DECOYS UNLIMITED
MOLDING INSTRUCTIONS

To insure successful decoy making, follow all the instructions carefully. With your decoy mold you will be able to make decoys perfectly tailored to your particular hunting conditions. Durability, handling, and riding characteristics should be equal to a handcarved pine or cedar decoy. Painting techniques and paint durability is comparable in all rspects to wooden decoys. When evaluating the surface density of your new decoys allow for some curing time as the plastic tends to harden with age.

Guarantee

We guarantee that with a reasonable effort you will be able to produce a good, serviceable decoy. Your molds are guaranteed for life against breakage. Should you experience any difficulty with your mold or with the process, we ask the opportunity to correspond or talk directly with you concerning your particular problem. Do not return a mold without prior instructions to do so.

Evenings call (319) 243-3948, ask for Art Ladehoff.

1. **Coat Head and Body Mold With Corn Oil**

   To insure release of the decoy from the mold, coat corn oil on the inside surface of molds. The use of corn oil is necessary to obtain the hard, tough surfaces desirable on these decoys.

2. **Prefoaming The Fostafoam For Decoy Bodies**

   The plastic we recommend and base our guarantee on is called Fostafoam.

   We recommend and base our guarantee on the following instructions.

   The use of prefoamed (pre-expanded) plastic is necessary for making perfect decoy BODIES. Using pre-foamed plastic has many advantages over using plastic as it comes from the container in its raw form.

   A. It is more efficient, therefore it saves you money and material.

   B. It shortens actual decoy cooking time, therefore saving money in fuel costs.

   C. It is virtually failproof, always producing a good decoy.

   To prefoam your plastic bring a container of water to a boil. The size of the container depends in part on the amount of plastic you plan on processing and on the size of your mold. Place a cloth such as a single thickness of baby diaper across the container with four corners hanging out while allowing center of cloth to rest in boiling water. Pour 1 to 3 cups of plastic into water and stir so as to expose all beads to hot water and steam. It takes 10 to 40 seconds for the beads to expand the proper amount. Remove cloth containing prefoamed plastic, quickly drain and place the plastic in a storage container. The best procedure is to repeat this operation until you have prefoamed enough plastic to produce the desired number of decoy BODIES.

   Some experimentation is necessary to determine the correct length of time to expose the beads to the hot water during the prefoaming phase. Too long of prefoaming time will result in larger beads. Therefore, you will get fewer beads into each decoy mold resulting in a soft decoy. Too short of prefoaming time will give you the opposite effect, resulting in very heavy decoys, and very poor yield in decoys per pound of plastic used. It is a good idea to prefoam at least 10 or 20 pounds of plastic and mix in a storage container before you start making decoys. This gives you a more uniform supply of prefoam plastic. SET ASIDE AT LEAST ONE CUP OF RAW PLASTIC FOR EACH HEAD YOU WILL NEED.

3. **Compensating For Too Long of Prefoaming Time**

   Inconsistencies in prefoaming may result in an occasional batch that has been prefoamed too much, or exposed to the prefoaming heat too long. This results in beads that are so large that not enough plastic can be packed in a mold to make a good, hard decoy. To compensate for a batch of beads that have been foamed for too long a time, simply sprinkle some unfoamed beads on the inside surfaces of the mold after you have coated those surfaces with corn oil.

   When boiling is completed this concentration of unfoamed beads on the surface of the finished decoy will increase the surface density of the decoy. Many of our customers like this method and purposely over cook during the prefoam cycle and compensate with the raw beads on the surface.

4. **Clamping Molds**

Your new molds come with flanges that have bolt slots cast in place wherever it was possible to do so. Those flanges that are slotted can be bolted or clamped. Of course, the two unslotted flanges must be C-clamped or drilled to accept a ¼" bolt. Most prefer C-clamps, as they provide handles that are convenient for handling the molds in and out of the boiler. Use only very high quality, strong, American made C-clamps.

5. **Making Decoy Heads**

Mix some raw plastic (unfoamed) with enough vegetable shortening (not oil) to allow the beads to pack together. Use this mixture to fill the bill section only, in both halves of the head mold. In one half of the head mold, nearly fill with raw beads. In the half you have both the bill and head portions filled, gently press a nail or wire into plastic, and extend well into the bill area. Bolt head together and it is ready for cooker. Place in boiling water 25 minutes or less and then cool until all expansion within ceases. Due to the smaller size, heads will be more dense than will be the bodies.

6. **Filling Body Mold**

With mold open, fill with prefoamed plastic as much as possible. Bolt or clamp the body mold together and unscrew brass plug. Insert a large funnel and pour in the prefoamed plastic until mold is full. Plastic that has fused together should be broken down so it will pass through funnel, a piece of broom handle, etc. is convenient to ram plastic through opening. An empty one gallon plastic bleach bottle makes a good funnel. Replace brass plug.

To insure good decoys to start with put the following amounts of prefoamed plastic in your body mold. Goose Mold - 26 oz. Mallard Mold - 12 oz. Bluebill Mold - 10 oz. These amounts are more than adequate. Once you have gained some experience, reduce amounts used as long as you still obtain good decoys. If beads have been over expanded during prefoaming, refer back to Item 3.

7. **Heating and Cooling**

Warning — Baking in a kitchen oven is totally unacceptable. It is inefficient, produces a poor quality decoy and could create an explosive condition in the oven. Place mold in boiling water, making sure water enters mold forcing air out. Actual boiling time is 35 minutes or less for bodies, 30 minutes or less for heads. As you gain experience and confidence, you can try reducing these times as long as you get good results. During boiling, your mold will float to the surface of the boiler. This will not affect the results as long as you keep a cover on your cooker. After boiling, allow molds to air cool for 5 minutes, then place it in a tub of cold water until all expansion stops.

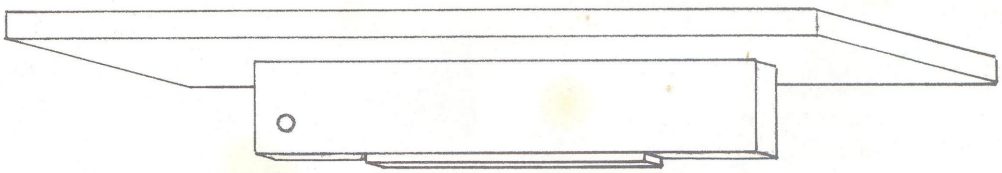
8. **Decoy Removal**

Decoys will usually stick in the mold when cooling is completed. Corn oil is a reasonably good release agent and prevents the decoy from actually sticking to the aluminum, but the molding pressures still make the decoys tight in the molds. Ideally, the decoy will stick in the top half of the mold which gives you a chance to remove the brass plug and drive a wooden ram through the fill hole thus ejecting the finished decoy.

When decoy is completely cooled in the mold, remove clamps or bolts and pry mold apart. Start at the front of decoy to do this. Next loosen the brass plug and eject the decoy. If the body sticks in the bottom half of the mold, you have no choice but to pry it out with a flat, stiff object like a wood chisel. Repair any damage with water putty, etc. Sticking problems are common, but usually diminish as molds get broke in from use.

9. **Keel Assembly and Ballast Weight**

Keel and ballast requirements vary greatly, depending on the water over which you hunt. Your decoys have a slot molded in the bottom to accept a basic, flat keel board. This board should be 3/8" thick and as wide as the molded slot. Once this keel board is epoxied in place, it provides the basis for a number of optional keel assemblies.



Illustrated is the flat keel board with a vertical keel, the vertical keel is weighted with a counter-weight attached to the bottom edge. A hole can be drilled to attach the anchor line. For most hunting conditions, the vertical keel can be eliminated and some form of ballast weight can be attached directly to the flat keel board.

10. **Attaching Heads and Keels**

Heads and keel assemblies must be epoxied into place with water soluble epoxy such as we furnish. All plastic surfaces to be joined with epoxy should be cleaned of all oily residues by washing, sanding, or scraping. To provide a sure bond, we recommend that all surfaces to be epoxied be perforated or punched full of small holes to provide additional glue surfaces. This is easily done with a sharp pointed object. Excessive amounts of epoxy are not necessary to provide a strong joint. For added strength or to suit the needs of some individuals, screw reinforcement can be added to all joints.

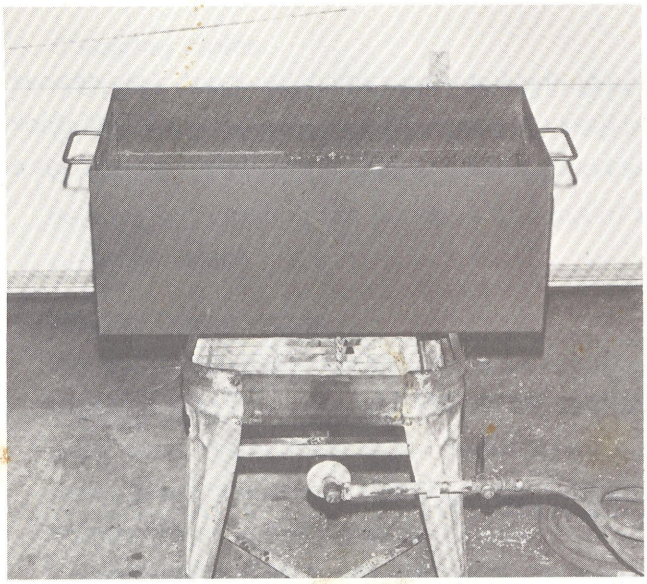
11. **Painting**

With a knife, rasp, or coarse sandpaper remove the ridge formed on the decoy where the mold halves fit together. Before painting, scrub the entire decoy with a strong detergent and steel wool pad. This removes the oily residue left after boiling and is absolutely necessary. Before applying your finish colors it is important to prime coat the decoy with a top quality latex exterior paint. For the finish coat use any good grade exterior flat enamel. We recommend Parker Bros. Decoy Paint, Green Bay, Wisc. Write directly to the factory and ask for their information. They do sell paint in bulk quantities and in kits. Some paints that are high in solvents eat into the polystyrene, so be sure and test all paints for compatibility.

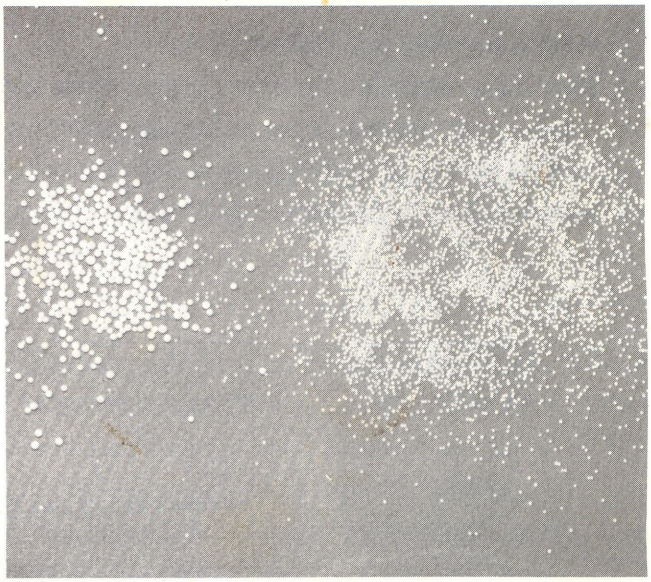
12. **Storage and Handling of Fostafoam**

CAUTION: CONTAINERS OF EXPANDABLE PLASTIC SHOULD BE KEPT AWAY FROM HEAT AND OPEN FLAME. FLAMMABLE VAPORS WILL ACCUMULATE IN A CLOSED CONTAINER AND ALL IGNITION SOURCES SHOULD BE REMOVED BEFORE OPENING CONTAINERS. THE ACCUMULATION OF VAPORS READILY DISAPPEARS SOON AFTER CONTAINER IS OPENED BUT WILL REAPPEAR WHEN THE COVER IS REPLACED.

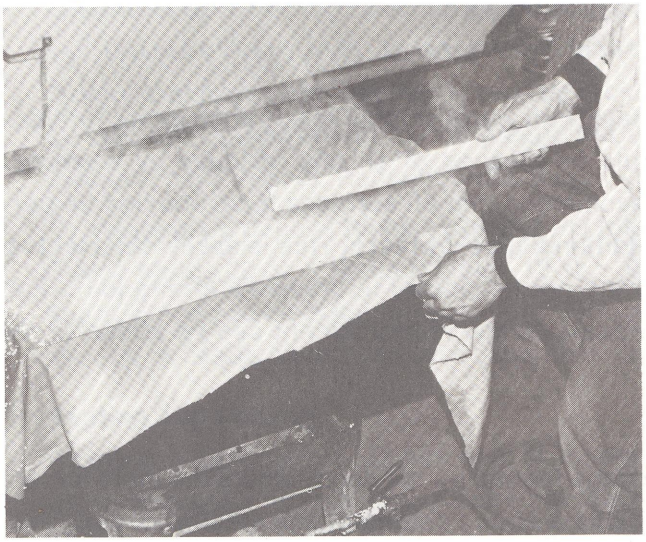
Expandable plastic should be stored in a tight container in a cool place. Use up all expandable plastic as soon as possible. It will retain its power to expand for several months, depending upon the conditions under which it is stored. Prefoamed plastic should be used within two weeks.



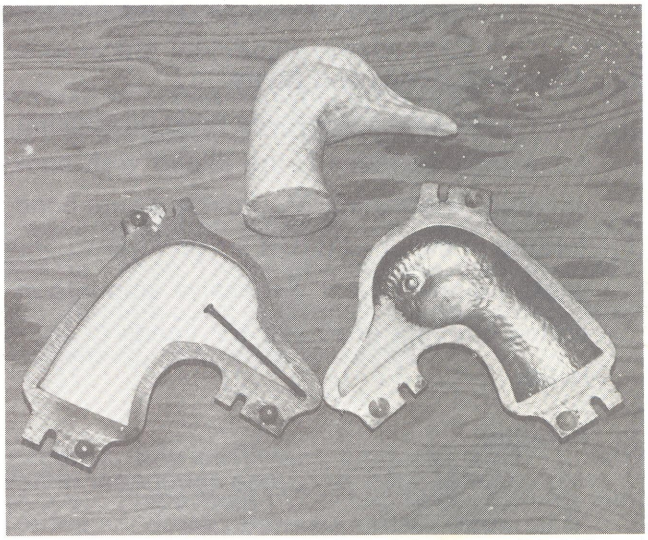
Inexpensive boiling setup made from old wash tub stand and burner from discarded hot water heater. Hook up to natural or bottle gas.



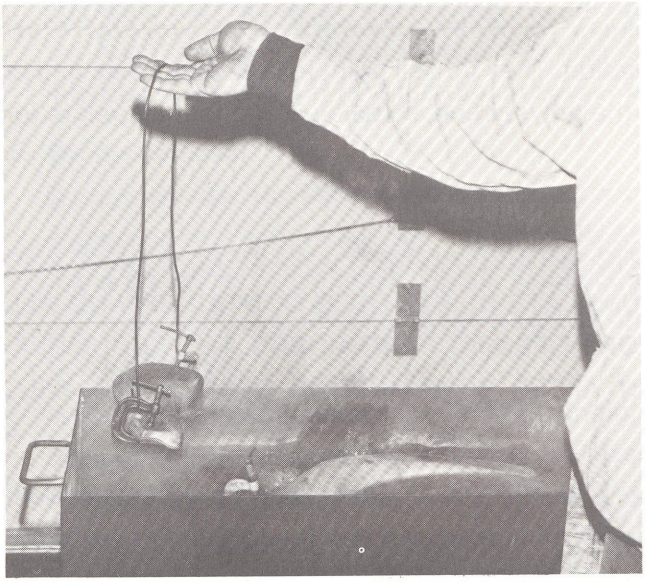
Comparative sizes of plastic when foamed and unfoamed. Average size of foamed beads should be about like a BB size shot.



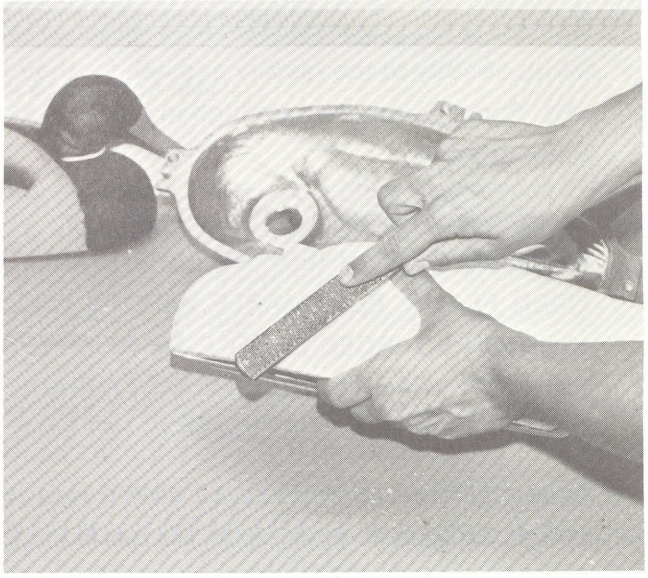
Stirring plastic during prefoaming. Note cloth used to contain beads for easy handling to storage container.



Head mold ready to close showing reinforcing nail in bill, and also notice mixture of beads and shortening in opposite side mold.



Handling molds in and out of cooker. Cooker shown was fabricated at low cost at local sheet metal shop.



Finishing steps. A successful paint job depends on a well prepared, paintable surface and paint of the highest quality.