
2. Cover the simplified line drawing with the colored coverlay to direct the attention of the students to the control panel.
3. Remove both masks.
4. Place the enlarged view of the control panel on the transparency table. Identify the burner controls and the oven temperature regulator. Explain the function of each.
5. Explain the operation of the controls by referring to the broiler controls, since both operate by the identical method.
6. Explain the care of the range. Point out specific safety precautions.

Exhibit B.4.a. The range coverlay.

RANGE

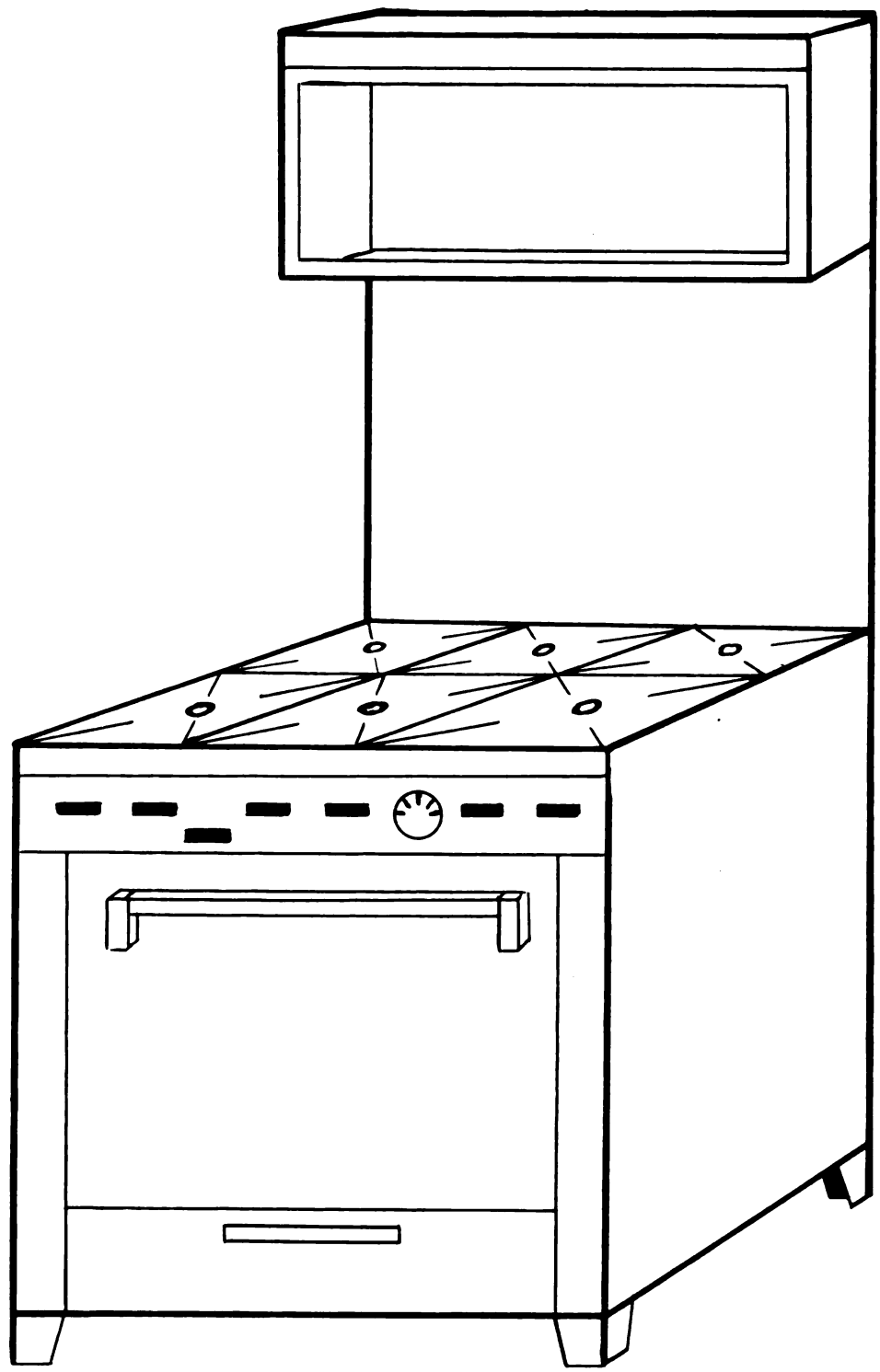


Exhibit B.4.b. A simplified line drawing of the range.

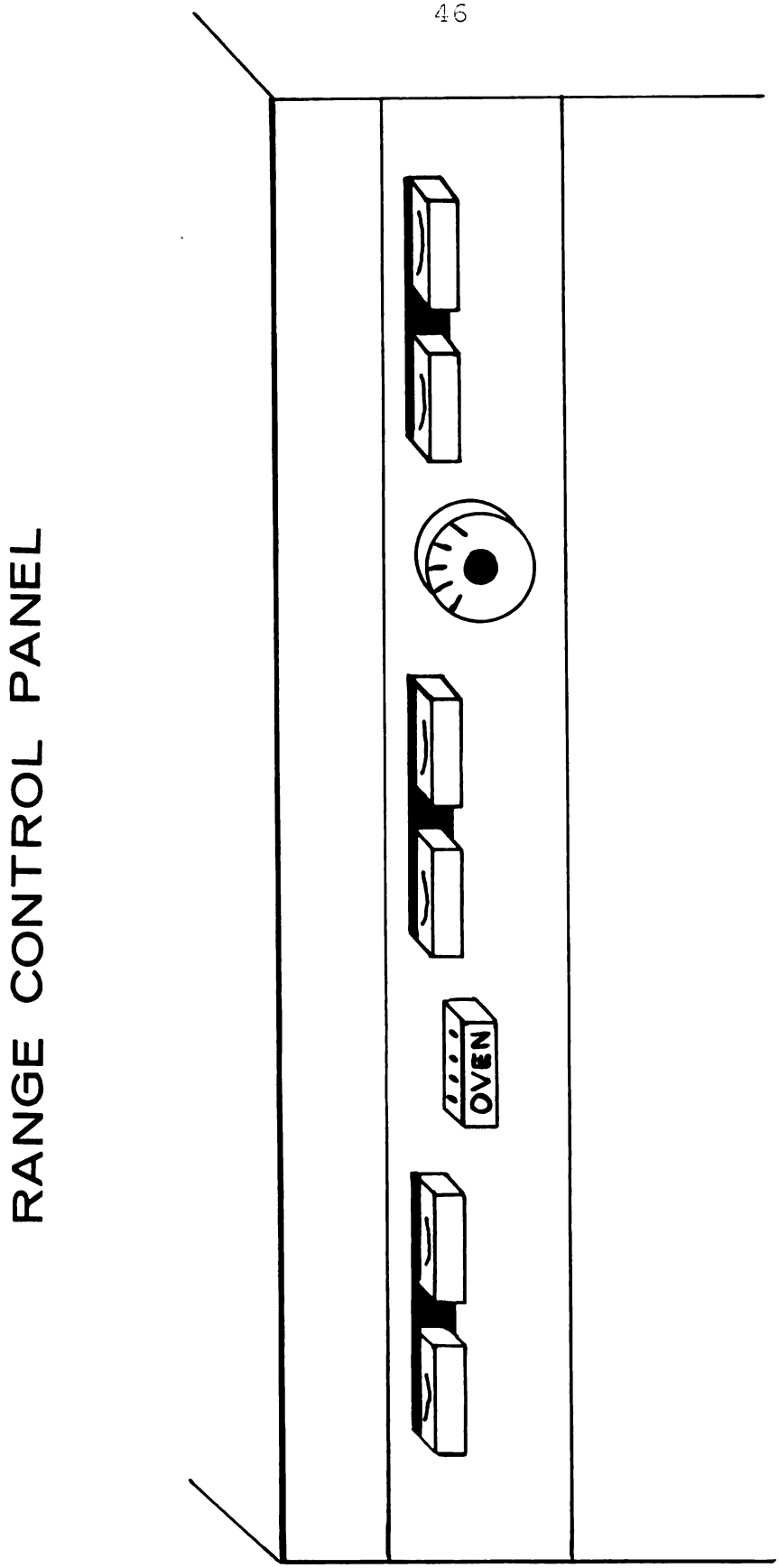


Exhibit B.4.c. An enlarged view of the range control panel.

EXHIBIT B.5

TRANSPARENCY COPIES OF MIXER WITH

ATTACHMENTS AND INSTRUCTIONS

FOR PRESENTATION

Instructions for Presenting the Mixer Transparency

1. Place the mask of the simplified line drawing showing the front and side view of the mixer on the transparency table. Identify the significant parts of the mixer.
2. Explain the sequential steps in the operation of the mixer. Use a grease pencil to emphasize the points and draw arrows to show the simulated movement of the mixer parts.
3. Flip the overlay showing the mixing bowl over the base mask. Explain how to connect the mixing bowl to the mixer.
4. Flip the overlay showing the flat beater over the base mask with the mixing bowl in place. Explain the purpose of the flat beater. Explain how to connect the flat beater to the mixer. Explain how to operate the mixer with the flat beater.
5. Repeat step four for the whip and dough hook attachments.
6. Explain the care of the mixer and the attachments. Point out specific safety precautions.

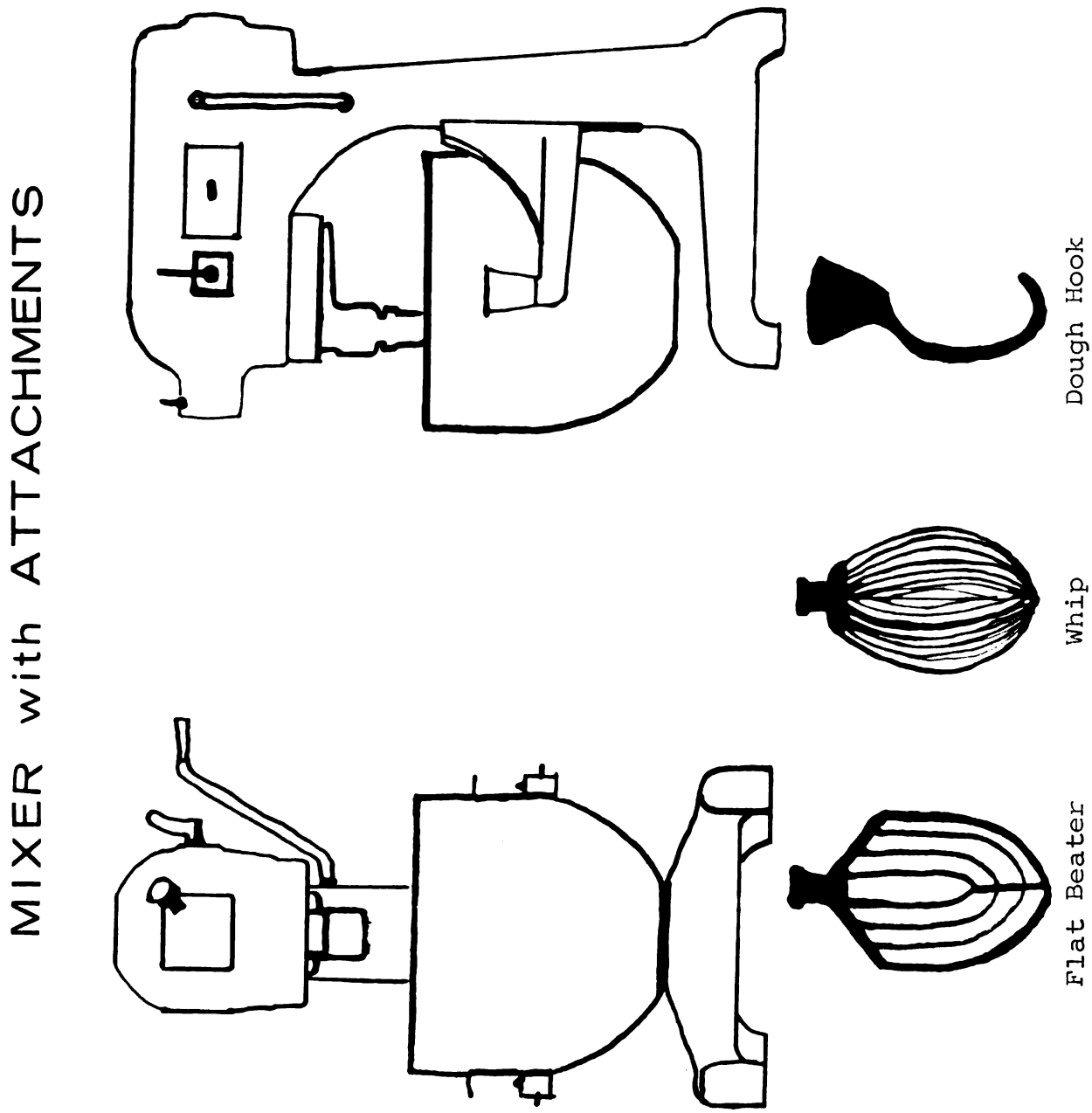


Exhibit B.5. Front and side view of the mixer with attachments.

Note: Each attachment was prepared in a separate overlay to be placed over the mixing bowl.

EXHIBIT B.6

TRANSPARENCY COPIES OF POTATO PEELER AND INSTRUCTIONS FOR PRESENTATION

Instructions for Presenting the Potato Peeler Transparency

1. Place the simplified line drawing showing the front and side view of the potato peeler on the transparency table. Identify the significant parts of the potato peeler.
2. Explain the sequential steps in the operation of the potato peeler. Use a grease pencil to emphasize points and draw arrows to show simulated movement of the potato peeler parts.
3. Explain the care of the potato peeler. Point out specific safety precautions.

POTATO PEELER

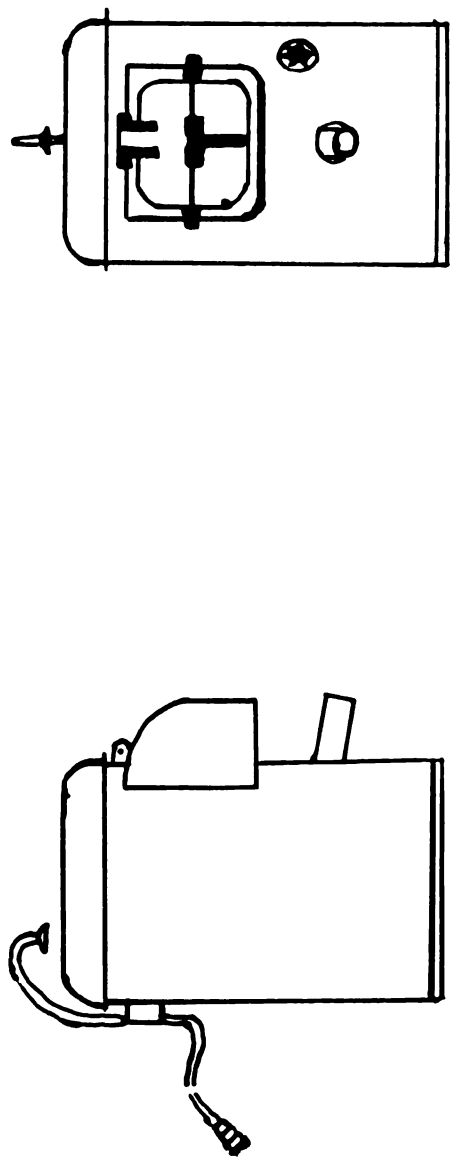


Exhibit B.6. Front and side view of the potato peeler.

EXHIBIT C

SMALL FOOD SERVICE

EQUIPMENT SLIDES

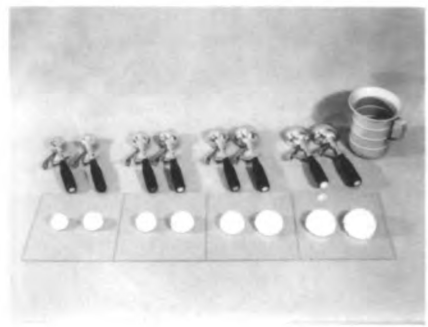
List of Slides and
Subject Content

Slide Number	Content of Slide
1.	Title Slide
2.	Good *versus* Poor Equipment
3.	Measuring Equipment
4.	Various Sizes of Ice Cream Dishers
5.	Various Sizes of Ladles
6.	Balance Scales
7.	Portion Scales
8.	Serving Utensils
9.	Various Types of Whips
10.	Rubber and Metal Spatulas
11.	Various Types of Cutlery
12.	Use of French Knife-Chopping
13.	Use of French Knife-Mincing
14.	Equipment for Straining
15.	Top of the Range Equipment
16.	Oven Equipment

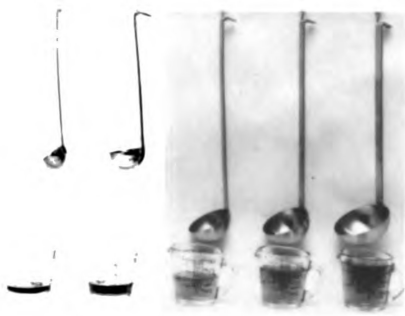
1.

2.

3.



4.



5.

6.

7.

8.

Exhibit C.1. Photographs of slide numbers 1-8 of the small food service equipment slides.

9.

10.

11.

12.

13.

14.

15.

16.

Exhibit C.2. Photographs of slide numbers 9-16 of the small food service equipment slides.

M.S. 1965

Jardine, Marian E. Problem

Selecting and Developing Audiovisual Materials for the Equipment Unit of a Quantity Foods Course