

TM 8-615

WAR DEPARTMENT TECHNICAL MANUAL

GASOLINE STOVES AND BURNERS

WAR DEPARTMENT • MAY 1945

WAR DEPARTMENT TECHNICAL MANUAL
TM 8-615

This manual supersedes TM 8-615, 28 July 1944

GASOLINE STOVES
AND BURNERS



WAR DEPARTMENT • MAY 1945

WAR DEPARTMENT

Washington 25, D. C., 25 May 1945

TM 8-615, Gasoline Stoves and Burners, is published for the information and guidance of all concerned.

[AG 300.7 (21 Mar 45)]

BY ORDER OF THE SECRETARY OF WAR:

OFFICIAL:

J. A. ULIO
Major General
The Adjutant General

G. C. MARSHALL
Chief of Staff

DISTRIBUTION:

AAF (5); AGF (5); ASF (2); T of Opns (10); Dept (10);
Base Comd (5); S Div ASF (1); SvC (5); PE (2); ASF
Dep (Med Sec) (10); Dep 8 (Cont) (25); except St. Louis
Med Dep (75); GH (4); SH (2); Conv H (2); USMA (2);
A (2); CHQ (2); AF (5); T/O & E 8-187 (2); 8-510 (2);
8-550 (4); 8-550S (4); 8-550T (4); 8-550-1-T (4); 8-560
(2); 8-572S (2); 8-580 (3); 8-581 (3); 8-590 (2); 8-610 (1);
8-611 (1); 8-667 (2).

Refer to FM 21-6 for explanation of distribution symbols.

CONTENTS

PART ONE. INTRODUCTION.

	<i>Paragraph</i>	<i>Page</i>
<i>Section I.</i> General.		
Scope	1	1
Records	2	1
<i>II.</i> Description and Data.		
Description	3	1
Data	4	10
Manufacturer	5	11
<i>III.</i> Tools and parts.		
Spare parts kits.....	6	11

PART TWO. OPERATING INSTRUCTIONS.

<i>Section IV.</i> General.		
Scope	7	12
<i>V.</i> Service upon receipt of equipment.		
Unpacking and assembling.....	8	12
<i>VI.</i> Controls and instruments.		
Controls	9	12
Instruments	10	12
<i>VII.</i> Principle of operation.		
How stove or burner operates.....	11	15
Function of vaporizer.....	12	17
<i>VIII.</i> Operating instructions.		
Similarity of operation.....	13	17
Types of fuel that can be used.....	14	20
To fill fuel tank.....	15	20
To pump air pressure.....	16	20
To light stove or burner.....	17	21
Adjustment of flame.....	18	22
To extinguish stove or burner.....	19	22

PART III. MAINTENANCE INSTRUCTIONS.

<i>Section IX.</i> General.		
Scope	20	23
<i>X.</i> Lubrication.		
Monthly	21	23
<i>XI.</i> Preventive maintenance services.		
Operator maintenance (first echelon).....	22	23
Organizational maintenance (second echelon) (weekly)	23	23

	<i>Paragraph</i>	<i>Page</i>
XII. Trouble shooting.		
Burner fails to light.....	24	24
Yellow flame.....	25	24
Pump does not operate properly.....	26	24
Leak around filler plug.....	27	24
Leak at pack nut on tip cleaner assembly.....	28	25
Tip cleaning lever will not turn.....	29	25
Needle rod does not work.....	30	25
Burner backfires or burns with red flashes.....	31	25
XIII. Maintenance operations.		
Vaporizer	32	25
Gas orifice	33	26
Needle rod	34	26
Burner head.....	35	26
Fuel leaks	36	27
Filler plug	37	27
Air pump	38	28
Dirty fuel tank.....	39	28
APPENDIX.		
Section I. Shipment and storage.		
Draining fuel tank.....	1	29
Packing and crating.....	2	29
II. Spare parts kits.		
Spare parts kits.....	3	29
III. Reference.		
Army Regulation.....	4	31
Army Service Forces Medical Supply Catalog.....	5	31
INDEX		32

PART ONE

INTRODUCTION

Section I. GENERAL

1. Scope

These instructions are published for the information and guidance of the personnel to whom this equipment is assigned. They contain information on the operation and maintenance of the equipment as well as descriptions of the major units and their functions in relation to the other components of the equipment. They apply only to the following Medical Department Items:

Medical Dept. No.	Nomenclature	Figure No.
9955000	Stove, 1-burner, gasoline:	1
9955500	Stove, 2-burner, gasoline:	2
9R10000	Burner, one 5,000 B.T.U. head, gasoline:	3
9R10001	Burner, one 10,000 B.T.U. head, gasoline:	4
9R10002	Burner, two 10,000 B.T.U. heads, gasoline:	5
9R10003	Burner, three 10,000 B.T.U. heads, gasoline:	6
9R10004	Burner, four 10,000 B.T.U. heads, gasoline:	7
9R10005	Burner, one 2,500 B.T.U. head, gasoline:	8
9R10006	Burner, three 10,000 B.T.U. heads, cylindrical, gasoline:	9

2. Records

No special maintenance forms are required to be kept by the using personnel except as may be prescribed by the medical officer in charge.

Section II. DESCRIPTION AND DATA

3. Description

a. The gasoline stoves and burners described in this manual are used as sources of heat in various pieces of Medical Department equipment, including several sterilizers, autoclaves, incubators and a distilling apparatus. In principle of operation, all the stoves and burners are identi-

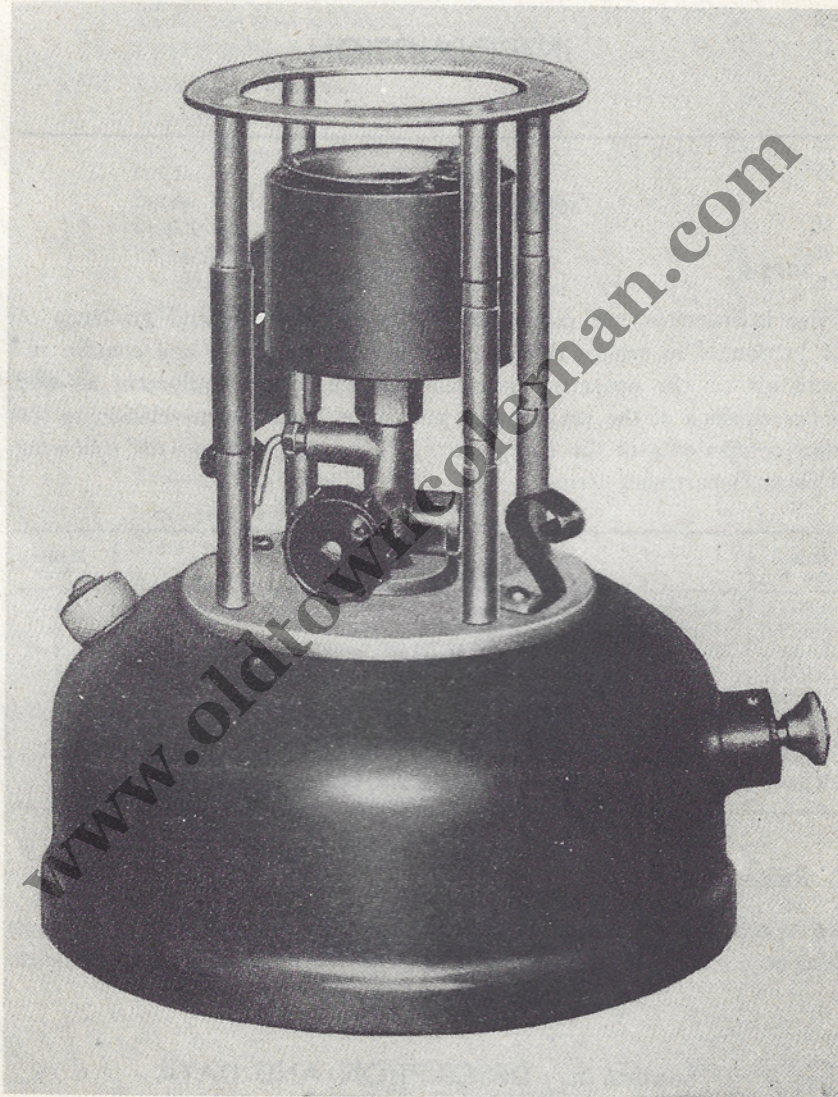


Figure 1. Item No. 9955000—Stove, 1 burner, gasoline.

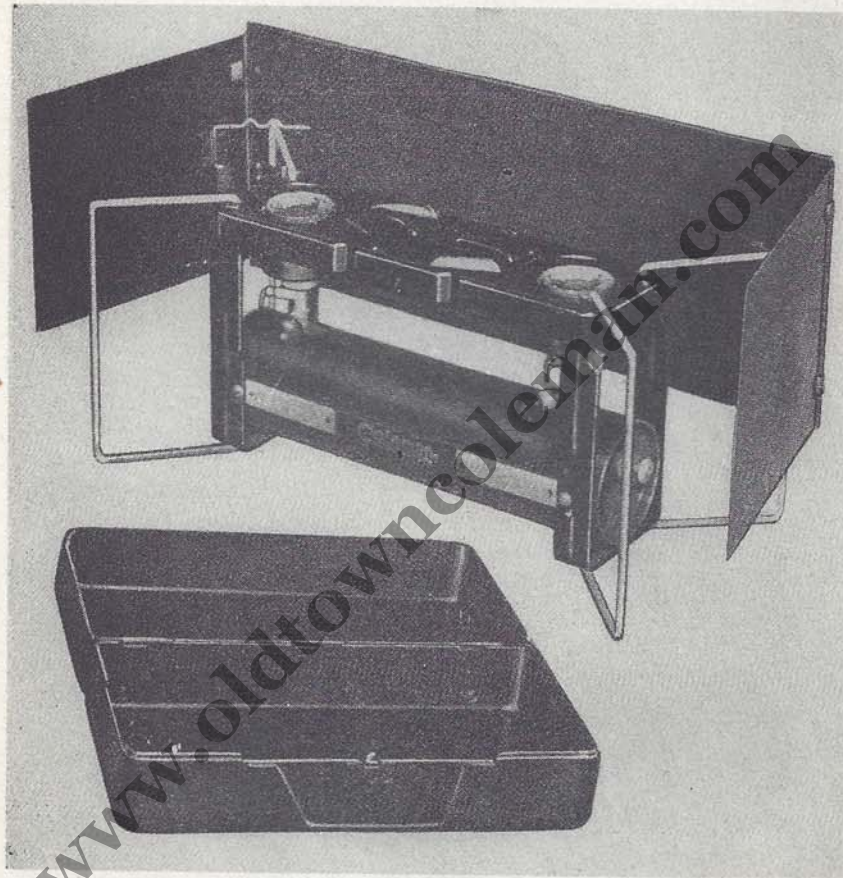


Figure 2. Item No. 9955500—Stove, 2 burner, gasoline.



Figure 3. Item No. 9R10000-Burner, one 5,000 B.T.U. head, gasoline.



Figure 4. Item No. 9R10001-Burner, one 1,000 B.T.U. head, gasoline.



Figure 5. Item No. 9R10002—Burner, two 10,000 B.T.U. heads, gasoline.

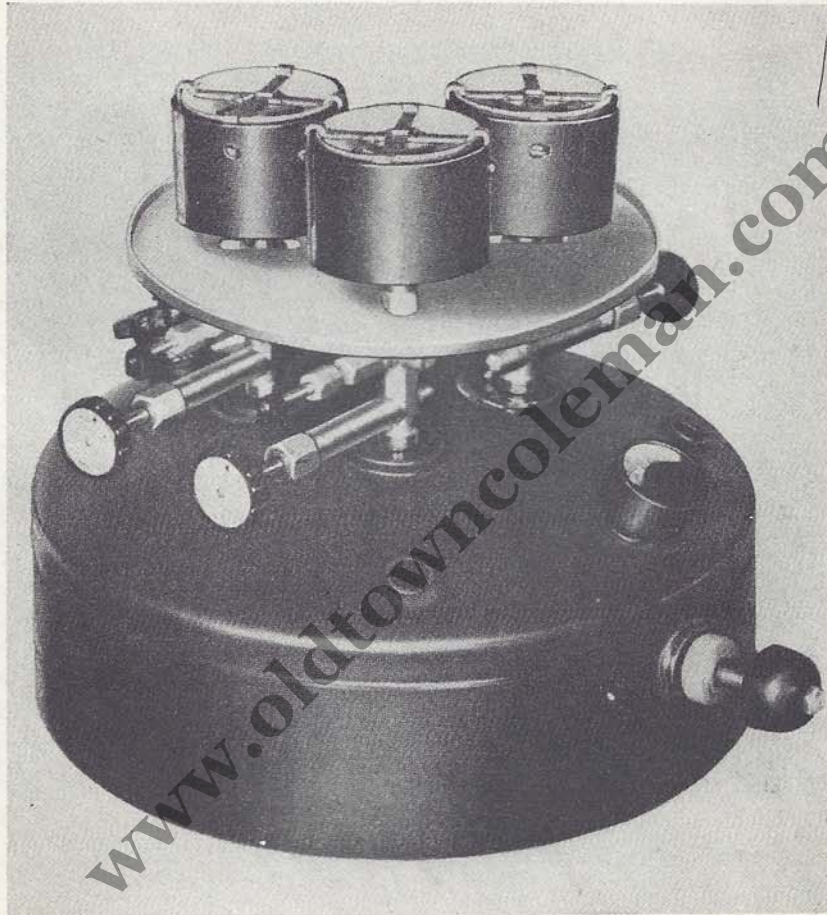


Figure 6. Item No. 9R10003-Burner, three 10,000 B.T.U. heads, gasoline.

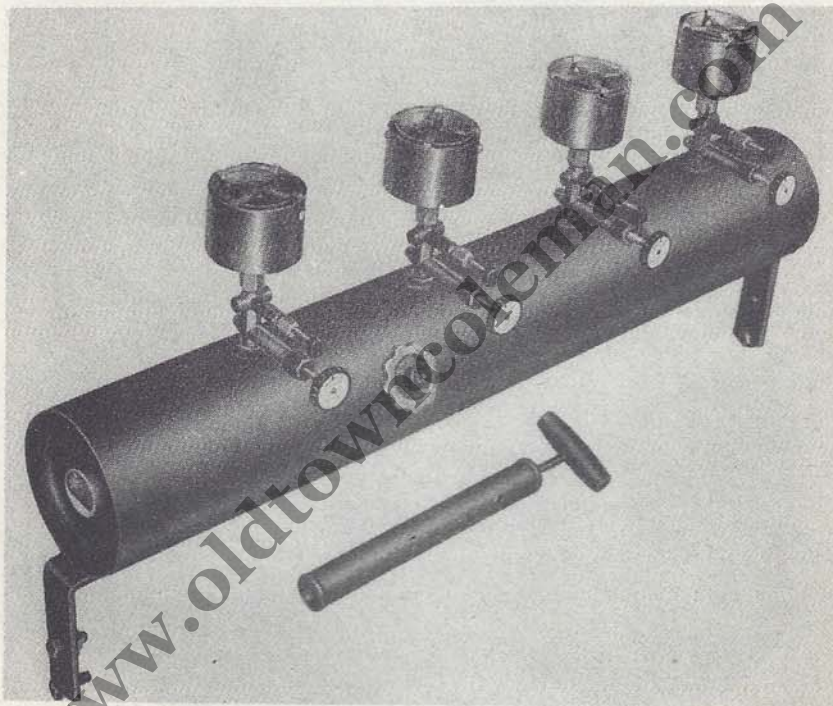


Figure 7. Item No. 9R10004-Burner, four 10,000 B.T.U. heads, gasoline.



Figure 8. Item No. 9R10005-Burner, one 2,500 B.T.U. head, gasoline.

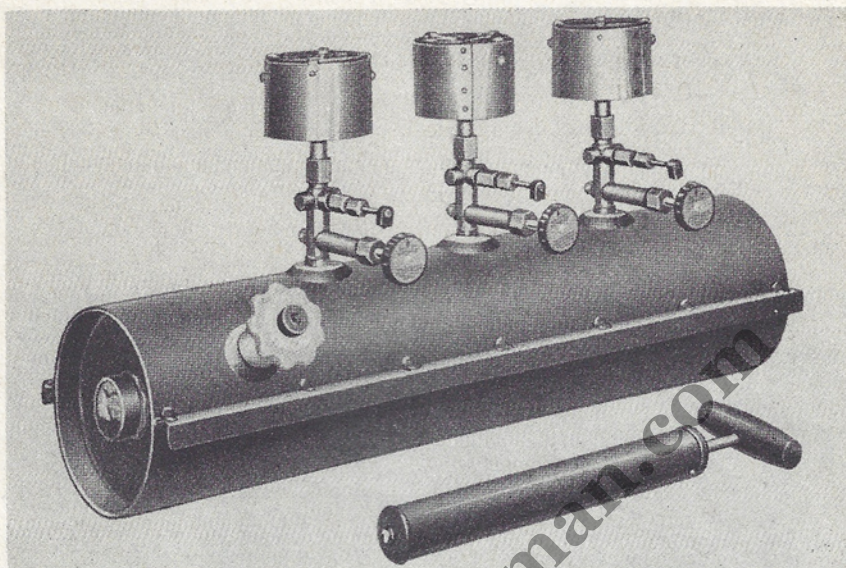


Figure 9. Item No. 9R10006—Burner, three 10,000 B.T.U. heads, cylindrical, gasoline.

cal; they vary as to capacity and shape of fuel tank, dimensions of certain parts, and number of burner heads.

b. Stoves differ from burners in that stoves are supplied with—

- (1) A supporting frame above the burner head or heads (figs. 1 and 2) to hold vessels and other equipment to be heated.
- (2) A carrying case or cover. (See fig. 2.)

4. Data

See table I.

Table I

Med. Dept. Item No.	Nomenclature	Mfg. No. for burners	Capacity	Hours of service
9955000	Stove, 1-Burner, Gasoline:	521	2 Pts.	5 to 7
9955500	Stove, 2-Burner, Gasoline:	523	2 Pts.	3 to 5
9R10000	Burner, one 5,000 B.T.U. head, gasoline:	526	2 Pts.	5 to 7
9R10001	Burner, one 10,000 B.T.U. head, gasoline:	522	2 Qts.	5 to 7
9R10002	Burner, two 10,000 B.T.U. heads, gasoline:	525	1 Gal.	5 to 7
9R10003	Burner, three 10,000 B.T.U. heads, gasoline:	524-497	1 Gal.	3 to 5
9R10004	Burner, four 10,000 B.T.U. heads, gasoline:	*522-375S	1 Gal.	2 to 4
9R10005	Burner, one 2,500 B.T.U. head, gasoline:	527	$\frac{3}{4}$ Pt.	2 to 3
9R10006	Burner, three 10,000 B.T.U. heads, cylindrical, gasoline:	*522-375S-3	3 Qts.	3 to 5

*Fuel tank manufactured by American Sterilizer Company.