

SERVICE INSTRUCTIONS FOR  
MODEL 457-458-460 COLEMAN HANDY GAS PLANTS

The instant-lighting feature of this appliance is incorporated in the #900-657 Instant-Gas Valve.

When the valve wheel is opened one-fourth turn, as in starting position, the needle, which is slightly tapered at lower end, still extends through fuel tip. Only a fine spray or vapor of gasoline can feed through tip while valve is in the "instant-lighting position" - opened one-fourth turn. The air pressure feeds down through opening in fuel wire just under valve body, to mix with this fine vapor of gasoline as it feeds through tip. This mixture of air and vapor then feeds up through small feed wire on inside of larger tube, through generator into burner casting in the form of a carbureted mixture that lights instantly with clear blue flame.

Opening valve wide as possible pulls tapered needle entirely out of tip and permits gasoline to fill feed tube, thus automatically sealing off any further loss of air pressure through feed wire. It is necessary, therefore, to open valve as wide as possible, after burning about one minute on "instant-lighting" position, or there will be a rather rapid loss of air pressure from the tank out through the generator.

In rare instances, gum and corrosion may collect on needle to the extent that gasoline won't feed through tip at all with valve one-fourth open. The flame will then float away or lift up from the burner. To correct this condition, remove Instant-Gas Valve Stem from tank and scrape needle clean with knife blade.

Fine powdery carbon may eventually form in the generator and when lighting heater or after heater has been in operation for some time, this powdery carbon may collect in orifice of gas tip. Flame would then almost go out. Closing and opening generator valve stem quickly several times, while at the same time tapping lightly on generator barrel with some light tool, will dislodge carbon and force it on through gas tip. Burning carbon will produce yellow specks in the flame.

Keep pack nut on generator valve stem loose enough that valve stem will turn easily, yet tight enough to prevent leadage of fuel.

In extremely cold weather the burner may show some tendency to flood from condensation of the gasoline spray in the cold casting. A yellow, lazy flame on burner is usually an indication of a flooded burner. To correct this condition, turn burner off and drain raw gasoline through drain plug provided at bottom of burner casting.

Keep burner parts clean. Burned match heads or dirt under the burner cap on the #458 will produce tongues of yellow flame. Unscrew bolt then lift cap up if necessary in order to clean under the cap. On other models use a thin knife blade to open and clean slots in burner cap.

Do not attempt to operate the burner with flame turned so high that it is yellow, flaring, and inefficient. Regulate generator valve so as to produce an active, hot, blue flame.

The generator is merely a device, which changes the gasoline from a liquid to a vapor in the heat of the burner. Substances in the gasoline that do not vaporize, collect in the generator. It is, therefore, extremely important to use only approved brands of gasoline. (See approval list.)

It is always a good plan to keep an extra generator on hand and thus insure uninterrupted service. When old, carbonized generator has been removed from heater, clean it and have it on hand for a spare.

552-262 Generator Parts

308-238	Needle & Holder	.09
325-217	Gas Tip Bushing	.15
325-418	Gas Tip	.18
551-240	V. Body & F. Nipple	.69
552-253	G. Valve Stem (Less Cleaning N. & H.)	.81
552-212	Generator Tube	1.20
552-219	Filler Coil	.21
552-262	Chrome Alloy Gen.	3.00

486-262 Generator Parts

486-262	Generator Complete	\$2.70
486-212	Generator Tube	.99
479-219	Gen. Filler Coil	.21
486-253	Valve Stem Complete	.60
479-217	Tip Protector	.15
479-218	Gen. Gas Tip	.18
472-238	Needle & Holder	.09

558-262 Generator Parts

558-262	Generator	\$3.00
552-212	Generator Tube	1.20
552-219	Generator Filler Coil	.21
558-253	Generator Valve Stem	.99
558-238	Needle & Holder	.09
558-218	Gas Tip	.18
325-217	Gas Tip Bushing	.15
551-240	Generator V. Body & F. Nipple	.69

Here's how to clean the generator: Clamp the tube of the generator in a vise, then unscrew the generator gas tip protector to remove gas tip. Next, unscrew the generator valve body from the generator barrel, and with a short hook of some kind, pull the coil out far enough to enable you to grasp it with a pair of pliers. The filler coil will be pulled out of shape in removing it from the generator barrel, so it will be necessary that you have a new one to install. A suitable hook for removing the filler coil may be made by bending the tapered handle end of an ordinary flat file.

After the generator barrel has been cleaned and is free of carbon, install a new filler coil, also new gas tip and needle if required. Clean carbon from valve stem with sand paper, then reassemble.

The following special tools are very convenient for cleaning generators and may be purchased from The Coleman Company, Inc.

599-817	Coil Puller	\$ .21
599-809	Carbon Scraper	.60
599-812	Tube Cleaning Brush	.60

If the old generators are sent to us they will be rebuilt equal to new ones insofar as service or operation is concerned as follows:

486	262 Generator (renewed)	\$1.35
552	262 Generator (renewed)	1.50
558	262 Generator (renewed)	1.50

## SERVICE INSTRUCTIONS FOR MODEL 457G AND 460G COLEMAN HEATMASTERS (Formerly Handy Gas Plants)

The instant-lighting feature of this appliance is incorporated in the No. 900-657 Instant-Gas Valve.

When the valve wheel is opened one-fourth turn, as in starting position, the needle, which is slightly tapered at lower end, still extends through fuel tip. Only a limited amount of gasoline can feed through fuel tip at bottom of tank while valve is in the "instant-lighting position" - opened one-fourth turn. The pressure in tank will force air down through opening in the fuel wire just under valve body, to mix with this gasoline as it feeds through fuel tip. This mixture of air and gasoline in the form of a mist or spray then feeds up through small feed wire on inside of large tube, through generator into burner casting. This carbureted mixture should light instantly with a clear, blue flame.

Holding down on safety lock and opening valve wide as possible pulls tapered needle entirely out of fuel tip. This permits gasoline to fill feed tube, thus automatically sealing off any further loss of air pressure through valve. It is necessary, therefore, to open valve as wide as possible, after burning about one minute on "instant-light" position. Unless this is done there will be a rather rapid loss of air pressure from the tank up through valve and out through the generator.

In rare instances, gum and corrosion may collect on needle to the extent that gasoline won't feed through fuel tip at all with valve one-fourth open. The flame will then float away or lift up from the burner. To correct this condition remove Instant-Gas Valve Stem from tank and clean needle with fine sandpaper.

With the flame turned low on the burner, the cleaning needle on the end of the generator valve stem will extend through orifice in generator gas tip to the extent that enough fine powdery carbon may eventually collect around the needle to shut off the flow of gas. It is a good plan, therefore, to clean the generator once in awhile by opening and closing the generator valve stem several times quickly, while at the same time tapping lightly against the generator barrel with some light tool. Do this while the stove is in operation and you will notice specks or flashes of yellow in the flame as the fine powdery carbon passes through the burner.

Keep pack nut on generator valve stem loose enough that valve stem will turn easily, yet tight enough to prevent leakage of fuel.

In extremely cold weather, the burner may show some tendency to flood from condensation of the gasoline spray in the cold casting. A yellow, lazy flame on burner is usually an indication of a flooded burner. To correct this condition, turn burner off and drain raw gasoline through drain plug provided at bottom of burner casting.

Keep burner parts clean. Burned match heads or dirt on burner cap will produce tongues of yellow flame. Use a thin knife blade to open and clean slots in burner cap.

Do not attempt to operate the burner with flame turned so high that it is yellow, flaring and inefficient. Regulate generator valve so as to produce an active, hot, blue flame.

Air regulation is made by changing the position of the flat Air Intake Adjuster Spring No. 551-325, which partly covers the opening in the manifold near where the gas tip end of the generator enters it. Adjustment should only be made while burner is hot. Close spring as much as you can without producing a yellow smoky flame on the burner.

The generator is really a miniature gas plant. The heat from the flame under the generator changes the gas from a liquid to a vapor. The gas as it feeds through the gas tip end of the generator is too rich to burn. Air is, therefore, admitted into the mixing chamber at that point. Any substance in the gasoline that doesn't vaporize would collect in the generator in the form of carbon or gum. It is, therefore, extremely important to use only a suitable non-leaded gasoline.

Generator installation should be made correctly to avoid a warped generator barrel. Avoid using excessive pressure when tightening set screw. Tighten just enough to prevent a leak. The gas tip end of the generator should float freely in the mixing chamber opening.

Don't use excessive force in tightening the filler plug or you may eventually strip the threads on the brass filler plug bushing. The filler plug is equipped with a gasket that will make a positive shut-off without excessive pressure.

Oil pump leather occasionally to keep it soft, pliable, and more efficient.

**Model 457G has a 5 inch burner**

**Model 460G has a 7 inch burner**

Here's how to clean the generator: Clamp the tube of the generator in a vise, then unscrew the generator gas tip protector to remove gas tip. Next, unscrew the generator valve body from the generator barrel and with a short hook of some kind, pull the coil out far enough to enable you to grasp it with a pair of pliers. The filler coil will be pulled out of shape in removing it from the generator barrel so it will be necessary that you have a new one to install. A suitable hook for removing the filler coil may be made by bending the tapered handle end of an ordinary flat file.

After the generator barrel has been cleaned and is free of carbon, install a new filler coil, also new gas tip and needle if required. Clean carbon from valve stem with emory cloth, then reassemble.

Jan. 1. 1976 - This is all the parts and paperwork available for obsolete models 457G or 460G Handy Gas Plants. Listed below are current parts and prices still available.

552-2621	Generator	(model 457G)	\$6.06	SEND US YOUR _____ CHECK OR MONEY ORDER TO SAVE C.O.D. FEES AND POSTAGE AND WE WILL SHIP:
558-2621	Generator	(model 460G)	6.24	
Parts interchangeable for both the 457G & 460G				
451-1401	Filler Plug		3.60	
451-5091	Pump Leather		.84	
451-5221	Jumbo Pump		7.98	

# Coleman **HANDY GAS** Plants

INSTANT LIGHTING - SPEEDY HEAT - LOW COST OPERATION

## No. 458G

This model lights instantly and has the same efficient operation as No. 457G, but is smaller in size. It provides the same quick-action, dependable heat, although in lesser volume.

It will raise two gallons of water from 40° to 170° F. in 16 to 18 minutes in an average room temperature of 28° F. Supplies ample volume of heat for ordinary needs. Small size makes it adaptable to many uses.

Produces up to 18,000 B. T. U.'s per hour.

Has 3-inch cast iron burner—not perforated metal—fitted with 8½-inch grate.

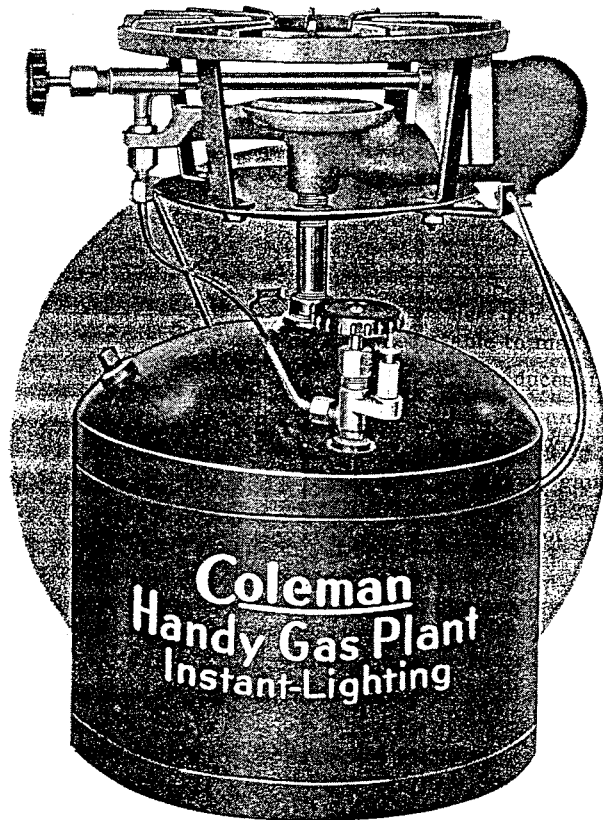
Heavy gauge steel tank is lead-coated, resists rust. Two gallons in size, holds one gallon of fuel and one of air. One filling of fuel gives 6 to 8 hours service at full heat; 10 hours under average use. Equipped with Instant-Gas Carburetor Valve, Hand Operated Filler Plug.

HEIGHT: 15½-inches; Diameter tank, 10 inches. Net weight, 15 lbs. Shipping weight, 17½ lbs.

U. S. Retail Price.....\$11.85

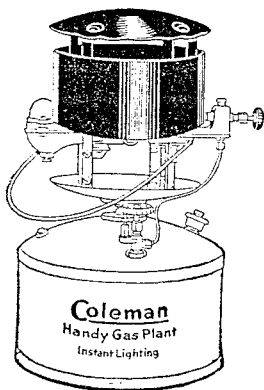
No. 453—Same as No. 458G but less grate and brackets. Shipping weight, 14½ pounds.

U. S. Retail Price.....\$10.95



## No. 457-335 DRUM HEATER

Fits both models (with grates) of Handy Gas Plants, makes a fine heat radiator. When equipped with this Drum Heater, a Coleman Handy Gas Plant is just the thing for use in fruit cellars, produce and storage plants, refrigerator cars, etc., to prevent loss and damage by freezing. Diameter, 9-in. Height, 6-in. Shipping weight, 4 pounds.



U. S. Retail Price..\$1.80

### PARTS AND SUPPLIES FOR 458G

375 - 164—Filler Plug Complete .....	\$ .60
458 - 189—Tank Complete .....	6.00
486 - 262—Generator (Gas Tip Marked "W")....	1.95
553 - 330—Grate .....	.75
900 - 657—Instant-Gas Valve Complete .....	1.80

Especially Suited for Use in  
FARM DAIRIES AND CREAMERIES

1. Meets the requirements of the U. S. Standard and all city milk ordinances.
2. Meets the requirements of Farm Underwriters' Association.

"The Committee (of the Farm Underwriters' Association) recommend for this use, as providing the greatest measure of safety, either electric hotplates with competent wiring or gasoline burners with air pressure feed fuel tanks of the newer type, with instant-lighting valve requiring no generating lamp, or torch and no supplementary generating fuel."—Excerpt from Farm Underwriters Associations' Report.

Just the heating equipment needed for water heating, steaming and sterilizing purposes. Provides fast-action heat in large volume — increases the capacity of any dairy cleaning equipment. Make it possible to do the same work in less time and the operator does better work in cleaning cans, bottles, etc. This means lower bacterial count, improved milk and cream quality, and a higher grade.

# Coleman **HANDY GAS** Plants

## INSTANT LIGHTING - SPEEDY HEAT - LOW COST OPERATION

**T**HE COLEMAN HANDY GAS PLANT is a complete, one-burner gas-heating plant that can be used whenever and wherever efficient, clean, fast action heat is needed. It is the heater of many uses—at home, on the farm, in factories, dairies, manufacturing plants, etc.

Fine for use with steam tables, boilers, steam washers, stock food cookers, large vats, in poultry houses, printing and tin shops for heating metal, pressure canning.

**Portable** — Can be used wherever quick, efficient heat is needed.

**Makes and burns its own gas** from common motor gasoline.

**Provides clean heat**—No smoke, no soot, no odor.

**Lights instantly**—No waiting, no delay.

**Flame easily and quickly adjusted** to desired height. Speedy in action.

### No. 457G

No. 457G is the standard size. Lights instantly just like gas with no preheating. Supplies a large volume of clean, intense, fast-action heat for practically every need. Will raise four gallons of water from 40° to 170° F. in 21 to 23 minutes in an average room temperature of 23° F. Strongly constructed, dependable in use, made to give heavy duty service. Equipped with 5-inch burner and 8½-inch grate. Three-gallon tank is made of heavy gauge steel, lead-coated, rust-resisting. Holds two gallons of fuel and one of air. Runs 8 to 10 hours at full heat on one filling; 12 hours average use. Produces up to 35,000 B.T.U.'s per hour. Has Instant-Gas Carburetor Valve, Air Gauge, Hand Operated Filler Plug.

HEIGHT: 15½ inches; Diameter tank, 12 inches. Net weight, 20 lbs. Shipping weight, 22 lbs.

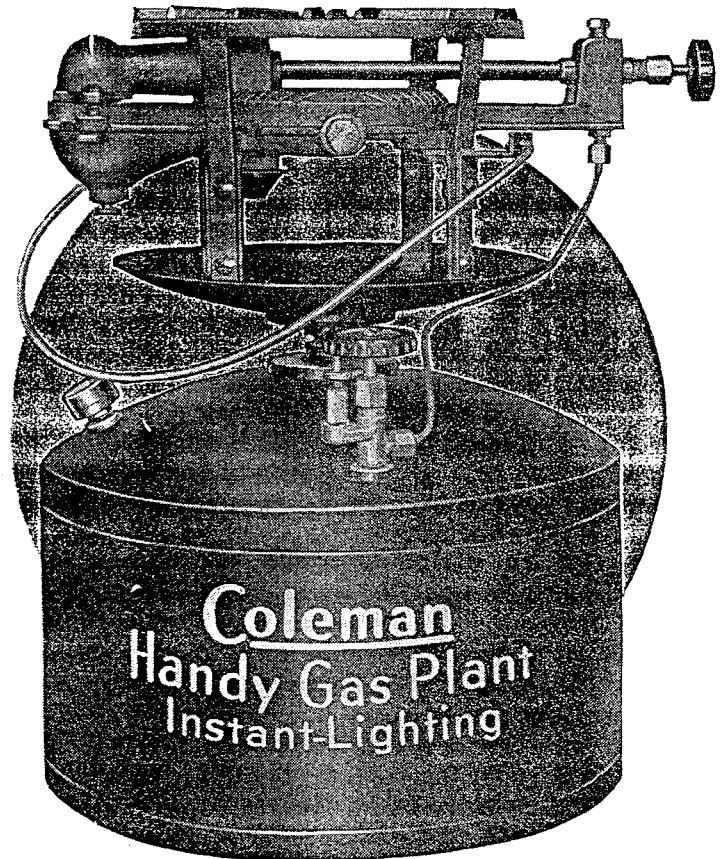
U. S. Retail Price.....\$15.75

No. 457—Same as No. 457G but less grate and brackets. Net weight, 19 pounds. Shipping weight, 19½ pounds.

U. S. Retail Price.....\$14.85

#### PARTS AND SUPPLIES FOR NO. 457G

328 - 172—Fuel Tube (12½-in. Long) .....	\$ .45
451 - 140—Filler Plug Complete .....	.75
457 - 189—Tank Complete .....	7.50
552 - 212—Generator Tube .....	.90
552 - 219—Filler Coil .....	.18
552 - 253—Valve Stem .....	.60
552 - 262—Generator Complete (Gas Tip Marked "4") .....	2.25
900 - 657—Instant-Gas Valve Complete .....	1.80



### No. 460G

#### WITH 7-INCH BURNER

Of the same general design as the No. 457G, but with a larger heat producing capacity. It will produce up to 55,000 B.T.U.'s per hour. Made for heavy duty work. Equipped with 8½ inch grate and a 7 inch burner. Three gallon heavy gauge steel tank, lead coated, rust resisting.

Height, 16 inches; diameter tank, 12 inches. Net weight, 21 lbs. Shipping weight, 24 lbs.

U. S. Retail Price.....\$17.40

No. 460—Same as No. 460G but less grate and brackets. Net weight 18¼ lbs. Shipping weight, 21 lbs.

U. S. Retail Price.....\$16.50

# Coleman **HANDY GAS** Plants

INSTANT LIGHTING - SPEEDY HEAT - LOW COST OPERATION

## No. 458G

This model lights instantly and has the same efficient operation as No. 457G, but is smaller in size. It provides the same quick-action, dependable heat, although in lesser volume.

It will raise two gallons of water from 40° to 170° F. in 16 to 18 minutes in an average room temperature of 28° F. Supplies ample volume of heat for ordinary needs. Small size makes it adaptable to many uses.

Produces up to 18,000 B. T. U.'s per hour.

Has 3-inch cast iron burner—not perforated metal—fitted with 8½-inch grate.

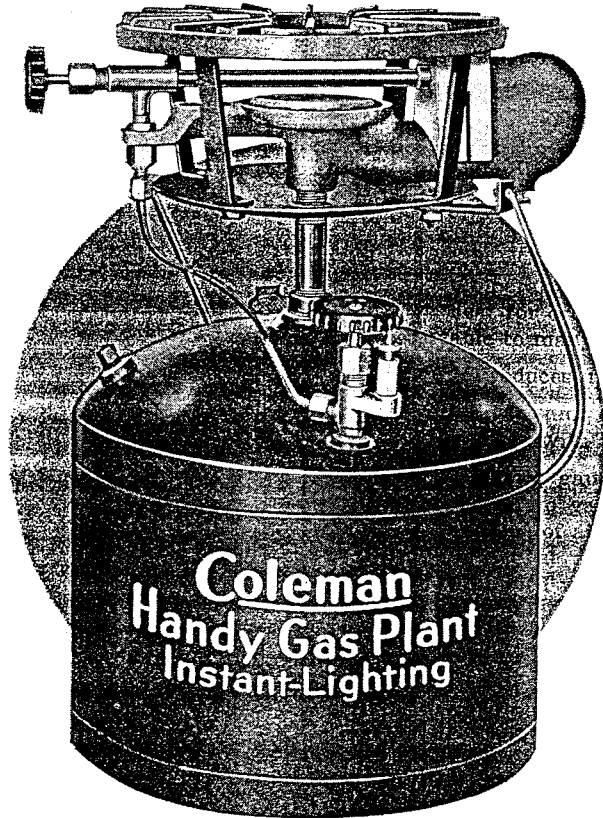
Heavy gauge steel tank is lead-coated, resists rust. Two gallons in size, holds one gallon of fuel and one of air. One filling of fuel gives 6 to 8 hours service at full heat; 10 hours under average use. Equipped with Instant-Gas Carburetor Valve, Hand Operated Filler Plug.

HEIGHT: 15½-inches; Diameter tank, 10 inches. Net weight, 15 lbs. Shipping weight, 17½ lbs.

U. S. Retail Price.....\$11.85

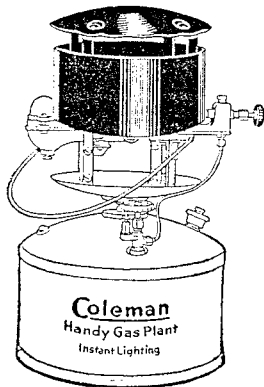
No. 452—Same as No. 458G but less grate and brackets. Shipping weight, 14½ pounds.

U. S. Retail Price.....\$10.95



## No. 457-335 DRUM HEATER

Fits both models (with grates) of Handy Gas Plants, makes a fine heat radiator. When equipped with this Drum Heater, a Coleman Handy Gas Plant is just the thing for use in fruit cellars, produce and storage plants, refrigerator cars, etc., to prevent loss and damage by freezing. Diameter, 9-in. Height, 6-in. Shipping weight, 4 pounds.



U. S. Retail Price..\$1.80

### PARTS AND SUPPLIES FOR 458G

375 - 164—Filler Plug Complete .....	\$ .60
458 - 189—Tank Complete .....	6.00
486 - 262—Generator (Gas Tip Marked "W")....	1.95
553 - 330—Grate .....	.75
900 - 657—Instant-Gas Valve Complete .....	1.80

Especially Suited for Use in  
FARM DAIRIES AND CREAMERIES

1. Meets the requirements of the U. S. Standard and all city milk ordinances.
2. Meets the requirements of Farm Underwriters' Association.

"The Committee (of the Farm Underwriters' Association) recommend for this use, as providing the greatest measure of safety, either electric hotplates with competent wiring or gasoline burners with air pressure feed fuel tanks of the newer type, with instant-lighting valve requiring no generating lamp, or torch and no supplementary generating fuel."—*Excerpt from Farm Underwriters Associations' Report.*

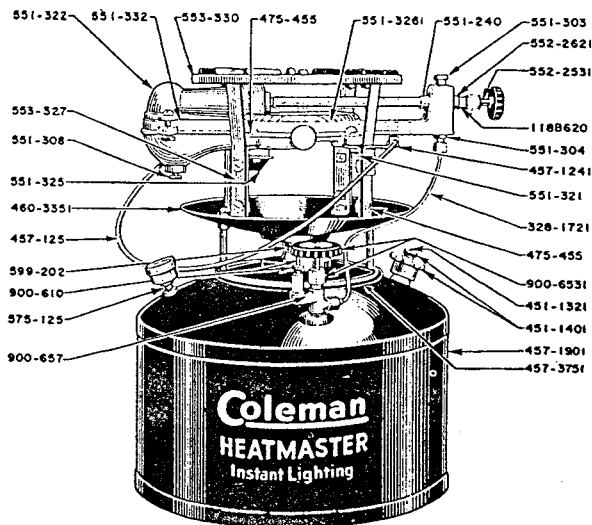
Just the heating equipment needed for water heating, steaming and sterilizing purposes. Provides fast-action heat in large volume — increases the capacity of any dairy cleaning equipment. Make it possible to do the same work in less time and the operator does better work in cleaning cans, bottles, etc. This means lower bacterial count, improved milk and cream quality, and a higher grade.

# DIRECTIONS for Operation of the

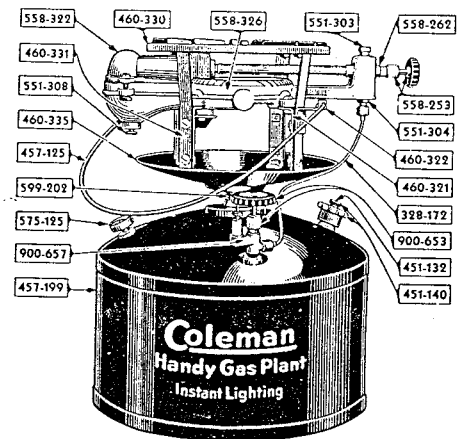


# HEATMASTER

COLEMAN HEATMASTER  
NO. 457G  
(457-195)



Coleman Handy Gas Plant  
No. 460G



## FILLING

Caution: Do not fill Tank near an open flame. Always be careful not to spill the fuel.

- See that Instant-Gas Valve and Generator Valve are closed.
- Remove Filler Plug and fill Tank. Use only fresh, clean, non-leaded gasoline or stove and lighting fuel.
- Replace and tighten Filler Plug firmly but do not use excessive force.

## PUMPING

Caution: Before starting to pump, be sure the Instant-Gas Valve and Generator Valve are closed.

- Open Air Stem No. 451-132 two full turns to left and place nose of Pump in center of Air Stem on Filler Plug.
- Pump 30 to 40 strokes of air into tank. This should place about 20 or 25 pounds of pressure in Tank.
- Close Air Stem tightly with fingers.

## LIGHTING

- Open Instant-Gas Valve No. 900-657 one-fourth turn to the left. The safety lock should stop the wheel at that

point. Open generator valve stem quickly while holding a lighted match above the burner. After burner lights, control the height of the flame by closing or opening the generator valve stem. Maintain an active flame on the burner rather than a high flaring flame. In approximately one minute the flame on the burner will settle down to a hot blue color. At that time hold the safety lock on the valve down and continue to hold it down while you turn the valve wheel as far as it will go to the left.

- The height of the flame may be regulated by turning the generator valve stem to the right or left. Increasing the amount of pressure in the tank will increase the force or efficiency of the flame accordingly. A pressure of from 10 to 25 pounds is recommended. You may add pressure while stove is burning.

## TO TURN THE FLAME OUT

When you are through using your Burner, close the Instant-Gas Valve by turning wheel to right until closed, then immediately open it one-fourth turn to left, to the Safety Lock. Allow the Burner to burn on the Instant-Gas mixture for about one minute. Now close Instant-Gas Valve by turning wheel to the right and when flame on the Burner is nearly out, close the Generator Valve firmly to the right.