

Duplex E-1. Electric

Corn Popper & Crisp Machine

Type "A" Popper

Electric Candy Furnace

General Directions

Tag Numbers

1—Motor Switch	8—Candy Furnace Switch
2—Popper Pan Element Switch	9—Oil Cup—Main Shaft Bearing
3—Case Warmer Switch	10—Main Line Safety Switch & Fuses
4—Lock Pin—Popper Support Arm	11—Thermostat
5—Oil Cup—Popper Drive Shaft Bearing (Under Popping Pan)	12—Fuse Box
6—Popper Pan Dump Handle	13—Popper Arm Holding Screw
7—Oil Cup—Worm Gear Housing	14—Popper Gear Oil Screw
	15—Electric Light Switch

We recommend that you place machine in a prominent location, so as to secure full advantage of its attraction.

Electric Data

Motor and all Electric Appliances on this machine are designed to receive
.....Current.....Volts.....Cycle current only.

Do not connect machine to a "higher voltage" service line or different type current than indicated above, for fear of damage to electric equipment — a condition for which we cannot assume responsibility.

Electric Load

Corn Popper.....Watts Seasoning UrnWatts
Candy FurnaceWatts Motor, Case Warmer & Lights.....Watts
Total Load.....Watts (Approx.)

Machine is wired "3 wire system", using a "common neutral" (white insulation). All load wires are connected to Main Safety Switch No. 10. The two black (hot) wires are fused with fuses of proper amperage. The "neutral" (white) insulated wire is not fused, but connection is broken when Main Safety Switch No. 10 is in "off" position.

Installation

It is very important that the machine have an ample supply of electric current, as otherwise, it cannot be expected to operate at full efficiency.

Have electrician connect machine to your Electric Service Line in accordance with the requirements of Local Authorities having jurisdiction.

Ground Wire — Ground machine in accordance with your Local Electric Code.

Fuses

Main Supply Line.....Amps.

Fuse Box No. 12 {
 Fuse No. 1—Seasoning WarmerAmps.
 Fuse No. 2—Popper ElementAmps.
 Fuse No. 3—MotorAmps.
 Fuse No. 4—Popper Case Warmer & Lights.....Amps.

Candy Furnace Fuse —
 Located in Main Line Safety Switch Box No. 10.....Amps.

Consult Wiring Diagram for additional details.

Never attempt any electrical work on machine unless Main Line Safety Switch No. 10, is in "off" position.

Operation

Pop Corn in the Following Sequence:

Be sure all Switches are in the "off" position.

Throw In Main Line Switch No. 10, next

Start Motor — Switch No. 1. Agitator blades in popping pan will now be in motion.

Turn Thermostat Handle No. 11 "counter clockwise" far as it will go, to "Start" position.

Turn Heat on Popping Elements — Switch No. 2, which will also light Pilot Light at top of popper case.

Pre-Heat Popping Pan approximately.....minutes until Pilot Light goes out.

Now turn Thermostat lever No. 11 "clockwise" far as it will go, to "Pop" position, and pilot will re-light.

Lift Small Cover to popper pan — and

Place "Melted" Seasoning in Pan—(Approx.....oz. Measure Supplied).

Place Corn in Pan Immediately — approximately.....ounces, (measure supplied with machine), and

Add one heaping teaspoonful of Salt.

With proper current supply and a good grade of corn, the same will soon begin to pop, and automatically raise the covers on popping pan.

When Corn Stops Popping — Dump Corn in Pan Promptly, by pulling wood handle, No. 6 sharply "towards" you, and rotate pan upside down. Return pan to "upright" position, and

Immediately proceed with as many additional poppings as desired.

When Through Popping, be sure and turn off current on Popping Element at Switch No. 2 and Stop Motor.

Leaving popping pan "inverted" a few minutes after through popping, helps to cool and keep pan clean.

Do Not Pop Corn with a Dry Pan — if you wish plain corn without seasoning, use a small quantity of seasoning in popping pan to act as a lubricant and avoid scorching.

Candy Coated Pop Corn

Prepare about four or five poppings of "Seasoned" corn, the same as if it were to be sold as seasoned corn. Corn popped in Cretors Ideal Seasoning and Salt, produces a Crisp of superior flavor.

For making Crisp, the large yellow grain variety of corn is preferred, but large white corn will do. We suggest that you use the large grain South American type.

The metal Corn Measuring Box supplied with machine, is intended to be hooked on the edge of popper case, so that the screened pop corn can readily be scooped from case into box, and then transferred to Candy Kettle when needed.

Fill **Corn Measuring Box** with popped corn to level of "groove" on side of same, which indicates the approximate amount of corn required for one batch of crisp.

Pull Out Copper Candy Kettle from base of machine far as it will go.

Hook sheet metal guard pad on edge of frame back of furnace, so as to keep heat of furnace away from Stainless Steel work counter.

Clean Copper Candy Kettle — before making first batch of crisp, Salt and vinegar is good for this purpose. Rinse thoroughly with cold water.

Cooking Syrup — First, be sure copper kettle is "down" far as it will go, in firm contact with cast iron heating element shoe inside furnace. When kettle is in proper heating position, the arrow marked on steel flange attached to kettle will point to button on top rim of furnace. *The circular kettle flange will now be close to top of furnace jacketing.*

Now place **One (1) Pint of Water** in kettle and then

Turn on furnace heating switch **No. 8** to "High" position — which will also light red Pilot Light alongside switch.

Do not add sugar and other ingredients for a period of about fifteen minutes from a **cold start**, so as to give the heating element a chance to build up heat.

After this 15 minute period of Pre-Heating, add sugar and other ingredients as specified in formula you are using. (Do not add additional water unless necessary, as a sufficient amount of water should remain in the kettle to dissolve the sugar).

Place thermometer in kettle and cook batch to temperature as specified in formula you are making. **After temperature reaches 240 degrees**, stir occasionally from sides and bottom of kettle to prevent scorching.

When temperature reaches 270 degrees, stir constantly and watch closely.

When within a few degrees of desired temperature —

Turn Off Furnace Switch No. 8 promptly, and "immediately" rotate copper mixing kettle "clockwise", until same is supported in a raised position — thus lifting and holding kettle away from heating element while mixing corn, so as to avoid scorching.

Remove thermometer, and add a pinch of soda (see formula) and stir thoroughly.

Immediately, pour measuring box of popped corn onto syrup in copper kettle.

Mixing — take the large wood paddle (which has previously been dipped into water) and "quickly" mix batch until corn is evenly coated. (If butter is used in formula, melt same, and pour over corn in kettle when batch is about one-half coated — thus causing the kernels to separate).

Stir "up" from the bottom, and when corn is evenly coated, dump contents of kettle on working table, by lifting kettle from furnace, and place left handle in socket attached to wood strip on working table, and then invert kettle and dump contents onto working table.

CAUTION — Be careful none of the crisp falls into furnace, as same would smoke badly and might ignite.

Spread batch out evenly on work table to cool. Then break up for sale.

Be sure and mix batch rapidly as possible after corn is dumped into copper kettle, and spread out on working table while it is warm and pliable.

Large wood paddle should be dipped into water before you start mixing, to prevent sticking. (When not in use, keep the mixing paddle and thermometer in the special water box attached to frame of machine alongside furnace).

To test batch without a thermometer — have a vessel of cold water convenient, and drop a small quantity of the mix into the cold water; it should not be gummy or stick to the teeth when you bite it. It must be brittle and crush like an egg shell before being applied to the popcorn.

☛ If you are making crisp continuously batch after batch, do not “Pre-Heat” furnace element between batches, as this is only necessary when element is cold.

Where one batch follows another, be sure and lower kettle down on element shoe, turn on switch, and immediately proceed with the next cook.

☛ When through making crisp, turn kettle to raised position, and place a small amount of water in kettle to prevent any residue of syrup from scorching.

In Hot Weather — keep your stock of crisp in air tight candy jars or metal containers, so as to keep it crisp.

When copper kettle is removed from furnace, be careful and do not strike bottom of same for fear of getting it out of shape, with the result that it would not make proper contact with heating element shoe — which would impair the heating efficiency and shorten life of heating elements.

Lubrication

DO NOT Use Ordinary Machine Oil for lubricating internal drive shaft bearings and gears of popper at Oil Cup No. 5 — which is located on popper support arm underneath center of popping pan. Use a **High-Grade “light” Auto Engine Cylinder Oil** only, on account of its heat resisting qualities.

To Lubricate Above Popper Bearing Parts — Start motor and turn popping pan half way over, which will bring Oil Cup No. 5 to an upright position for oiling. A few drops each morning should be ample. (Do not over-oil).

Lubricate the “inside-drive” mechanism of popper daily, through the various oil cups — including **Main Shaft Bearing Oil Cup No. 9**. (About two drops in each cup).

Popper Gear Oil Screw No. 14 — located in center of nut on bottom of ball underneath popping pan, is for lubricating lower internal drive gear. Remove this screw frequently, and insert a few drops of “light” Automobile Cylinder Oil. Replace screw tight to avoid leakage.

Worm Gear Housing attached to motor — keep well lubricated with **Heavy Transmission Oil** by means of Oil Cup No. 7.

Electric Motor Bearings — do not over-oil, a few drops monthly should be ample.

If **Motor Should Suddenly Stop** — immediately throw out Motor and Popper Switches. **Examine all Fuses**. If any are found to be burned out, replace with new fuses of proper amperage in respective positions.

If fuses in machine are found to be O.K., next **examine all House Wiring Fuses** to which machine is attached.

If all fuses are found O.K. — next let popper parts cool, and examine all bearings, especially those of popper pan drive, and be sure same are free and properly lubricated.

Thermostat

Thermostat is located inside of aluminum casting attached to popping unit.

The Dial On Thermostat Numbered 0 to 10, controls the temperature of popping pan.

Our Test on your machine indicates that Dial Setting.....in "Start" position, and.....in "Pop" position, gave best popping results in connection with our electric current and grade of popcorn.

Your local conditions may be different from ours, hence you may find it necessary to either decrease or increase, the temperature of popping pan.

If popper pan appears "too hot", which is evidenced by shriveled or scorched corn: reduce the thermostat setting as follows: first, remove bakelite handle on thermostat; next remove the aluminum thermostat cover casting.

Now remove "Stop Pin" in cover casting at "Start" position, and move pin "Counter Clockwise" to the next perforation. Likewise move the "Pop" Position Pin, one perforation "Counter Clockwise" to decrease pan temperature.

To "Increase" Popping Pan Temperature, move Stop Pins one position "Clockwise".

Pilot Light — red Signal Light in popper case indicates whether current is "On" or "Off" popping element, in accordance with the action of thermostat.

Should pilot light bulb "Burn Out", replace with a new one promptly.

Do not disturb factory thermostat setting unless necessary.

Maintenance

This Popping Pan is not removable. To clean, remove cover and stirrer blades as explained below, and wipe inside of pan clean.

Never place popping unit in water, as so doing would injure heating elements and thermostat.

To Remove Popper Pan Cover and Stirrer Blades for cleaning: remove knurled screw at end of rod on which covers are hinged, lift free end of covers slightly, and slide rod out of end bearing, thus freeing cover. Next, remove hexagon screw in center casting to which stirrer blades are attached and lift blades out of pan for cleaning.

When Replacing Stirrer Blades, engage lower end of stirring shaft into hole in stud in center of pan, and then rotate stirring blades until the slot in lower end of shaft engages in drive pin of gear underneath. Next, press stirrer blades down against bottom of pan firmly, and then tighten Set Screw in center casting securely.

To Remove Popper Pan Heating Elements — First be sure and throw out Main Switch No. 10 thereby eliminating all electric current from machine and proceed as follows:

- 1 — Remove popper pan covers.
- 2 — Remove Lock Pin No. 4, and cover on terminal housing to which popper pan dump handle is attached. Remove cable support plate where cable goes through retainer, and then remove bakelite brush holder. Remove Popper Arm Holding Screw No. 13, and slide popper pan assembly off of support arm and out of case.

- 3 — Invert popper pan, and remove bakelite thermostat lever.
- 4 — Remove lower section of popper pan enclosure.
- 5 — Remove the four brass spacer nuts which secure baffle plate.
- 6 — Remove the four screws holding pan to center support casting, and detach pan from support arm.
- 7 — Remove the four nuts which hold terminal straps where they attach to element terminals. (First apply penetrating oil on threads to loosen nuts and avoid twisting element terminals.) Now you can lift baffle plate and wire assembly away from pan without disconnecting any wires.
- 8 — Next, loosen the four nuts securing element clamps. Now remove the slotted washers underneath nuts and slip element clamps up and off the long threaded studs which will permit you to remove elements from bottom of pan.

Do not disturb setting of top nuts on threaded studs which support the baffle plate at proper level.

Caution — Be extremely careful not to disturb thermostat or damage same. Never remove or loosen thermostat from its base support.

- 9 — Put new elements in place and re-assemble carefully. Locate left terminal of large element under long strap in line with notch on pan bottom. Be sure all electric connections are properly made and secured. Element holding cleats must be screwed down reasonably tight.

To Remove Candy Furnace Elements: First throw out Main Safety Switch No. 10, and then slide kettle out into working position.

Next, remove the four screws in terminal housing on rear side of furnace jacketing which will expose supply wires and terminals.

Next, remove feed wires from terminals, **tagging each wire in accordance with the markings on terminals**, so as to be positive that wires are correctly re-connected. This is very important, as the **"White" insulated or neutral wire, must be connected to center terminal marked "3-C"**. If this white insulated "neutral" wire is not connected to proper terminal, you will blow fuses when furnace switch is again turned on.

If the black insulated (hot) wires are not attached to correct terminals, it would result in altering the switch cover readings.

Next, remove nut on bottom of furnace jacketing (in center), and push bolt up from underneath and remove.

Now remove element shoe or casting from furnace by taking hold of shoe at front, and tip same up and out.

To replace heating elements inside of shoe, tap lightly on heads of the four bolts and separate shoe. Install new element and re-assemble carefully, drawing all nuts up tight.

When re-assembling, be sure all Electric Connections are properly made and secured.

Apply graphite on threads of heating element terminals. Never loosen the nuts on terminal studs next to element, or put any twisting strain on same.

Order element renewals direct from us, stating Voltage and Watts stamped on back face of element, and give Serial Number of your machine marked on our name-plate.

To Remove Main Drive Shaft Attached to Motor: First remove cotter pin at top end of drive shaft, which will permit brass sleeve to drop down, thus enabling you to lift drive shaft "up" and out of worm gear box.

Safety Pin — steel pin at upper end of main drive shaft, is purposely made weaker than other parts of popper drive mechanism, so as to act as a "safety link" in case of undue strain on driving parts due to lack of proper lubrication.

Glass Renewals — If you should need to replace a broken glass: First remove screws on roof which secure top moulding, and lift moulding evenly at the four corners away from frame. Remove wood block at top of broken glass and slide same up and out of grooves. Then slide new glass into place, and replace wood block and metal moulding.

Special Notice

Wipe Polished Nickel Plated Parts of Popper While Warm, with a soft clean cloth, so as to remove any accumulation of seasoning and salt. It is important that the popper pan and cover should always be kept scrupulously clean both inside and out.

Do Not Pop Corn With a Dry Pan — if you wish plain corn without seasoning — use a small quantity of seasoning in pan to act as lubricant and to avoid scorching corn.

Do not pour seasoning over corn "after" popping. Educate your trade to appreciate the unequalled flavor of corn popped and seasoned by **The Cretors' Process** — each kernel of which is seasoned precisely alike during the process of popping. Cretors originated the method of popping corn "**Directly In The Seasoning**", which not only produces a superior flavor, but also gives increased yield, and more rapid popping.

If you wish to use Butter for Seasoning, be sure and extract the water and whey from butter before using. First melt the butter and then place aside to cool; the water and whey will settle to bottom of container. **Under no circumstances should this sediment be used**, as same will impart an off color and taste to the corn. As a matter of economy, some of our butter using customers use a mixture of one-half or two-thirds pure butter oil, and the remainder of pure rendered leaf lard or Cretors Ideal Seasoning. (**Special instructions on request.**)

Don't use ordinary Cooking Oils for Seasoning — we, and our most successful operators recommend either:

Cretors Ideal Seasoning, or a Butter Mixture for best results, and supreme satisfaction to the public.

The Care Of Shelled Popcorn

Popcorn should not be stored in a hot or dry room. By all means keep your corn in a cool place, where the natural air will strike it. Popcorn, to pop best, must contain the proper percentage of moisture. If corn is too dry, this can be remedied by dampening the corn and testing for popping qualities.

For dampening, the best way is: if you have a dirt cellar, to dampen the dirt, lay down a piece of burlap and place your bag of corn on this, turning the bag over every day, and in a week or so the corn will be ready for use. If a dirt cellar is not available, take a pail of corn and pour water on it, then pour the water off, and take this pail of damp corn and mix it with about 100 lb. sack of corn.

By experimenting, you will soon learn the exact condition in which to keep the corn, and will also know when the same is properly tempered. By all means do not keep your corn in a heated room. Keep it outdoors as much as possible. Corn may pop all right one day, and again later it may not, for the reason that it has lost its moisture, due to climatic conditions — but can usually be revived by treating as above instructed.

Final

We test each and every machine thoroughly before shipment, and our inspectors will not pass a machine unless it works as it should in every respect.

We will not assume responsibility for damage to electric equipment caused through the use of improper Electric Current, Voltage or Fuses.

Use a generous amount of "Seasoning" in popping — as it produces a superior grade of popped corn and pops faster.

Don't Use Ordinary Machine Oil — for lubricating popper bearing shafts at Oil Cup No. 5 as the heat will cause this grade of oil to carbonize and bind bearings. Use a high grade "Light Automobile Engine Cylinder Oil" only.

If you should experience any difficulty in operating your machine — first re-read your directions carefully, and if nothing stated therein is of assistance, write us fully, stating conditions, and we will forward instructions.

We build our machines as near perfect as expert workmanship and the best of materials can make them, and will gladly replace, within a reasonable length of time, any part which we find defective if returned to us with transportation charges prepaid. We cannot honor a claim for repairs or service unless previously authorized by us.

Keep your machine "Bright and Clean".

Wipe nickel plated popper parts while warm.



Hand Out Samples Freely — It Pays.

**For Best Results — Use Cretors Ideal Seasoning,
Cartons and Bags. Cretors Brand Special Salt and Pop Corn.**

All Cretors Supplies Are First Class Trade Stimulators.

We Wish You Success

C. CRETORS & CO.

Chicago, Ill.

SAVE THESE DIRECTIONS FOR FUTURE REFERENCE.