

# Complete DIRECTIONS for Assembling and Operating the Sunshine Safety Lantern

**NO EXTRAS TO BUY.** This Lantern is packed complete, assembled ready for use as soon as the fount is filled with fuel, and the mantles attached.

## CHECK CONTENTS OF PACKAGE—

Which should contain in addition to complete lantern, the following parts listed and pictured below:

- |                                  |                         |
|----------------------------------|-------------------------|
| 217—Pump.                        | 218—Wrench.             |
| 200—Generator (extra).           | 4—Mantles.              |
| 216—Gas tip.                     | 220—Wrench for gas tip. |
| 219—Cleaning needle for gas tip. |                         |

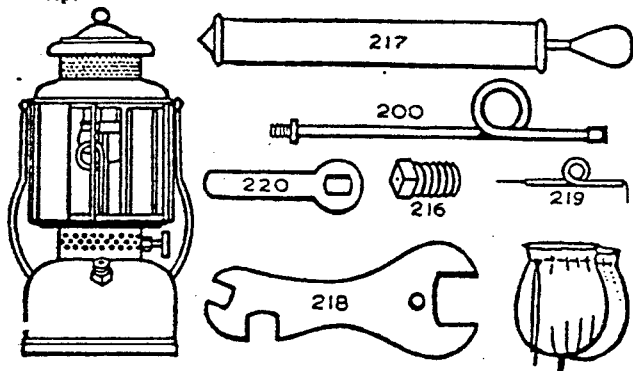


Illustration ①

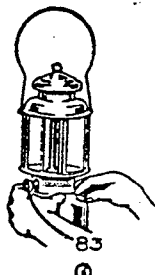
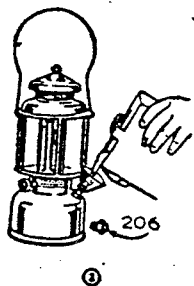
Follow carefully directions below and you will always obtain splendid results.

### To Fill Lantern:

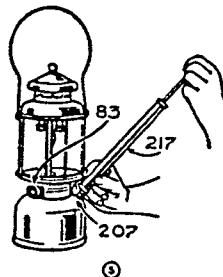
Always keep fuel away from open fire or flames of any kind.

③ Remove the filler plug, 206, and pour into the fount two pints of clean gasoline, which is also known as "Petrol," or "Motor Spirits," or "Essence."

④ Then replace and tighten the filler plug 206, tight, with fingers, and see that the valve stem, 83, is closed.

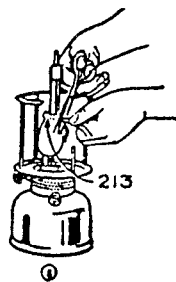
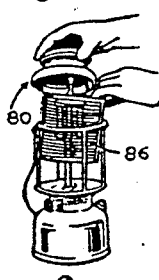


⑤ **Air Must Be Pumped** into the fount in order to force the fuel up the stem through the generator and into the burner. First be sure that the valve stem 83 is closed. Then loosen the air stem, 207, on filler plug; a single turn is enough. Then place the pump, 217, on top of air stem and pump in 20 or 25 full strokes. Now tighten air stem, 207, with fingers only.

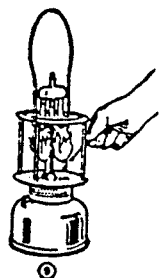


### To Put on Mantles:

⑥ First, unscrew ring hanger nut, 201. Then ⑦ remove the canopy 80. Also remove the mica chimney, 86. ⑧ Tie the mantles in groove of burner caps, 213, flat side lying parallel to the generator coil. Distribute the folds of mantle evenly and cut off surplus strings. ⑨

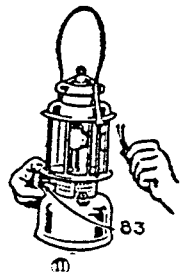
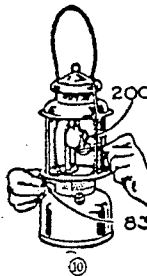


⑨ Light the mantles with a match at the bottom and let them burn out completely. This consumes the thread, and only a white ash is left, which is easily crushed and should not be touched. Let the mantles cool and don't move lantern until it has been finally lighted.



### ⑩ How to Light Lantern:

First, replace mica chimney, canopy and ring hanger. Next, make sure that valve stem, 83, is closed. Always use two matches in left hand. Open door found on side of chimney 86, and insert lighted matches. Apply flame



to lower part of generator coil, 200, close to upright part. Don't open valve until matches are burned down nearly to fingers. Then open and close valve stem 83, quickly with right hand.

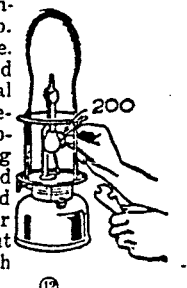
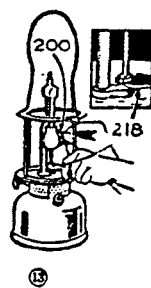
⑪ Remove left hand with burnt ends of matches but keep right hand on valve stem, 83, a few seconds until the mantles begin to dim. Then with right hand open the valve one full turn for full light.

**To Extinguish Light:** Turn the valve stem 83 over to the right tightly, as shown by arrow on wheel, and the light will extinguish in about 30 seconds.

**To Keep Light at Full Strength:** Pump in more air when the light grows dim, which it may begin to do after you have used the Lantern 2 or 3 nights, or the equivalent of 8 or 10 hours continuous service.

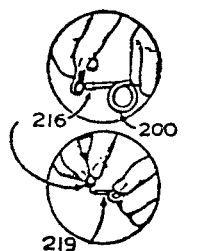
### ⑫ How to Clean or Change Generator:

**Generator:** In time the generator, 200 will gradually clog up. Then you should put in a new one. An extra generator is furnished with each lantern. Additional generators cost very little. To remove generator without disturbing mantles, first remove ring hanger, 201, and canopy, 80, and take out mica chimney. Then hold the generator coil with your finger tips and loosen the small lock nut at lower end of generator with wrench.



⑮ Next lift the generator, 200, up a little then out of socket, and pull it down out of the tube without striking the mantles.

⑯ With the small tip wrench, 220, remove the gas tip, 216, from the upper end of the generator. Then take the wire cleaning pick, 219, and insert it through the gas tip, 216, from the inside thus removing any carbon or dirt lodged in the tip. Don't use a sewing needle. Any such wire is too large and will ruin hole in tip which would have a bad effect on your light.



See other side for further instructions and wholesale price list of parts.

# Prepaid Price List of Lantern Parts

## FOR THE NEW MATCH LIGHTING MODEL

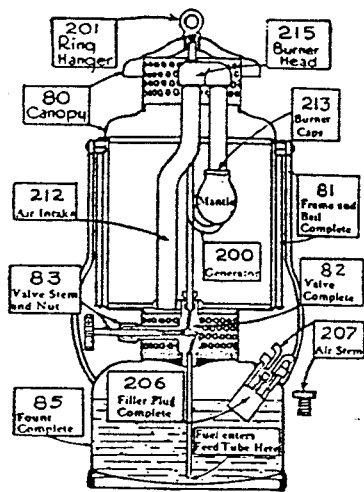
ALWAYS ORDER BY NUMBER AND NAME.

To guarantee against loss in the mails, always include 5 cents extra to insure your shipment. Everything listed below will be sent prepaid upon receipt of price, to any post office in the United States. Keep for future reference.

### TERMS.

Terms, cash with order or one-third cash and balance C. O. D. Send Money Order, Bank Draft, Registered Letter or Certified Check. Goods shipped to foreign countries must be fully paid for in advance.

## New Match Lighting SUNSHINE SAFETY LANTERN



The above drawing shows arrows pointing to the different parts of the Lantern. If at any time you should require new parts order by name and number as shown on the drawing.

	Per Doz.	Each
Mantles .....	\$1.00	\$0.15
Mantles are 15 cents each in less than dozen lots.		
200—Generators (3 for 75c).....	3.00	.30
201—Ring Hanger .....		.20
80—Canopy .....		1.75
215—Burner Head .....		.85
214—Burner Tube .....		.20
213—Burner Cap and Screen.....		.30
212—Air Intake Tube.....		.45
223—Connection Casting .....		.25
81—Frame, including Bail.....		1.25
82—Cut-off Valve .....		1.00
83—Valve Stem and Packing Nut.....		.30
84—Ventilator Band .....		.10
85—Fount only .....		2.00
206—Filler Plug, complete.....		1.00
207—Air Stem for Filler Plug.....		.25
86—Mica Chimney .....		.80
218—Wrench .....		.25
220—Wrench for Gas Tip.....		.10
219—Cleaning Needle for Gas Tip.....		.10
224—Burner complete, including 212, 200, 223, 82, 215, 213.....		3.00
Pump .....		1.00
217—Pump Leather .....		.10
Rubber Gasket for Filler Plug.....		.10

# SUNSHINE SAFETY LAMP CO.

KANSAS CITY, MO.

# SUGGESTIONS

## About the Use and Care of Sunshine Safety Lanterns

Don't buy cheap mantles. They soon go to pieces and nearly always give an unsatisfactory light. We supply only the highest grade mantles and strongly advise every person who uses our Lamp or any similar lamp to insist on having Sunshine mantles. They are only 15 cents each, or \$1.00 per dozen, postage prepaid.

- If Lantern blazes up and smokes when you light it.  
*Cause*—Incorrect Lighting. *Remedy*—Read and follow directions.  
*Cause*—Gas Tip 216 may be clogged. *Remedy*—Remove and clean gas tip with pick 219. See paragraph 3.  
*Cause*—Enlarged opening in gas tip. *Remedy*—Put in new tip, or complete new generator.  
*Cause*—Air Intake 212 may be stopped up. *Remedy*—Clean intake.
- If Lantern doesn't light at all.  
*Cause*—No fuel, lack of air pressure. *Remedy*—See that fount contains clean fuel and then pump in 20 to 30 strokes of air.  
*Cause*—Gas tip 216 may be clogged. *Remedy*—Remove and clean gas tip with pick 219. See paragraph 3 above.  
*Cause*—Generator 200 may be stopped up by dirt or carbon. *Remedy*—Put in complete new generator.
- If light grows dim rapidly or goes out suddenly.  
*Cause*—Fount may leak air. *Remedy*—Pump up lantern and place fount in bucket of water to test for leak. If bubbles come from filler plug 206, screw it down tighter and reseal air stem 207 carefully, and if it continues to leak get a new plug. If bubbles come from around the bushing where valve 82 screws into fount remove valve. If threads on valve are not damaged rub soap on them, replace valve, tighten it securely and retest. If leak continues get new fount.  
*Cause*—Gas tip 216 may be clogged. *Remedy*—Remove and clean gas tip with pick 219. See paragraph 3.  
*Cause*—Generator 200 may be filled with dirt or carbon. *Remedy*—Put in complete new generator.
- If a leak develops at lower end of Generator 200.  
*Cause*—Generator not seated properly onto valve 82. *Remedy*—Close valve stem 83. Then tighten nut at bottom of 200 with wrench. If leak continues, put on new generator. If new generator fails to stop leaking, then trouble is with valve 82, which should be replaced by new one.
- If generator 206 lasts only a short time.  
*Cause*—May be dirty gasoline. *Remedy*—Strain gasoline through chamois skin when filling fount.  
*Cause*—Continued careless lighting would cause generator to carbonize. *Remedy*—Read and follow directions for lighting.
- If mantle turns black.  
*Cause*—Air intake tube 212 or burner head 215 may be stopped up. *Remedy*—Clean air intake or mixing chamber.  
*Cause*—Dirty screens in burner cap 213. *Remedy*—Unscrew burner caps and clean screens, or replace with new ones with wires of each screen placed diagonally with the other.  
*Cause*—Hole in tip 216 may be enlarged. *Remedy*—Put on new tip.  
*Cause*—Generator may be filled with carbon. *Remedy*—Put on complete new generator 200.  
*Cause*—Mantles used may be of inferior quality. *Remedy*—Always use Sunshine Mantles.
- If pump does not work.  
*Cause*—Leather plunger may be dry. *Remedy*—Remove plunger and soften leather with oil.  
*Cause*—Leather plunger worn out. *Remedy*—Put in new leather.  
*Cause*—Point connection lower end damaged. *Remedy*—Get new pump.
- If water gets mixed with the fuel.  
Remove filler plug, 206, to let out air pressure, and then remove, first the generator, next, the burner, next, the frame and last, the valve. Shake fount moderately while contents run out. Then rinse fount thoroughly with clean fuel.
- On one filling of two pints of fuel.  
The lantern will provide an average of from 10 to 12 hours brilliant service if directions for lighting and using are followed.

If for any reason you ever return a Lantern or Part, transportation charges must be prepaid. Address it plainly, and also mark on package your own name and address.