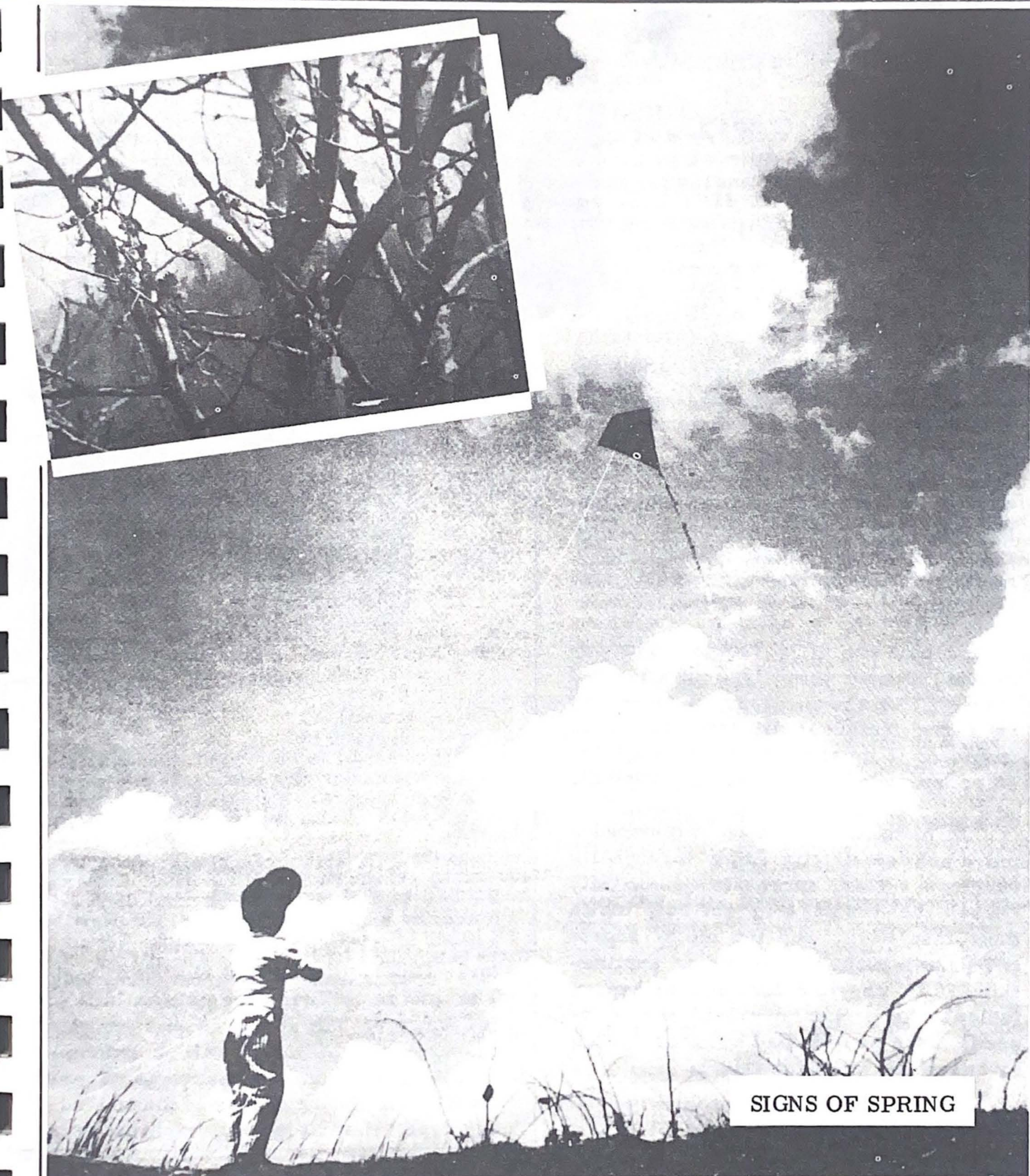


ADAMS OUTLET

ADAMS ELECTRICAL CO-OPERATIVE
CAMP POINT, ILL.

MARCH, 1957
VOL. 6 NO. 3



SIGNS OF SPRING



MOTOR HP WORKS ON THE FARM



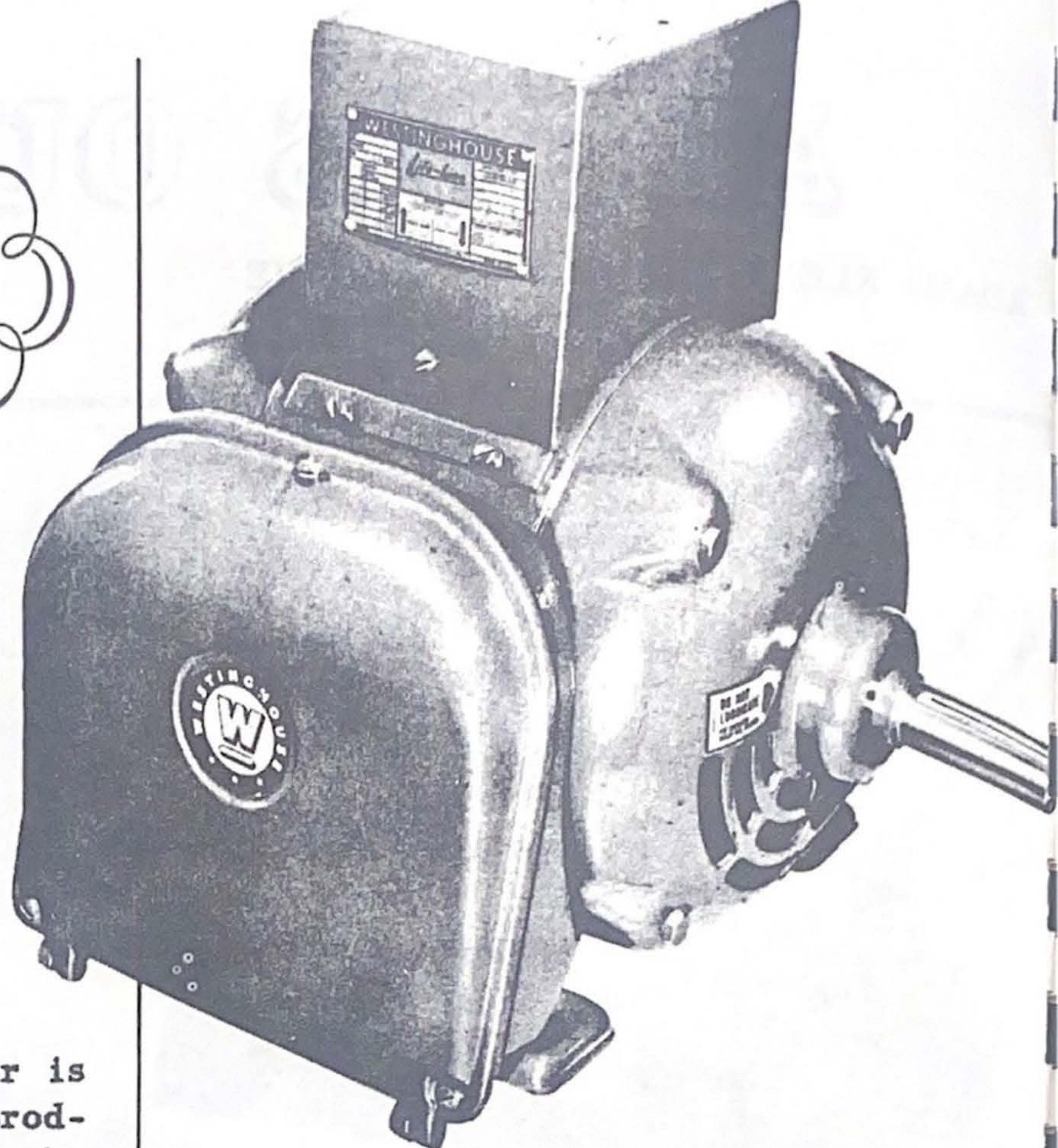
Properly Connect
& Protect Your
Farm Motors. It
Will Save You
Money.

Increasingly the electric motor is being applied to numerous farm production tasks. Larger motors are working at important and bigger chores. Since these larger motors are more costly to install and replace, more emphasis must be placed on motor circuit capacity, proper motor control equipment and adequate overcurrent protection.

A motor definitely should not be operated without some type of overload control. This protection is available as an extra feature built into the motor frame or it must be gained through the selection and use of an external control.

The motor is said to be overloaded if too much electricity flows through its windings. This excessive electricity causes the windings to get hot, melts their insulation, and the motor shorts out (burns out). In all motor applications it is possible for this to happen (unless the proper overload device is used) since an overload could be caused by one of the following things:

1. Connected load is too great.
2. Belt is too tight or binds.



3. Voltage to motor too low.
4. The pulley is not in line.
5. Driven machine becomes locked or jammed.
6. Bearings get hot due to faulty lubrication.
7. Motor shaft binds due to misalignment of motor end shields.

All these items cannot be checked every time, so the best solution is to buy an overload (or overcurrent) device.

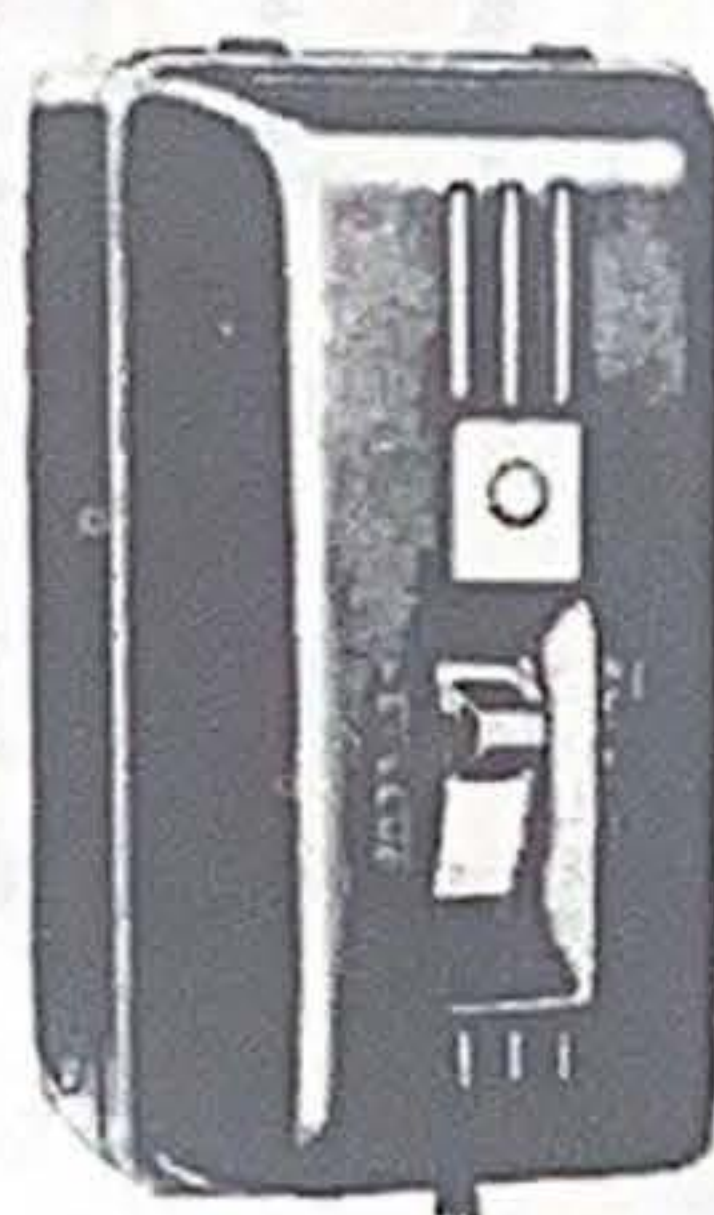
The built-in overload works on the principle that excessive heat can be made to trip a mechanism which will open a switch thereby stopping the motor. This action occurs automatically. The motor is started again in one of two ways. If the device is an automatic re-set type, the motor will be automatically re-started as soon as it has cooled. If the device is a manual re-set type, the attendant must press a

button which is located in one end of shield of the motor. Pressing the button re-sets the trip mechanism and re-starts the motor. This style is preferred in most cases since it gives the attendant a chance to investigate the situation in an effort to see why motor was overloaded. Most farm motors must be protected by external overload devices rather than the built-in type.

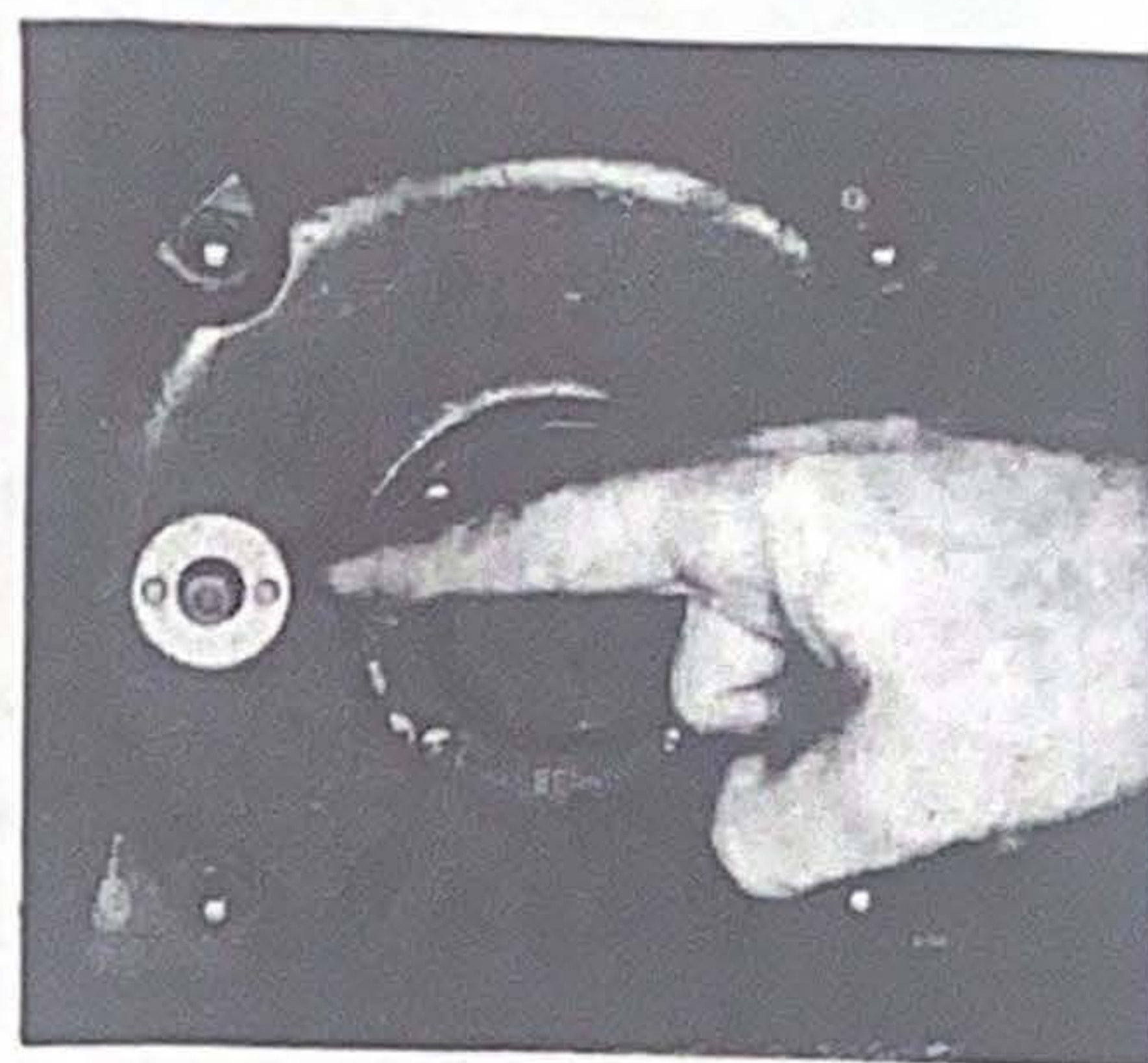
MOTOR STARTING SWITCHES



SMALL MOTORS



LARGE MOTORS



Built-in Motor Protection is available in some motors. Some have a reset button as shown above, and some reset themselves automatically.

Manual Motor Controllers are available for most motors up to 5 h.p. Small heater elements inside the controller determine the amp. rating of the protection. These elements are removable so that one size of controller can be made to protect one of several sizes of motors. If the switch turns off as the result of an overload, it can be reset after a short cooling period.

Magnetic Motor Controllers (shown at left, lower controller) have the advantage that small switches can be added to the circuit to control the motor from more than one location. Magnetic controllers also have interchangeable heater elements to protect any particular motor and can be reset after an overload.



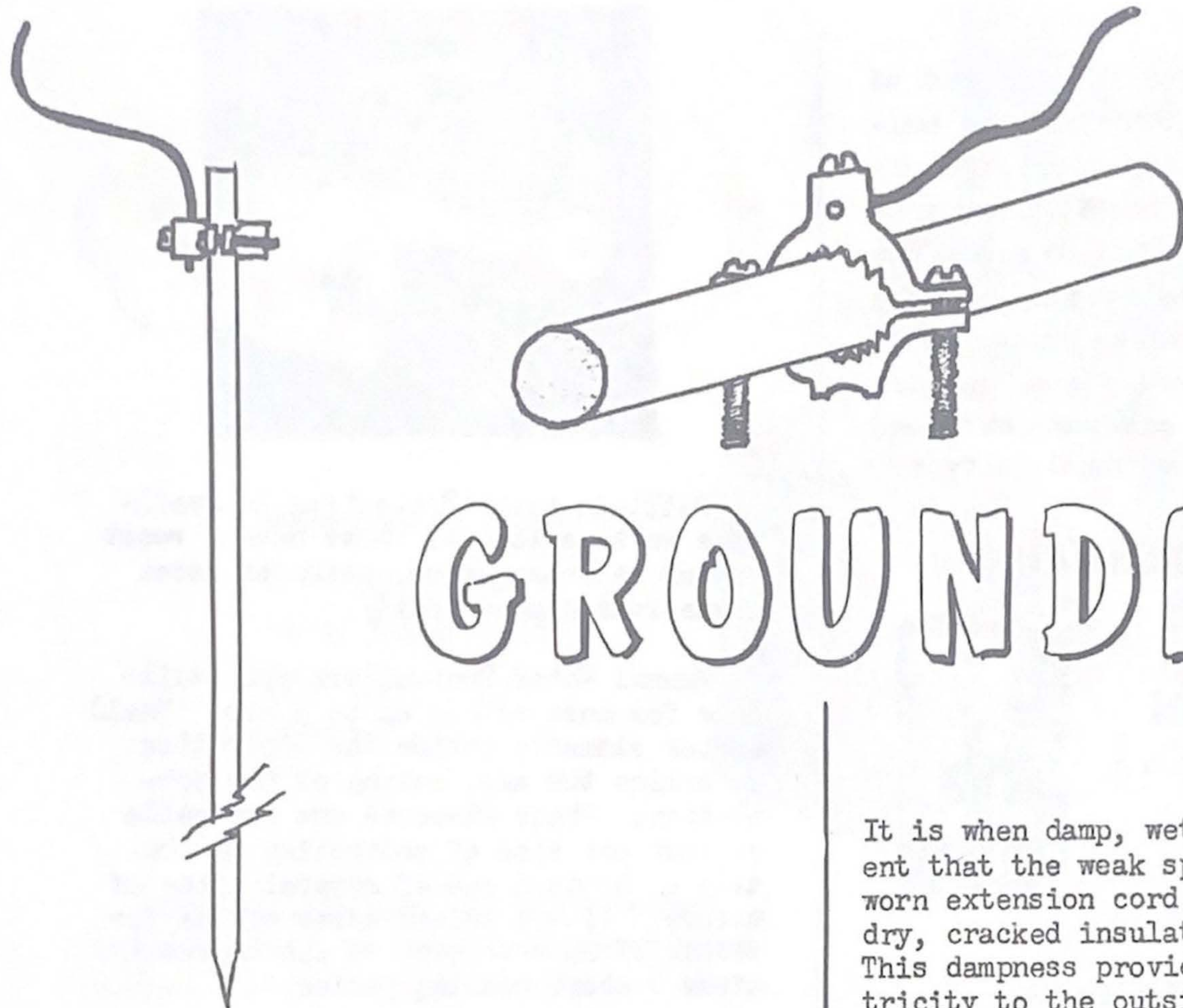
HERE ARE
A FEW
HINTS ON
HOW YOU
CAN HELP!



KEEP YOUR MOTOR RUNNING

During the hot summer season the electric motors that operate your freezer, water pump, and refrigerator work overtime to provide you with dependable service. It is important to keep them running.

1. Keep the motor clean from dust, dirt, and excess oil and grease. Use carbon tetrachloride and a brush for cleaning.
2. Protect the motor from weather, dust, heat, and moisture. Lubricate the bearings with a few drops of oil every 3 to 6 months. Use #10 motor oil for small motors, #20 for large. Do not use 3-in-1 oil.
3. Keep belts in proper alignment and tension.
4. Built-in overload protection on the motor is good, but insufficient. These built-in devices have been known to fail, and we highly recommend proper fusing on the smaller motors and controllers on the larger motors--in addition to the built-in device.



GROUNDING

Grounding is one of the most important factors of the farm or home wiring system. It is not possible to provide too many grounds. As we once heard a noted speaker proclaim, "If you don't know what to do with it -- ground it."

It is possible for numerous safety hazards to occur if metal objects and appliances near the electrical systems are not inter-connected with the electric ground and neutral.

Electric energy is always ready to go to ground through whatever paths may be available. The electric industry has provided many means of rendering devices and equipment safe. Wires are isolated by a jacket of insulation of plastics and rubber. Porcelains and glass are used to further provide insulation at contact points and outlets. Special varnishes isolate the energy in motors, condensers and such equipment.

The insulation on wire will weaken and break down. With hard use and little physical protection, the sooner trouble may develop.

It is when damp, wet conditions are prevalent that the weak spots show up. A well worn extension cord or attachment cord with dry, cracked insulation will take up water. This dampness provides a path for the electricity to the outside. Then if the cord is laying on some metal devices or equipment, it too, may become energized at the same voltage of the wire. If this metal equipment is properly grounded and the circuit properly fused, there is a good chance the safety valve (fuse) will blow and remove the hazard. When not grounded, then it is a potential hazard for animal or human making the connecting link from the energized object to a grounded surface, such as, concrete floor, earth floor, or grounded equipment. (Add water to these weakened conditions and possibilities mount.)

INFORM - NOT SCARE

We are not bringing you this story to scare or advocate that electricity is not good. We desire that you become aware of conditions from which trouble usually develops and as you recognize these conditions you may arrange to avoid hazards.

Improperly installed equipment, without the protection it should have, will work fine as long as no interference develops. It is for these interferences that we set up the protection equipment, so it will be ready to protect the line, the equipment and the life when the time comes.

Grounding - -

DON'T TAKE WIRING FOR GRANTED

Remember, new electrical equipment is like a new automobile. In about all cases everything works good at first because it's new - little used. As the car becomes older - acquires more miles, little troubles develop and care must be given to avoid major problems later. This is true with our electric system, too. Yet, too many people take their wiring and equipment for granted and expect it to be in new shape after considerable use and abuse.

WHAT CAN I DO ABOUT IT ?

What can I do about it? Never fuse lighting circuits greater than 15 amperes. Never place a penny behind a fuse. Always fuse motor circuits with dual-element fuses at 125% the rating of the motor. Always install motor-starting equipment and see that the proper heating element is provided for each motor. Periodically check extension and attachment cords for defects and always keep them away from damp locations. (Eliminate them by doing additional wiring, if possible.) Periodically check grounds and ground connections to see that they have not become loose or broken. Have an electrician come in and ground all metal equipment in the basements, garage, milk house and barns.

Wet, murky weather will provide the conditions for trouble. Check your wiring system now, and be safe during the wet weather this Spring.

WATCH THAT ALUMINUM WIRE

Today's "do-it-yourself" movement has extended into the electrical field, and some of our members have already come to the conclusion that there is no substitute for a good wireman. No doubt about it -- there is more to wiring than twisting wires together.

It has been the practice for the past few years, for some of our chain stores to run special sales on aluminum wire. There is nothing wrong with this practice if the salesman is willing and qualified to point out the problems with using aluminum conductor.

We want to point out that aluminum does not have the tensile strength or current-carrying capacity of copper. Therefore, you must use two sizes larger aluminum conductor. Where you would normally use #8 weatherproof copper wire, use #4 weatherproof aluminum wire. But the greatest trouble develops where the copper and aluminum wires are joined. The touching of these two metals sets up a chemical reaction, which in time develops a high-resistance connection that will limit the flow of current. It is imperative that bi-metallic connectors or special sleeves be used when joining aluminum and copper wire.

The initial cost of aluminum wire is less, but if improperly installed, the trouble it will cause may run several times the cost of copper wire.

New Working Hours

On April 15th. and continuing through the summer months, the office hours of your co-operative will be changed to 7 A.M. to 4 P.M., Monday through Friday. The office will be closed all day Saturday, as it is at the present time.

During the past several years this change in working hours has worked out very satisfactorily, because it enables the employees to take advantage of the cooler working hours during the summer months.

It has also been found that most members prefer to call at the office in the early part of the day, rather than late afternoon during this season.



Homemakers' Outlet

BY VIVIAN WENNIE,

HOME ELECTRIFICATION ADVISER



Do you have a few spare moments now before Spring planting begins to plan and prepare the meals for the family? Yes, I know there are many odd jobs to be finished before the "busy Spring time", but I am giving you these easy to make recipes from your cupboard shelf items. Why don't you try them today - electrically?

SPECIAL LIGHT ROLLS

Mix together:

- 1 pkg. granulated yeast
- 1 tbsp. sugar

Dissolve in:

- 1 cup lukewarm water
(be sure the water is
not too hot)

Let stand for a short time.

Add: $\frac{1}{2}$ cup melted fat

(lard, oil or shortening)

$\frac{1}{2}$ cup sugar

1 tsp. salt

2 well-beaten eggs

4 cups flour

(measured before sifting)

Mix above ingredients very well. Let rise in a warm place until double or more in bulk (approximately $2\frac{1}{2}$ hours). Push down and make in rolls (butter-horn, parkerhouse, cloverleaf or muffin type). Let rise again, approximately 1 hour. Bake 15 minutes at 400° F. This recipe makes 4 dozen or more.

POLKA DOT DESSERT

1 package lime jello

1 package orange jello

co-op 1 package cherry jello (or any red color)

Dissolve each package in $1\frac{1}{2}$ cups water instead of the usual 2 cups. Put each flavor in a flat pan, and after set cut into cubes.

Mix 2 envelopes of Knox Plain Gelatin with $\frac{1}{2}$ cup cold water, let stand. Then dissolve in 2 cups hot pineapple juice and $\frac{1}{2}$ cup sugar, and let set until sirupy.

Whip 1 pint whipping cream and fold into Knox gelatin mixture. Then fold in cubed jello and let set until firm. Cut into squares and serve as a dessert or salad. Makes 16-20 servings.

"PUDDING" COOKIES

$\frac{3}{4}$ cup Bisquick

1 pkg. instant pudding mix

$\frac{1}{4}$ cup cooking (salad) oil

1 egg

Heat oven to 350° (mod.). Mix ingredients until dough forms a ball. Shape into balls using 1 teaspoon dough for each ball. Place on ungreased baking sheet. Flatten to about 2" with hand or a glass. Bake 8 minutes. Makes $2\frac{1}{2}$ doz.

→ → → **ATTENTION!** ← ← ←

All Members Of Adams Electrical Co-Operative

FREE INSTALLATION

FOR NEW USERS

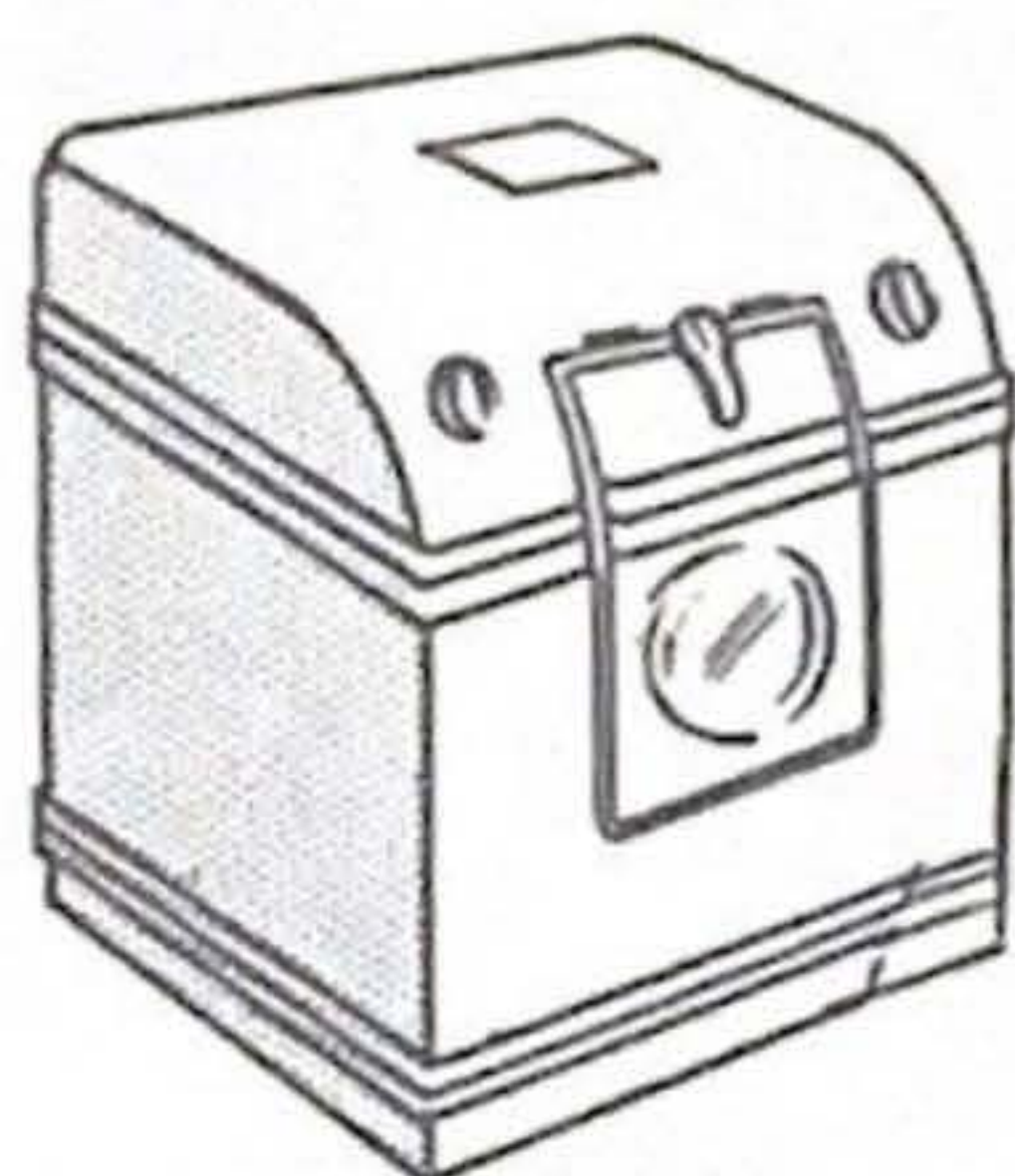
OF

ELECTRIC RANGES

WATER HEATERS

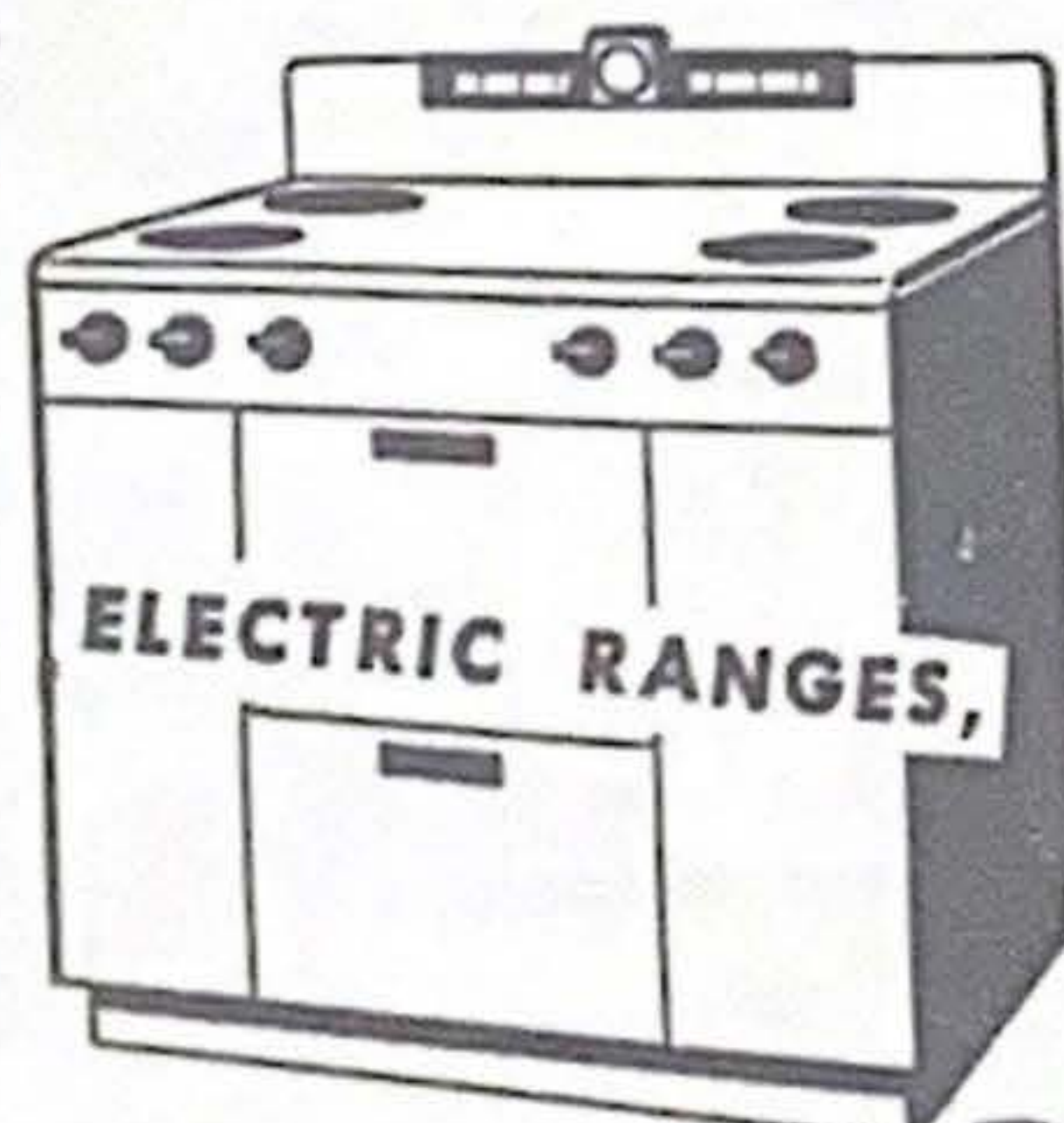
CLOTHES DRYERS

CLOTHES DRYERS



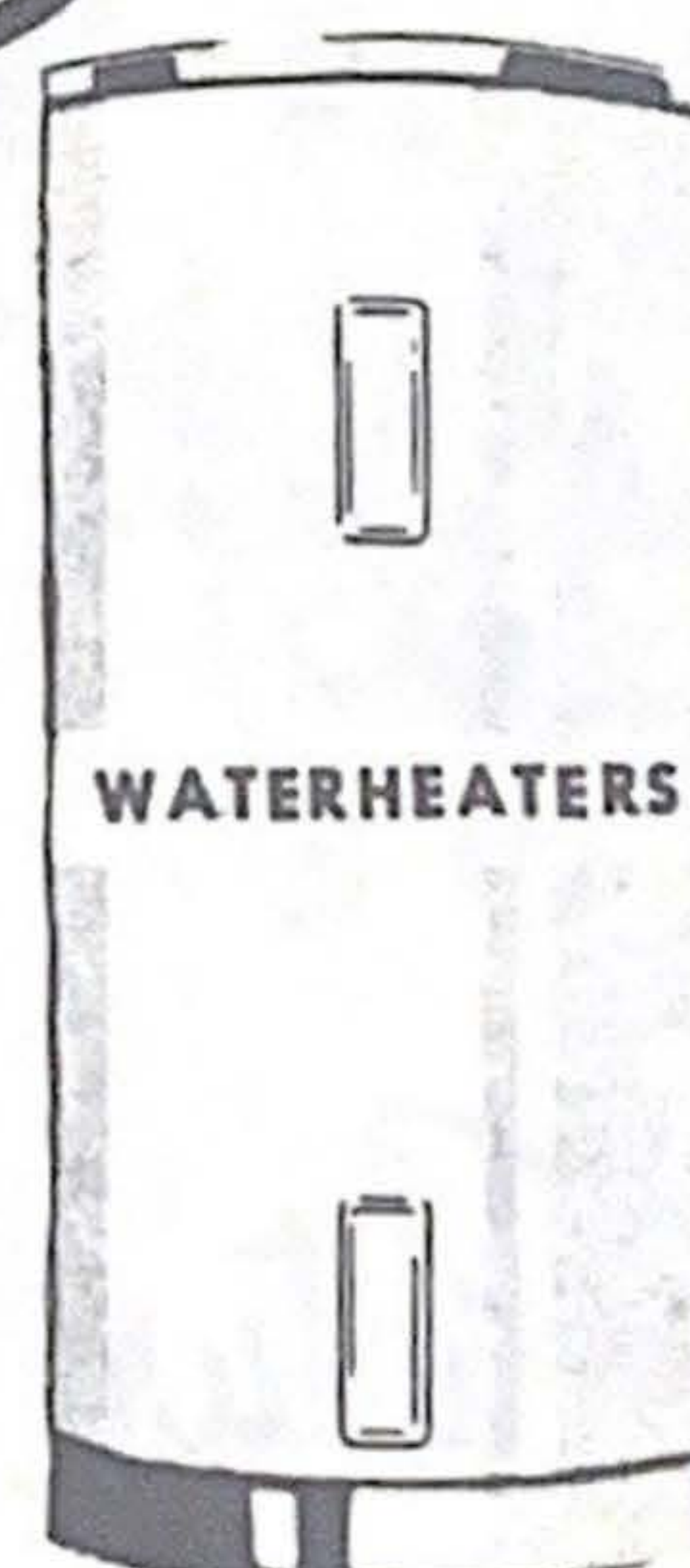
Use Electricity

IT'S SAFE, FAST, CLEAN, ECONOMICAL, DEPENDABLE
Enjoy the convenience and luxury of Hot Water, heated with
the CLEANEST, SAFEST and MOST DEPENDABLE and ECONOM-
ICAL FUEL. Use more Electricity and secure rock-bottom rates



NOTE:

HOMES WIRED AFTER JANUARY 1, 1953
WILL ALREADY HAVE A RANGE RECEPT-
ACLE INSTALLED.



For further details, contact
YOUR ELECTRICAL DEALER

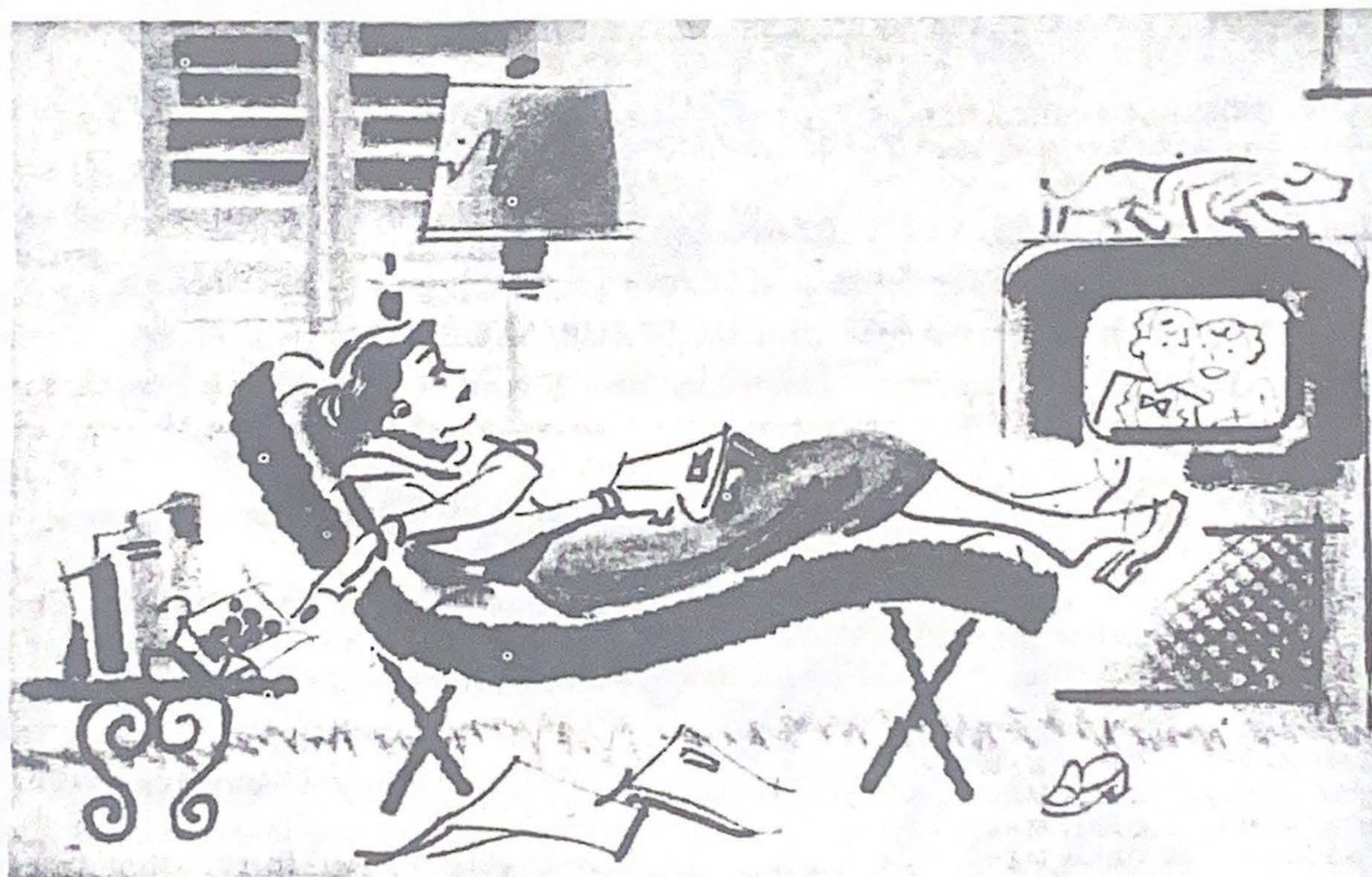
or

ADAMS ELECTRICAL CO-OPERATIVE

BULK RATE
U.S. POSTAGE PAID
PERMIT NO. 3
CAMP POINT, ILL.

Remember —
With Electricity
There Is
No Flame!

15-5-45-4
D. W. Voorhees S. C.
% Electric Wheel
Quincy, Ill.



Picture of a Lady
drying clothes **ELECTRICALLY!**