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WAR DEPARTMENT TECHNICAL MANUAL

NON-CIRCULATING

OUTFIT
COOKING, PACK

(STOCK NO. 64-0-214)

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WAR DEPARTMENT TECHNICAL MANUAL

TM 10-707

This manual supersedes section I, chapter 2, TM 10-400.

OUTFIT COOKING, PACK

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PART ONE INTRODUCTION

Section I. DESCRIPTION

I. Description

- a. The pack cooking outfit (fig. 1) has been designed to replace the

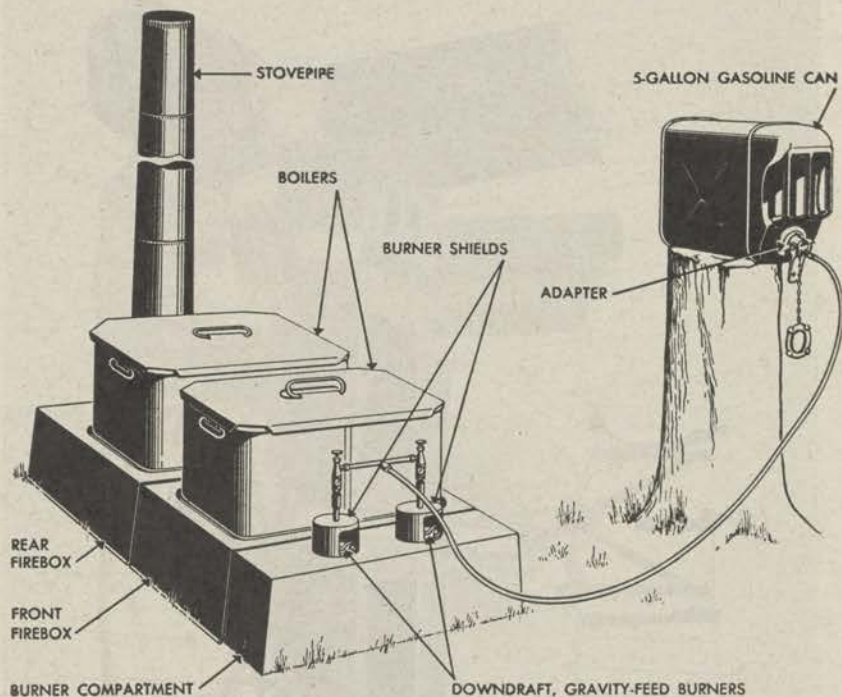


Figure 1. Outfit, cooking, pack (64-0-214) assembled for operation. Fuel container is placed at higher level than burners to provide gravity-feed.

earlier cavalry pack cooking outfit and the mountain artillery cooking outfit. The new outfit may be operated with gasoline, kerosene, fuel oil, or crankcase drippings, or, if necessary, it may be fired with wood.

- b. Each pack consists of one unit, designed for the use of 40 men. The outfit is carried by a pack animal, using the Phillips packsaddle, with the range and accessories on one side and the two cans on the

other. If necessary, the outfit can also be broken down into lightweight loads which may be strapped onto packboards for man transport.

Section II. TOOLS, PARTS, AND ACCESSORIES

2. Component Parts

a. Each outfit may be divided into three major parts:

- (1) The range and its accessories.
- (2) The utensils.
- (3) The tool and maintenance set.

b. The components of the outfit (fig. 2) are itemized below:

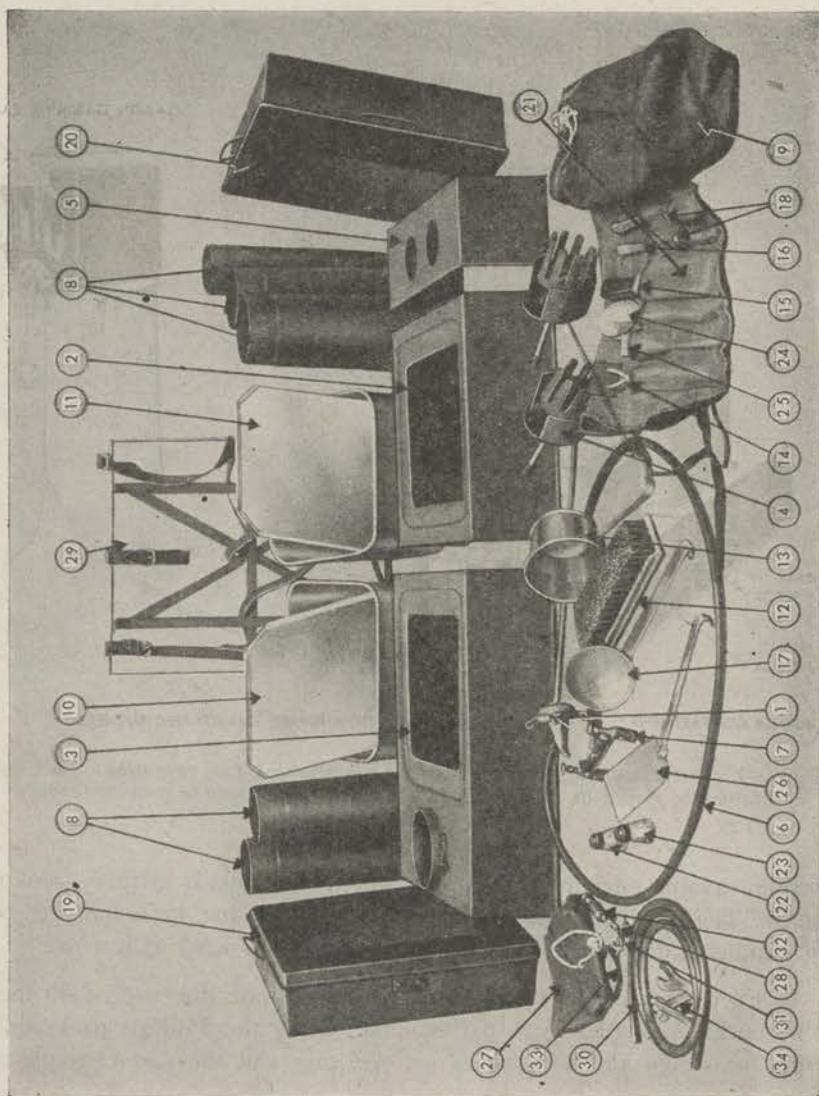


Figure 2. Components and accessories outfit, cooking, pack.

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Item No.	Stock No.	Components	Quantity
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RANGE, FIELD, OUTFIT, COOKING, PACK

1	65-H-1002	Adapter, gravity feed, 5-gallon gasoline can.	1
2	65-H-1187	Box, fire, outfit, cooking, pack, front.	1
3	65-H-1188	Box, fire, outfit, cooking, pack, rear.	1
4	65-H-1238	Burner, downdraft, 3¼-inch diameter (w/fittings and flame shield)	2
5	65-H-1399	Compartment, burner, outfit, cooking, pack.	1
6	33-H-470	Hose, gasoline, slip-on-type	1
7	65-H-2030	Manifold, fuel feed, outfit, cooking, pack (with 2 valves, drip)	1
8	65-H-2320-30	Pipe, stove, joint or section, tapered, 6-inch, nested	1

UTENSILS, OUTFIT, COOKING, PACK

9	64-B-35	Bag, cutlery, canvas	1
10	64-B-910	Boiler, outfit, cooking, pack, with cover #50.	1
11	64-B-915	Boiler, outfit, cooking, pack, with cover #51.	1
12	38-B-3630	Brush, scrubbing, floor, hand (palmetto or palmyra fiber)	1
13	64-D-200	Dipper, 1 quart	1
14	64-F-275	Fork, cook, flesh, length 15-inch.	1
15	64-K-545	Knife, butcher, 10-inch blade.	1
16	64-K-660	Knife, paring	2
17	64-L-150	Ladle, 15-inch (over-all)	1
18	64-O-130	Opener, can, hand	2
19	64-P-386	Pan, bake-and-roasting, 4½" x 15½" x 17½", #52, bottom	1
20	64-P-387	Pan, bake-and-roasting, 4½" x 15½" x 17½", #52, top	1
21	64-R-800	Roll, cutlery, canvas	1
22	64-S-505	Shaker, pepper, cooks'	1
23	64-S-510	Shaker, salt, cooks'	1
24	64-S-1000	Spoon, basting, length 15-inch	1
25	41-S-5227	Stone, sharpening, pocket (3½" x 1¼" x 1½")	1
26	64-T-579	Turner, cake, length 15-inch.	1

TOOLS AND MAINTENANCE PARTS

27	24-B-1105	Bag, canvas, tools and maintenance parts, stove, cooking, outfits	1
28	43-B-23722	Bolt, stove, steel, NCTS, flathead w/out nut, cl 1 fit, 1½" x ¾"	6
	65-H-1240	Burner, downdraft, 3¼-inch diameter (without fittings)	2
30	33-H-470	Hose, gasoline, slip-on-type	1
31	43-N-11398	Nut, wing, steel, threaded, NCTS, 1½-inch.	6
32	65-H-3695	Valve, drip, burner, downdraft plain outlet.	2
33	65-H-3715	Washer adapter, gravity feed, 5-gallon gasoline can	1
34	65-H-3825	Wrenches, oil burner, (3 to set)	1 set
	45-N-1838	Nipple, steel, std. shoulder, galv. 1/8" x 5½"	2
	64-S-1475	Strap, hanger, outfit cooking pack, 27¼-inch.	2
	64-S-1480	Strap, hanger, outfit, cooking, pack, 54-inch.	1
	64-S-1485	Strap hanger, outfit, cooking, pack, 61-inch.	1

PART TWO

OPERATING INSTRUCTIONS

* Section III. SERVICE UPON RECEIPT OF EQUIPMENT

3. How to Assemble Range (fig. 1)

a. Choose a level spot of ground protected from the wind, where loose earth is available.

b. Place the rear section of the firebox on the ground with the stack end downwind. Attach the front section of the firebox to this by inserting its flanges into the grooves of the rear section. Attach the burner compartment to the front section in a similar manner.

c. Erect the first five sections of telescoping smokestack. If a greater draft is desired, add the two other sections of stack.

d. Pack earth 3 inches high around all sides of range.

e. Insert the burners (with flame shields) into the holes in the burner compartment and attach the manifold. Be certain that the valves are shut off.

f. Screw the adapter into the fuel can, and clamp the hose to the adapter and to the fitting between the drip valves. Hold the center clamp on the adapter to prevent its turning, and then lock the clamp down. Be certain to dry off the adapter, gasket, and the gasket seat before you insert and tighten the adapter. This will prevent the gasket from squeezing out of place.

NOTE: The fittings provided at each end of the hose may be permanently attached to the burner manifold and to the adapter, eliminating the necessity of threading and unthreading these fittings.

g. Place the fuel can on its side at least 18 inches above the burner level, and make certain that it is secure. If no other support is available, turn the hanger on edge and rest the can on this; be sure that both the hanger and the can are secure before lighting the range. In the event that the fuel can is not available or that the adapter breaks, fuel can be siphoned from any available container.

Section IV. OPERATION UNDER USUAL CONDITIONS

4. Operation

Heat for the range is normally furnished by two downdraft, gravity-feed burners. (See fig. 3.) Principal parts of the burner are the burner

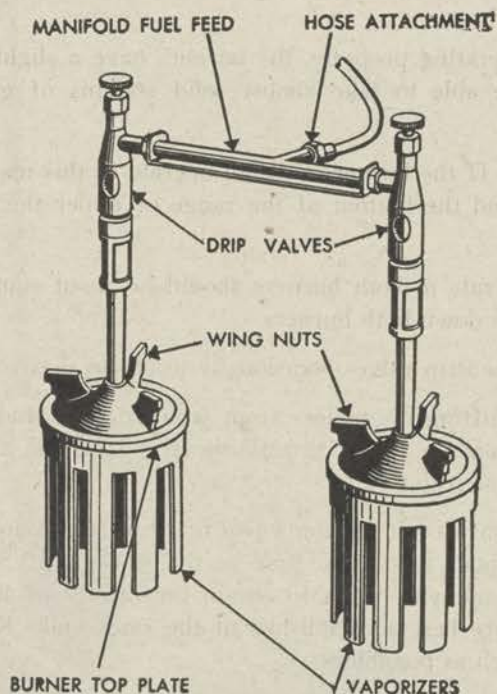


Figure 3. Burners, downdraft, gravity-feed.

top plate and the vaporizer, a cylindrical part with fingerlike projections. The range will burn approximately $2/3$ gallon of fuel per hour. It can be operated with kerosene, fuel oil, or wood.

a. Fill the two boilers with water or food and place them in position on the range.

b. Open one drip valve and start the fuel dripping slowly. When fuel appears around the edge of the burner, light with a match.

Caution: Keep face and hands from directly over the burner when lighting it. Be particularly careful when relighting a hot burner. If fuel has leaked on the ground, it is best to remove the first boiler before lighting the burners in order to avoid a possible back flash.

c. If gasoline is being used, open the second drip valve and the other

burner will light automatically. If kerosene or fuel oil is being used, it is best to ignite an oil-soaked rag or piece of paper below each burner, before turning on the fuel.

d. Keep the fuel valves open to a drip flow for about 4 minutes, to give the burners time to heat. When gasoline is used, proper adjustment of the valves should eliminate smoke completely after this initial heating period.

e. When operating properly, the burners have a slight roaring sound and should be able to take almost solid streams of gasoline without smoking.

Important: If the burners will not operate in this manner, check for air leaks around the bottom of the range or under the pots. Close all such leaks.

f. The fuel rate to both burners should be about equal. If less heat is desired, turn down both burners.

g. Adjust the drip valves occasionally to obtain desired heat.

h. Before shifting the boilers from front to back, and before removing a boiler from the range, throttle the drip valves to a very slow drip in order to avoid a flare-up.

i. Five gallons of water should boil in 20 to 30 minutes at the burner end, and in about twice that time at the stack end. Shift pots from front to rear and vice versa to obtain uniformity of heating. Baking and roasting are best accomplished at the stack end. Keep the boilers covered as much as possible.

j. Always shield the range from the wind.

5. Using a Wood Fire (fig. 4)

a. Assemble the range without the burner section.

b. Dig a trench 3 or 4 inches deep and 15 inches wide under the front section of the firebox.

c. Build a fire in the trench, keeping it toward the front.

d. The burner section may be used as a windshield or as a draft control.

PART THREE MAINTENANCE INSTRUCTIONS

Section V. MAINTENANCE

b. Maintenance

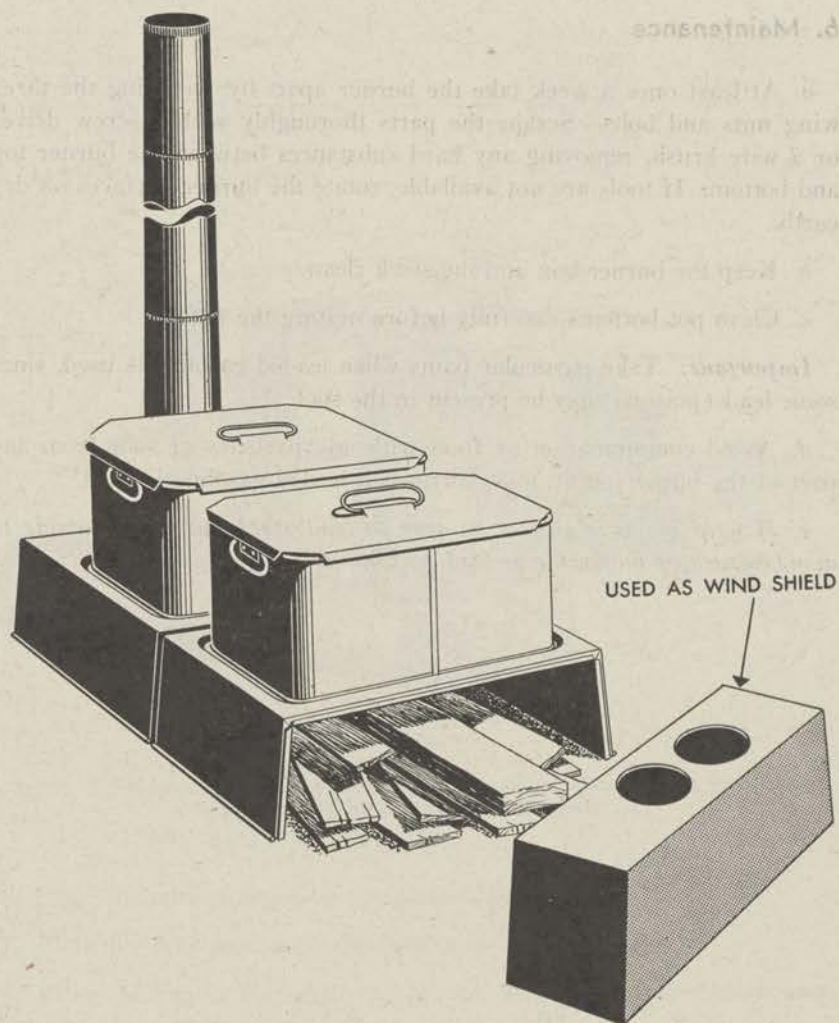


Figure 4. Outfit, cooking, pack, using wood fire.

PART THREE

MAINTENANCE INSTRUCTIONS

Section V. MAINTENANCE

6. Maintenance

a. At least once a week take the burner apart by removing the three wing nuts and bolts. Scrape the parts thoroughly with a screw driver or a wire brush, removing any hard substances between the burner top and bottom. If tools are not available, rotate the burner surfaces on dry earth.

b. Keep the burner box and the stack clean.

c. Clean pot bottoms carefully before nesting the pots.

Important: Take particular pains when leaded gasoline is used, since some lead (poison) may be present in the soot.

d. Avoid contamination of food with any particles of soot from any part of the burner outfit, especially when leaded gasoline is used.

e. *If used inside a shelter be sure to lead stack fumes to outside to avoid hazard of monoxide or lead poisoning.*

APPENDIX

HOW TO PACK OUTFIT FOR TRANSPORTATION

Each unit is packed in the following manner (fig. 5):

- | | | | |
|-----------------|----------------------|------------------------------|--------------|
| 1. 64-H-210 | Hanger. | 7. 65-H-1002 | Adapter. |
| 2. 65-H-1188 | Box, fire, rear. | 8. 65-H-1238 | Burner. |
| 3. 65-H-1187 | Box, fire, front. | 9. 33-H-470 | Hose. |
| 4. 65-H-1399 | Compartment, burner. | 10. 64-P-387 | Pan, top. |
| 5. 65-H-2320-30 | Pipe, stove. | 11. 64-B-910 and
64-B-915 | Boilers. |
| 6. 65-H-2030 | Manifold. | 12. 64-P-386 | Pan, bottom. |

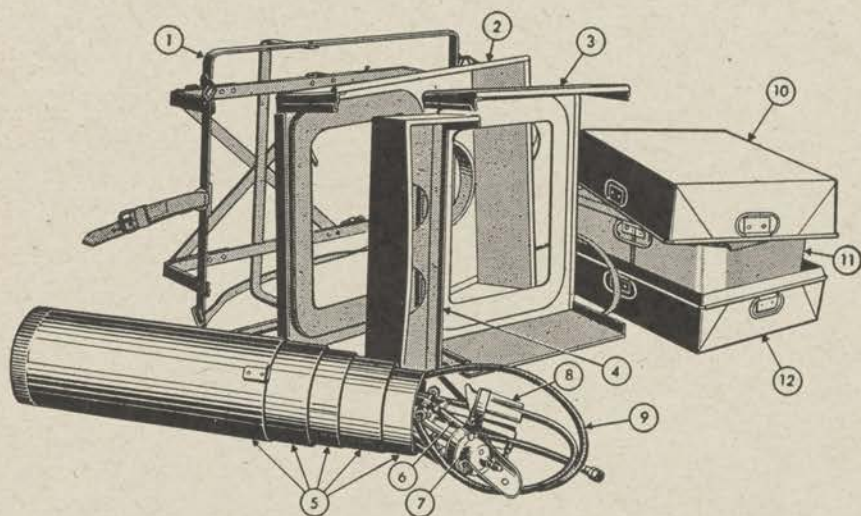


Figure 5. Method of stowing outfit, cooking, pack. Utensils and maintenance parts are placed inside nested boilers.

1. Place the outfit hanger on the ground, open side up.
2. Place the rear section of the firebox inside the hanger.
3. Place the front section of the firebox and the burner compartment into the rear section of the firebox.
4. Place the bake and roasting pan in the front section of the firebox.
5. Pack the burners and the hose into smokestack, and place the telescoped smokestack in the burner compartment. Place the manifold and the gasoline can adapter inside the small boiler.
6. Place the small boiler into the larger one and insert both boilers into the bake and roasting pan.

7. Place the fork, knives, can openers, spoon and sharpening stone into the cutlery roll and put roll into cutlery bag. Also put into cutlery bag the brush, dipper, ladle, salt and pepper shakers and cake turner. Pack tools and maintenance parts into the tool bag. Place the cutlery bag and the tool bag into the small boiler.

8. Place boiler covers over boilers, and place roasting-pan cover over these.

9. Secure all parts in hanger with leather straps. The two lengths of standard extension smokestack must be secured to the pack as a top load

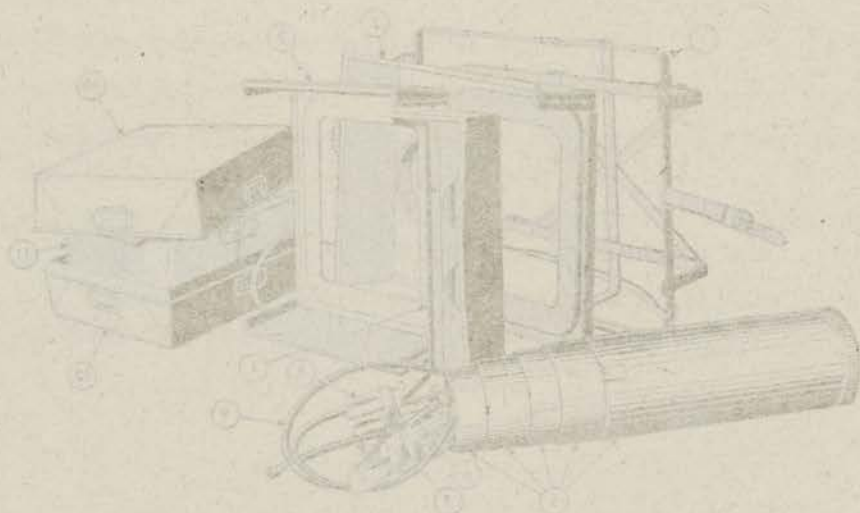
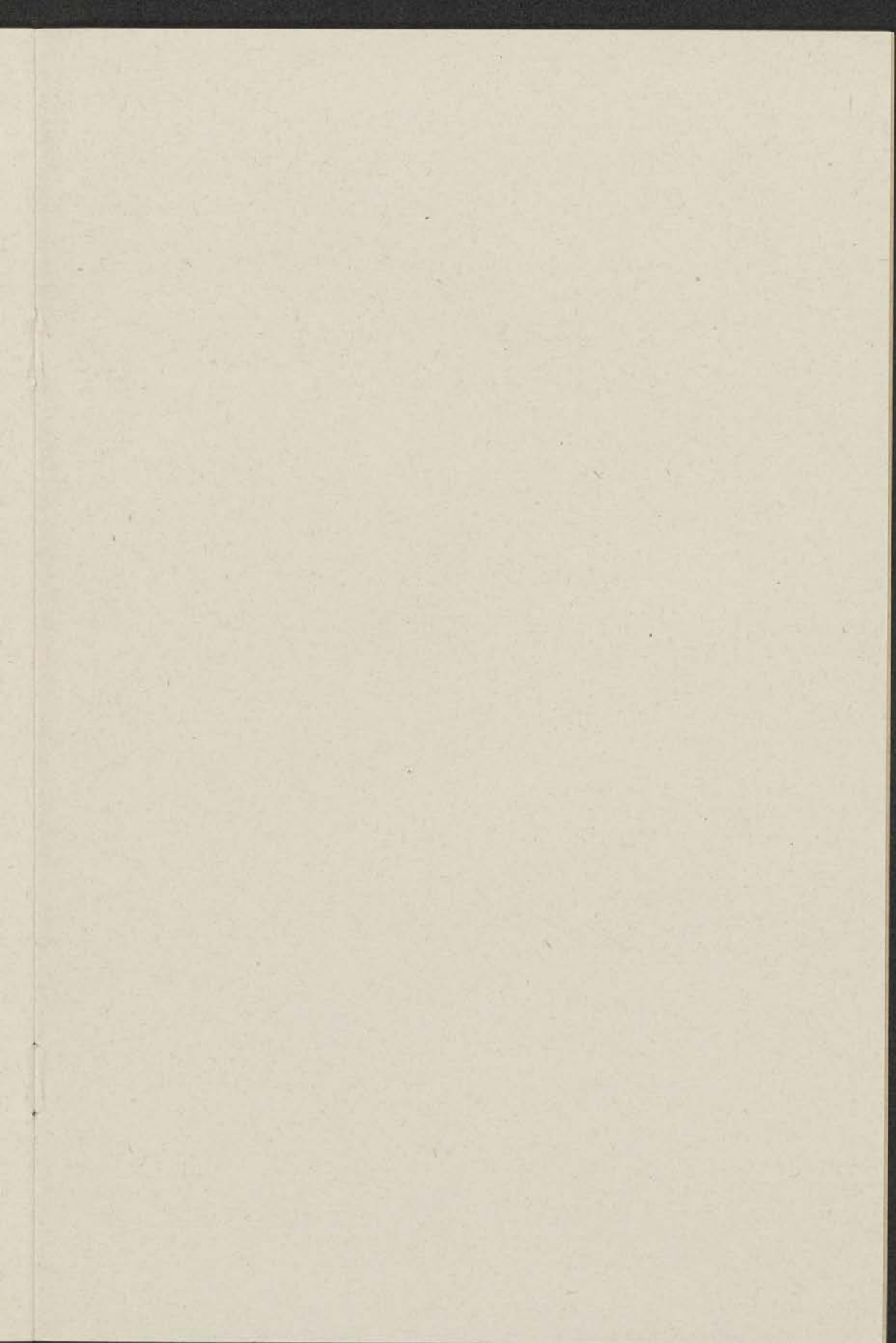
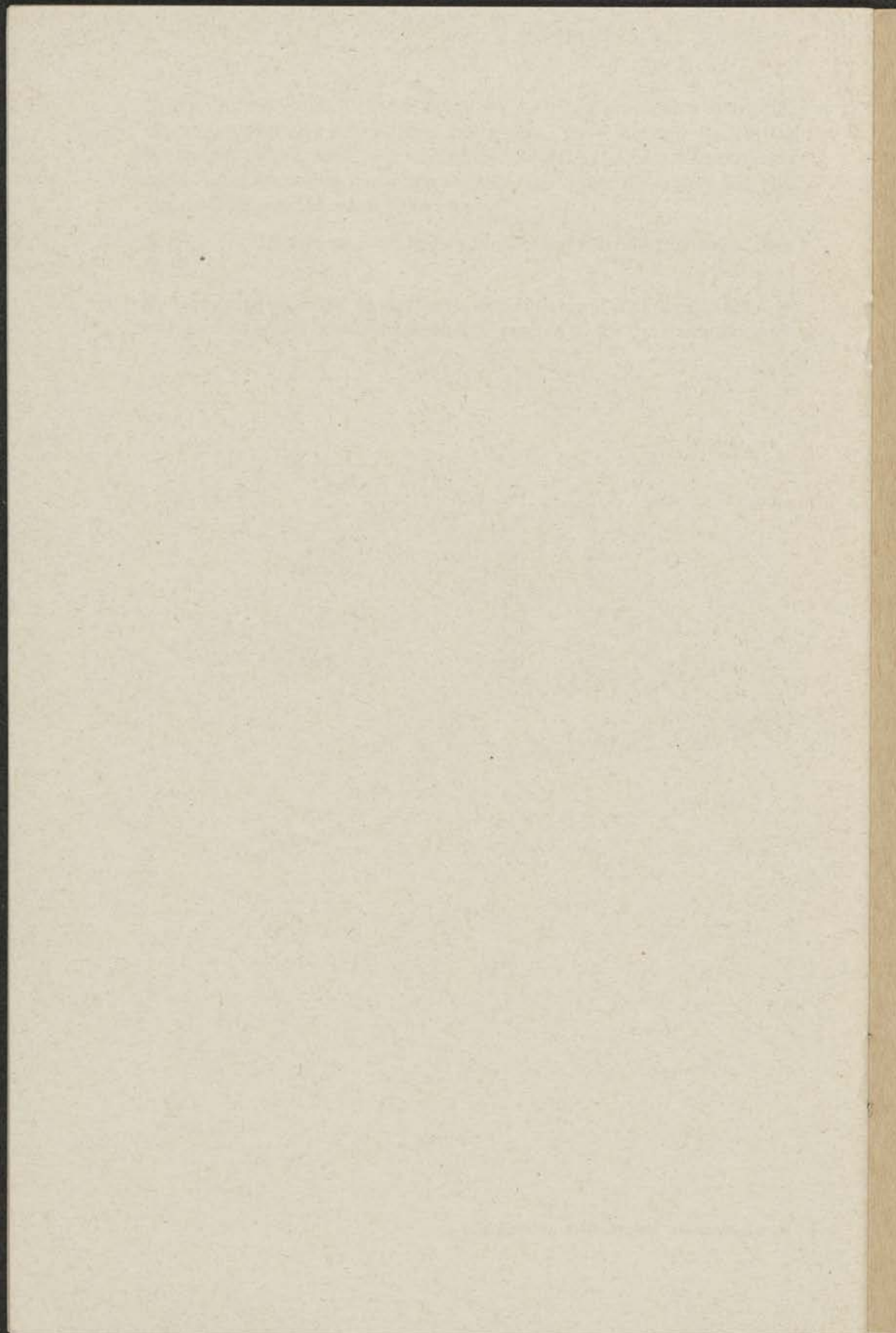


Figure 2. Method of securing with straps the pack and accessories.

1. Place the outfit hanger on the ground with the top of the hanger facing the pack.
2. Place the rear section of the pack inside the hanger.
3. Place the front section of the pack and the boiler compartment into the rear section of the hanger.
4. Place the boiler and roasting pan in the front section of the hanger.
5. Pack the boilers and the boiler into the hanger, and place the boiler compartment in the hanger compartment. Place the hanger and the boiler compartment in the hanger.
6. Place the small boiler into the larger one and insert both boilers into the hanger.







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