CANDLE MAKING

LEAFLET NO. A531

Candle Making

Margaret Bass

Introduction

In the past, candles were made from beeswax obtained from the honeycombs of bees or tallow produced from the suet of beef, pork, lamb etc. Nowadays candlemakers generally use candlewax blends based on paraffin wax and stearin to make candles. Beeswax is sometimes used today, but it is scarce and expensive. This booklet will explain the basic principles of candlemaking. Once mastered, the creative possibilities are limitless, and you will be able to make your own unique candles.

Materials required for Candle Making

Good quality paraffin wax.

Wicking.

Moulds.

Stearin. (This is sold in the form of powdery white crystals. It is added to melted paraffin wax to make the candle more opaque. It makes white candles white, and improves the brightness of coloured candles. It also raises the melting point of wax so that the candles do not bend or sag, and it improves the burning quality of the candle).

Mould sealer.
Dyes.
Perfume. (Not essential).

Fig. 1

Equipment required for Candle Making

- Two pans, one larger than the other.
- Thermometer, reading to at least 100°C.
- Bucket or plastic bowl. (Not essential).
- Hammer.
- Newspapers, knives, scissors, spoons, old jug, saucepans.

Heat source. Although domestic heating rings can be used, electric pots with thermostatic control are available, either of the 'water-jacket' or water-less type.

Care and Safety

The same care **MUST** be taken in candle making as in cooking. Never leave wax unattended over a heat source. Like fat, paraffin wax is inflammable.

Follow these rules

Melt wax over boiling water. Water cannot get hotter than 100°C.

When the thermometer registers 90° C, remove the wax from the heat.

SMALL CHILDREN MUST NOT BE ALLOWED NEAR HOT WAX FOR OBVIOUS REASONS.

Children can become involved in candle making by choosing colours, making moulds etc.

NEVER BE TEMPTED TO HEAT WAX OVER A DIRECT HEAT SOURCE.

When you are ready to pour the candle, reheat the wax to about 90°C.

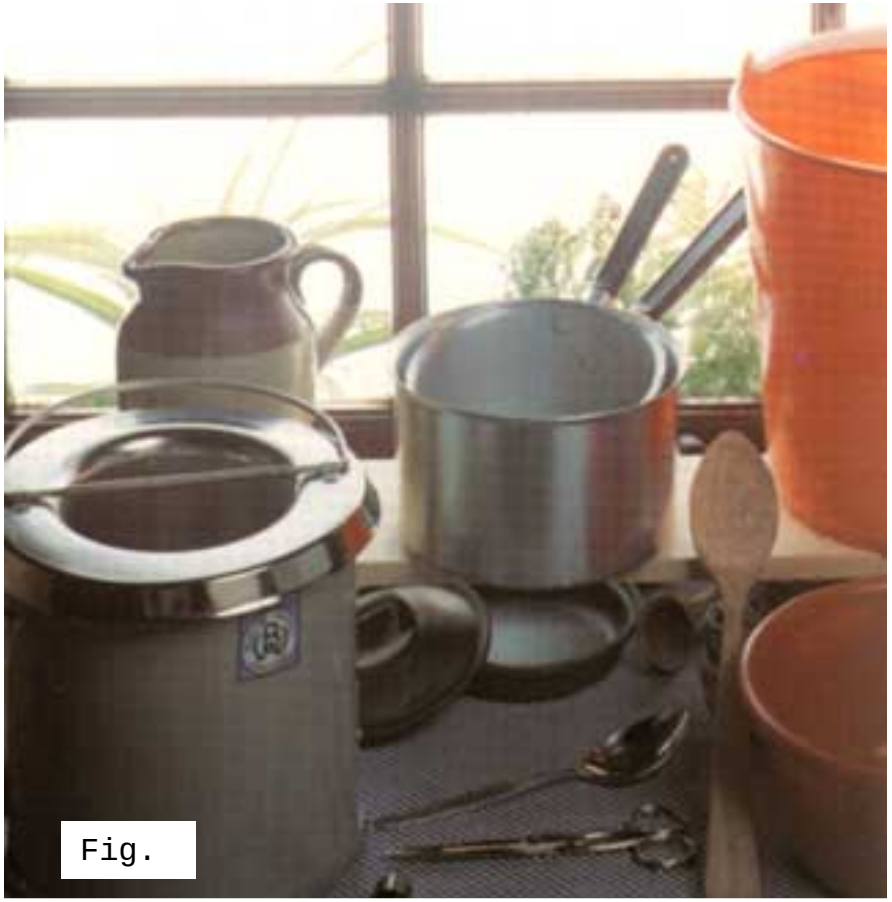


Fig.

Accident procedure

Should the wax catch fire, turn off the heat and cover the pot with a lid or fire blanket to smother the flames.

Never use water to put out a wax fire.

If hot wax spills onto you, do not wipe off the wax, but run cold water over it. The wax will solidify immediately. Treat the area as you would a scald or a burn.

Your Materials

Wax
Wax is sold ready chipped for convenience or in 5kg, (11 lb), slabs.

Wicking
Wicking is plaited, braided cotton, impregnated with chemicals. It is manufactured in several sizes and the size of wick chosen is dependent on the size of mould. As a rule of thumb: candles of up to 2", (50mm), diameter use a small wick. Anything larger use a large wick. For candles moulded without a wick, e.g. stacked candles, use a wax-stiffened wick.

Proportion of Wax to Stearin
As waxes from different sources tend to vary somewhat in substance, some are more opaque, some have a high oil content and some are harder, it is not possible to give an exact formula for the proportions of stearin to wax. Too little stearin will produce a soapy candle. Too much stearin will make the candle brittle.

As an approximate guide:

3 tablespoonfuls of stearin to 1/2 kg, (1b) for white candles, and 2 tablespoonfuls of stearin to 1/2 kg, (1lb), wax for coloured candles.

Candle Making Dyes
Candle making dyes are specially prepared for the purpose. They are made from very concentrated pigments suspended in oil or wax. The colour range available is large, and all the colours are intermixable. Do not be too generous when adding your dyes to the wax. Only a tiny amount is needed, due to the concentration of colour. If the dye is in stick or disc form, shave a small amount with a knife onto a saucer and add to hot wax. Test the resulting colour in a cup half filled with cold water. The wax will be about one or two shades lighter than the finished candle.

Preparation of the Working Area

First prepare your work area. For safety's sake make this some way away from the heat source. Cover with plenty of newspaper. Also cover the floor in front of the working area. Before you begin, make sure that you have all the equipment close to hand.

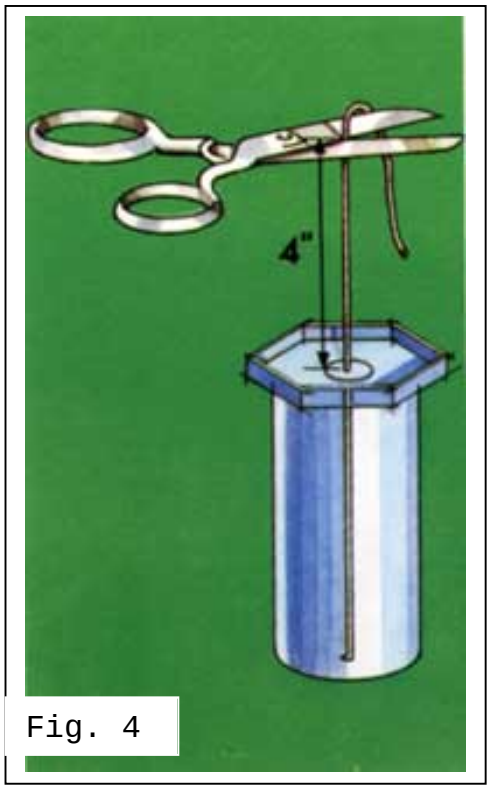


Fig. 4


Fig. 5


Fig. 6


Fig. 7

Prepare the Mould

1. Make sure that the inside of the mould is clean.

2. Cut a length of wicking, chosen to suit the mould at least 4" (10cms) longer than the length of the mould. (Fig. 4). Thread the wicking through the hole in the bottom of the mould and tie a secure knot. (Fig. 5). No one likes candles with short stubby wicks so pull the knotted end of the wick back from the mould for about 1/2", (Fig. 6), and seal the hole with mould sealer. This is a putty like substance and can be bought from craft shops; "Blu-tack" is a ready substitute. Place a wick holder, a cocktail stick will do, across the top of the mould and secure the wick to this. Make sure that you have centred the wick, otherwise the candle will not burn evenly. The wick should be tied LOOSELY, but not so loose that it bends. (Fig. 7).

3. Warm the mould. This improves the finish of the candle. Leave in a warm place.

4. Fill the water-bath with cool, not cold, water.

Melting the Wax

1. Once the mould is ready, and the work area prepared, you can concentrate on melting the wax. Remember the safety advice mentioned earlier, and do not leave the wax unattended.
2. Put water into the bottom of the larger saucepan. Put a trivet into the bottom of the larger one containing water. (Fig. 8).
3. Weigh out about 0.5kgs (1 lb.) of paraffin wax chips and put into the smaller saucepan. Lower into the larger saucepan and place on a low heat source. (Fig. 9).
4. As the wax begins to melt, test the temperature with the thermometer.

DO NOT LEAVE WAX ONCE IT IS ON THE HEAT SOURCE.
CHECK THE WATER LEVEL IN THE BOTTOM OF THE LARGER SAUCEPAN AND TOP UP AS NECESSARY.

5. Add the stearin. About 3 tablespoonfuls for 1 lb. of wax, for a white candle, 2 tablespoonfuls for a coloured one.
6. Add dye, a tiny amount at a time, and test the colour in a cup of cold water until you are satisfied with the result.

Remove the wax from the heat source as soon as it reaches 90°C. (Fig. 10).

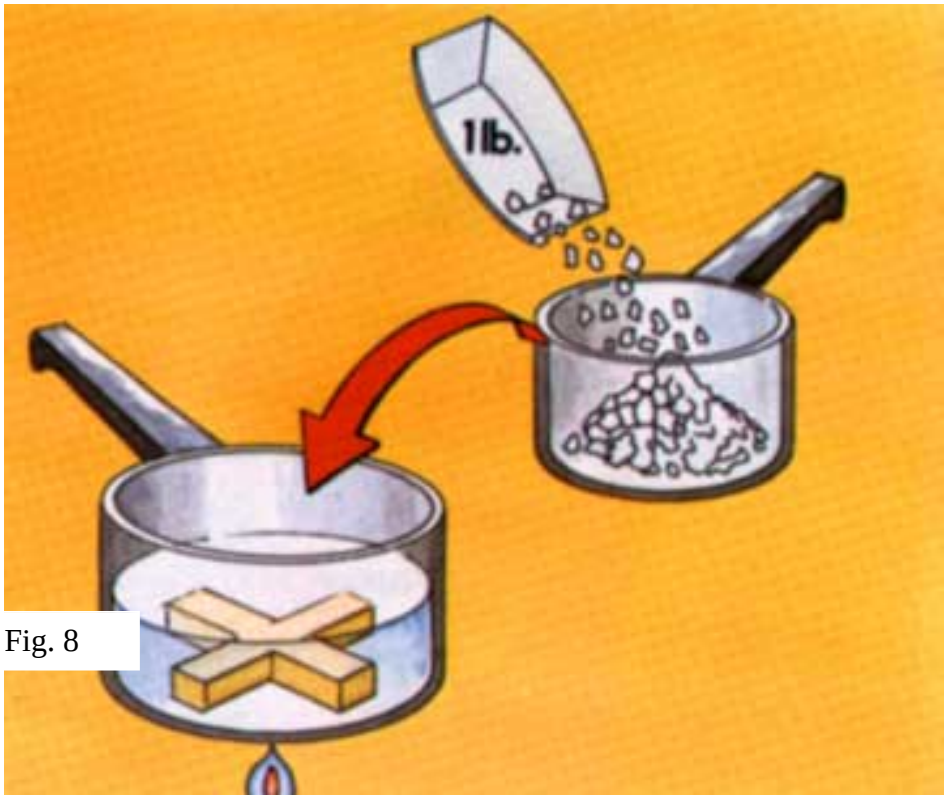


Fig. 8

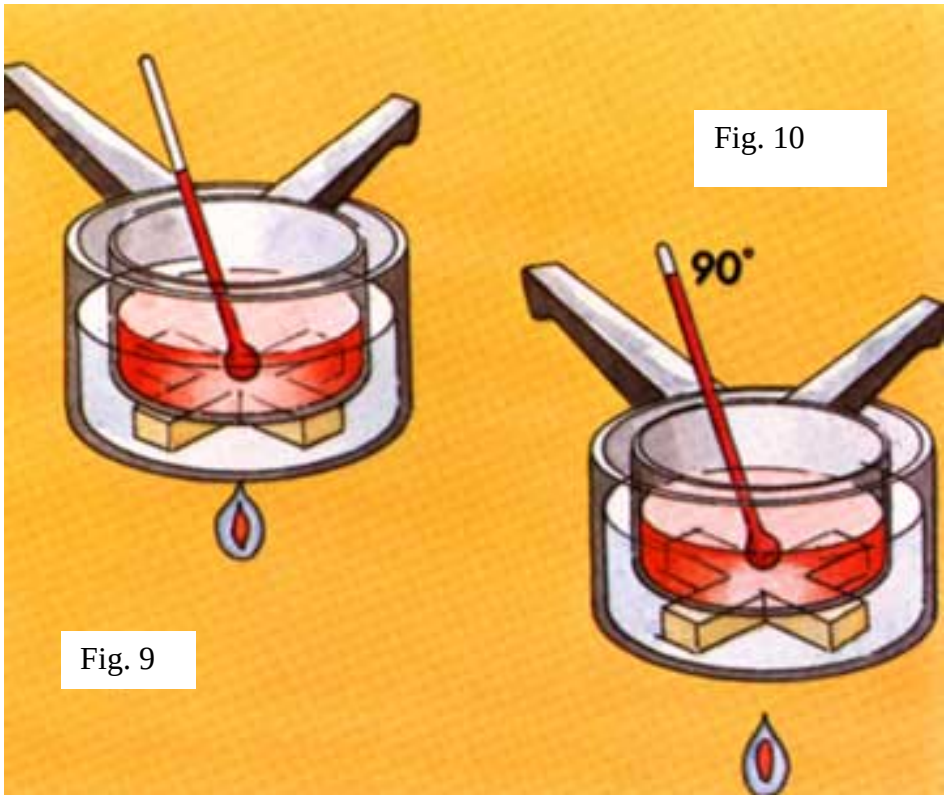


Fig. 9

Fig. 10

Pouring the Candle

- Now everything is ready for you to pour your candle.
- If you are going to add perfume follow the directions on the bottle.
- Move the wax pot away from the stove to the prepared working area. For ease of pouring, pour was from the wax pot into a Pyrex jug with a lip.
- Tilt the mould very slightly and pour the melted wax down the side of the mould. Tilting the mould will stop air bubbles from forming thus spoiling the finish of the candle. (Fig. 11).

Fig. 11

- Pour the candle as tall as you require.
- If the wax is too hot, the candle will have pit marks caused by bubbles of steam spoiling the surface.
- If too cool, air bubbles will form in the candle, again spoiling the surface.
- Place the candle in the waterbath. The water level should nearly reach the top of the mould. (Fig. 12).

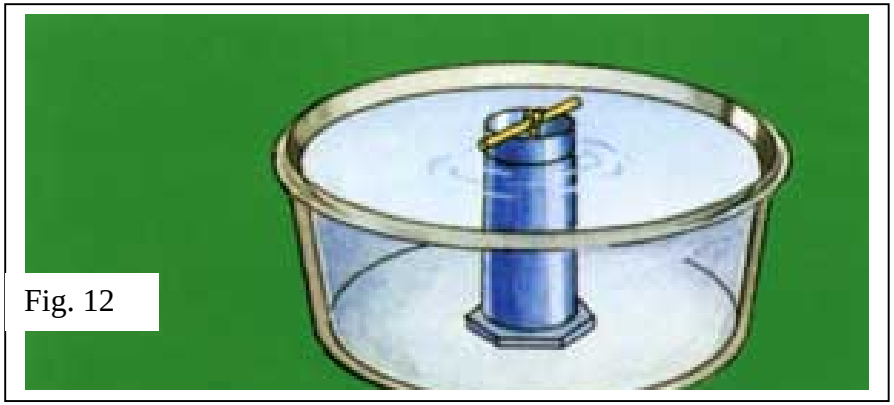


Fig. 12

N.B. As wax cools it contracts, leaving a 'well area' in the centre. Heat the wax again in the wax pot and pour into a Pyrex jug. Carefully fill this area with hot wax.

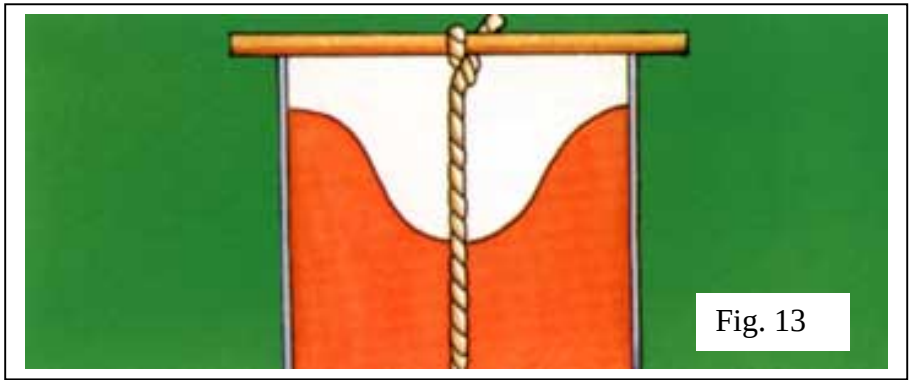
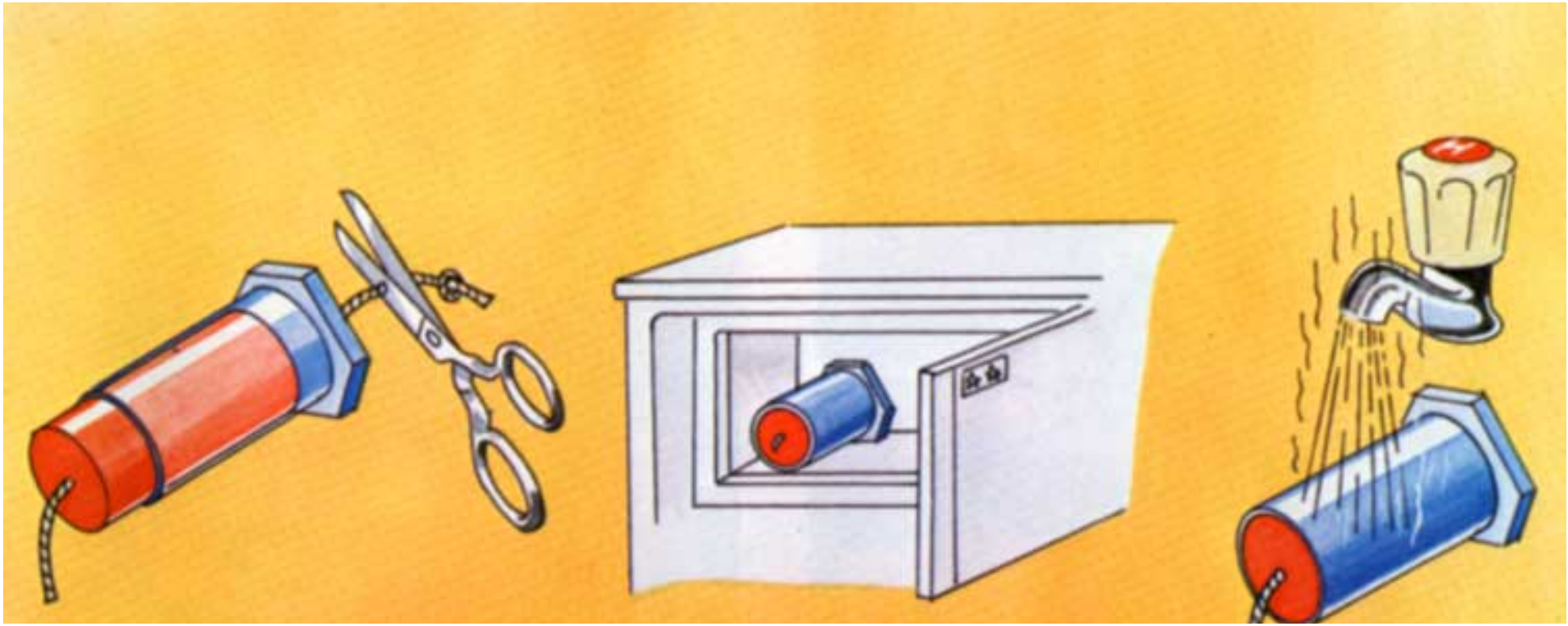


Fig. 13



To Remove the Mould

- Remove the mould sealer and replace in container. It can be used over and over again.
- Cut the knot from the wick.
- The candle should now slide easily from the mould if rigid. If rubber, just peel off the mould.
- Should the candle prove to be obstinate, place in a refrigerator for 15 mins or so and try again.

If you are still unlucky, the only remaining course of action to persuade the candle from the mould is to pour hot water over it. This will melt the wax sticking to the sides of the mould sufficiently to allow the candle to slip out. (Fig. 14).

The candle will not have a smooth surface, but at the very least you can melt it down and start afresh.

Finishing the Candle

1. Pare away any seam lines left by the mould with a sharp knife.
2. Glazing - This process is not essential, but if you want to glaze the candle do it now, before the wick is trimmed. Dip the candle into either hot water or hot wax, to which no stearin has been added, holding the candle by the wick. (Fig. 15).
3. Cut the wick to the length you want.
4. Level the bottom of the candle by rubbing around the inside of an empty warm saucepan (Fig. 16).
5. If the surface of the candle is marred by fingermarks, rub with an old pair of nylon tights.

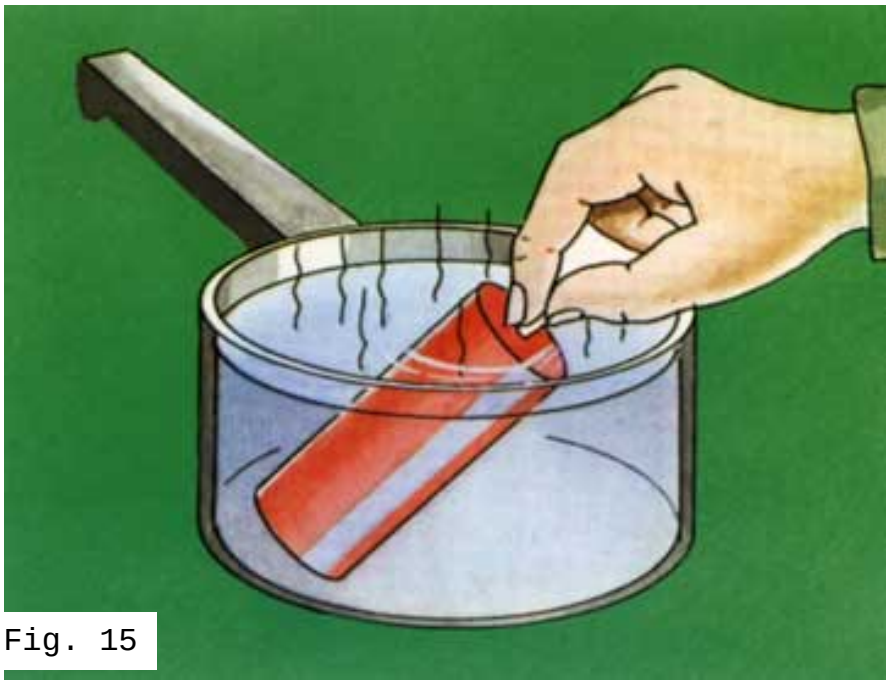


Fig. 15

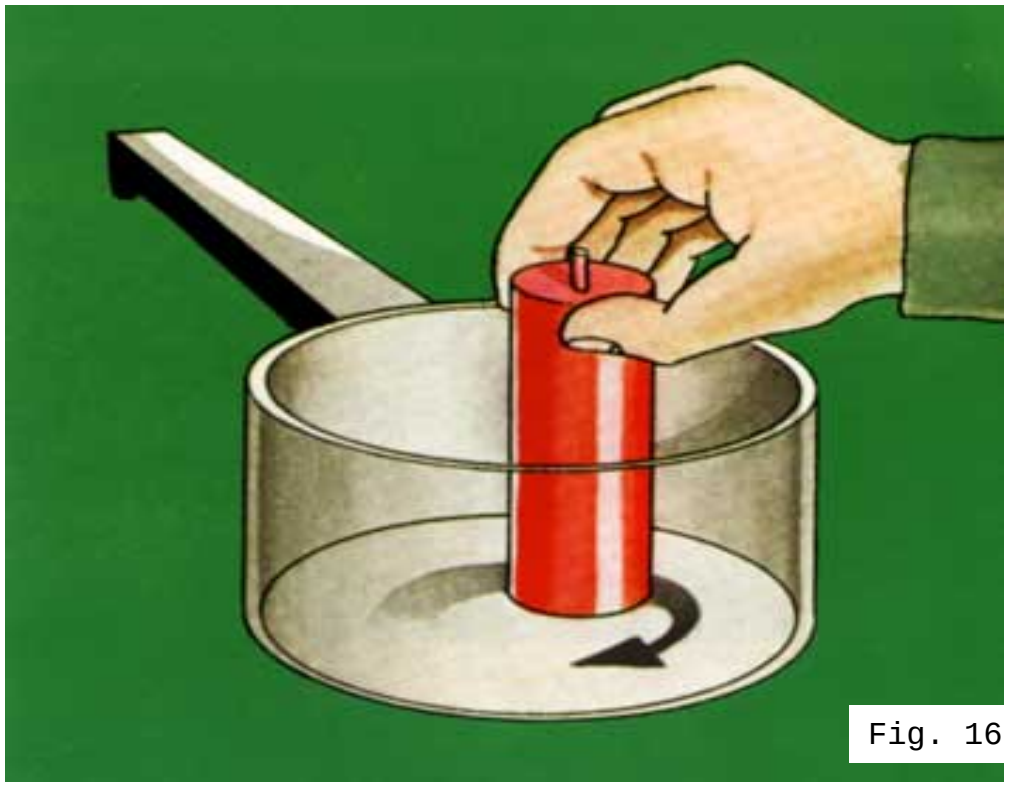


Fig. 16

Now you have mastered this simple process you can make a whole variety of candles. Indeed, possibilities are unlimited. Here are some ideas for moulds:

Yoghurt or cream containers.

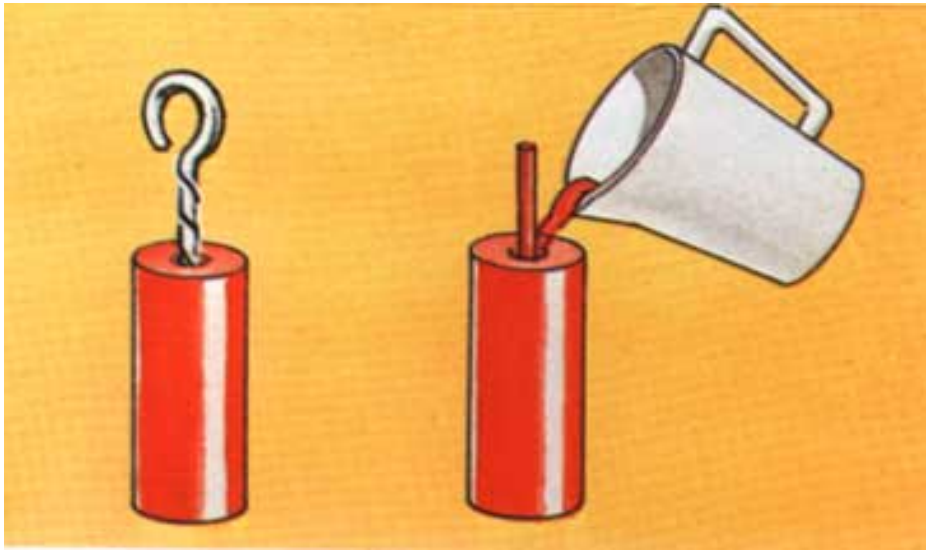
Jelly moulds.

Ice cube trays.

Small fancy moulds.

Cups, old glasses.

In fact, more or less anything that is wider at the opening end than the other.



Candles Made Without Wicks

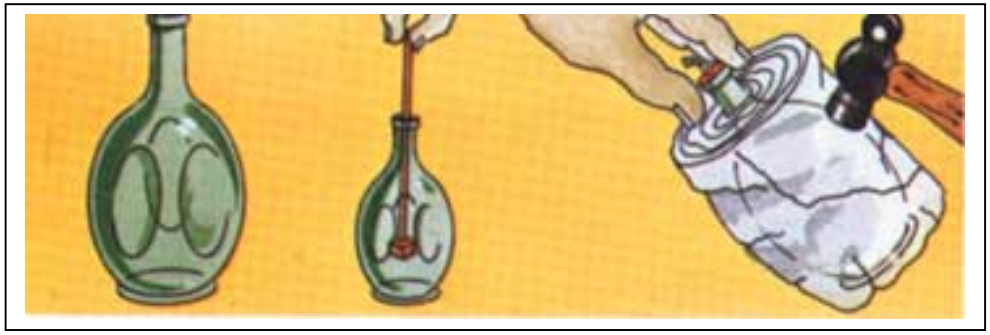
You will probably want to make candles in improvised moulds without a wick. The wick can be inserted into the candle after removing it from the mould.

Dip the wick into warm wax and pull it taut. Make a hole in the centre of the candle with a heated skewer. Put the wick into this, and seal the hole by pouring a little warm wax around the wick. (Fig. 17).

Candles Made Using Narrow Neck Moulds

I previously stated that candles can be made in any container wider at the open end. You can, however, make candles in containers with narrow necks, but you will have to break the mould in order to remove the candle.

Examples of these moulds are of blown eggs, old Christmas decorations, glass bottles, etc.



Process

1. Tie a weight to the bottom of the wick and lower into the mould. Tie wick to wick holder.
2. Make candle.
3. Remove candle from mould by wrapping it up in an old pillowcase, towel or the like and gently tap, (to stop splintering), with a hammer to break the mould. (Fig. 18 -above). If using plastic or polystyrene containers, cut away the mould with a sharp knife or scalpel.

Some Ideas for Candles

To Make a Striped Candle

Prepare your chosen mould. Prepare the wax, as many colours as you like in separate containers for each colour. Do not tilt the mould as you would when pouring single colour candles. Carefully pour the wax into the bottom of the mould. Let this layer set for good colour separation. If you want a subtle blend of colours pour whilst the first layer is still warm. Remove from mould and finish the candle. (Fig. 19).

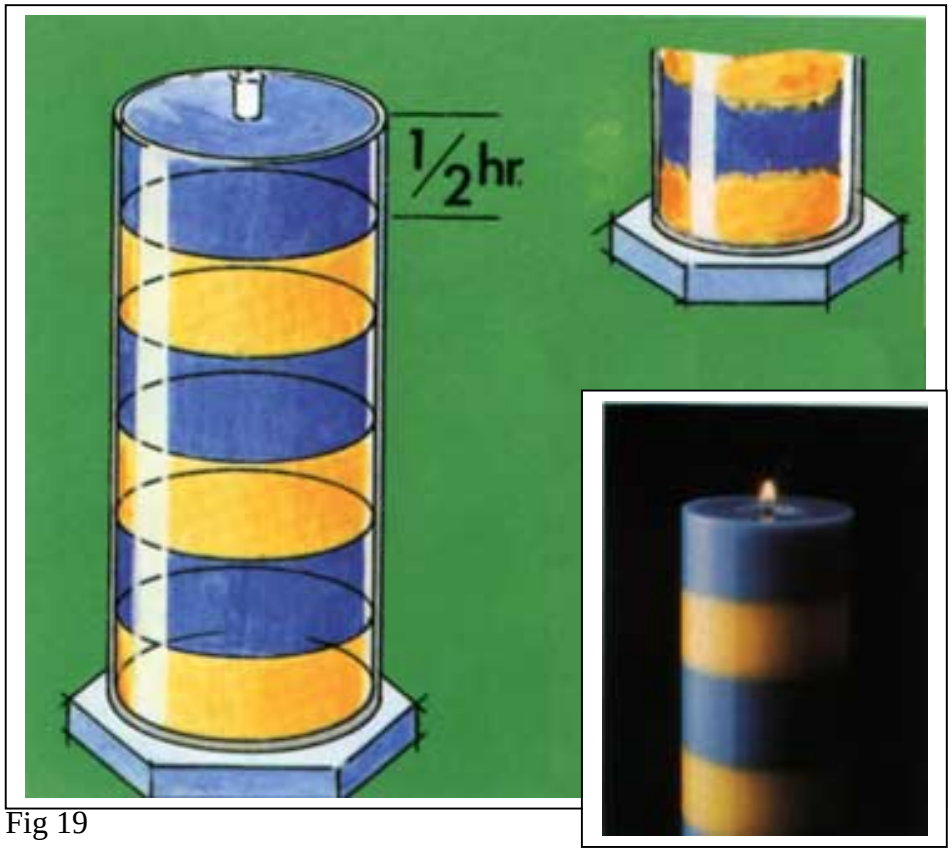
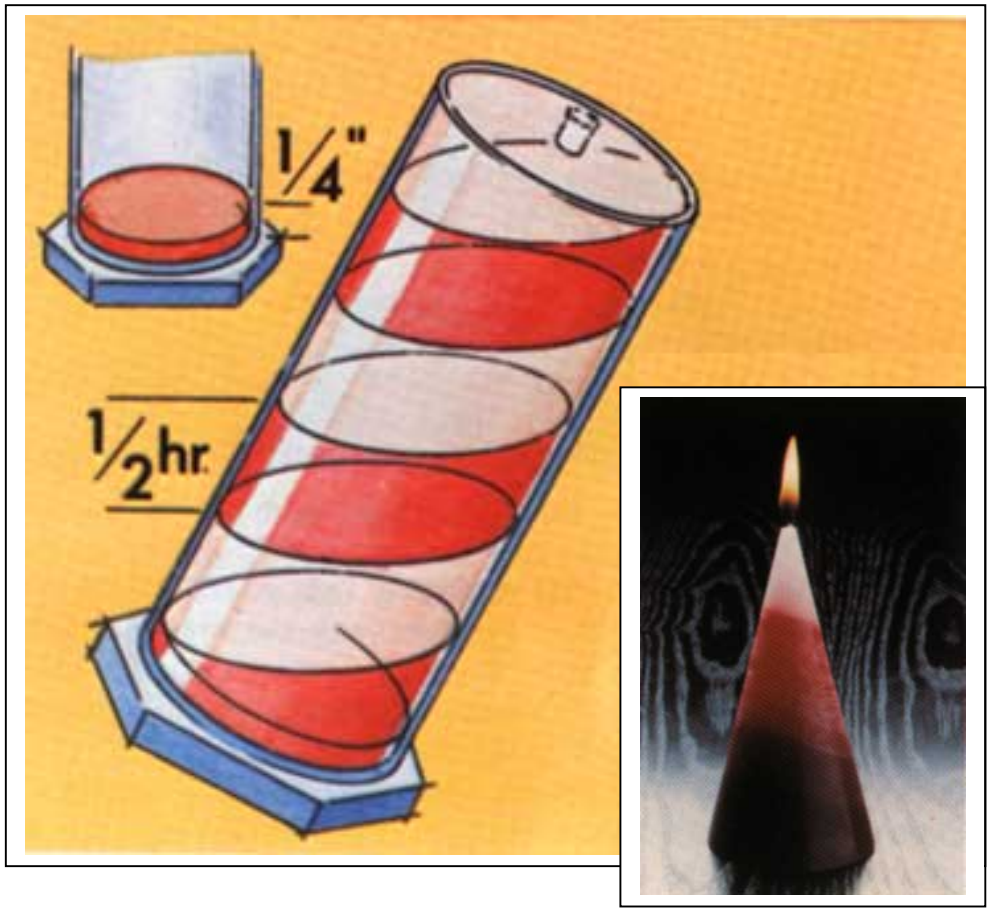


Fig 19

Diagonal Stripe

Diagonal stripes are every attractive, but not as difficult as you may think. Prepare the wax and mould as before. Pour the first layer of wax to a depth of about 1/4" (6mm) and allow it to set. When this layer has set, tilt the mould and make secure. Now you can pour the next layer. If you want to change the direction of the stripes, move the angle of the mould when this layer is set. When you are near to the top of the mould, straighten the mould and pour the last layer. Remove from mould and finish the candle. (Fig. 20).



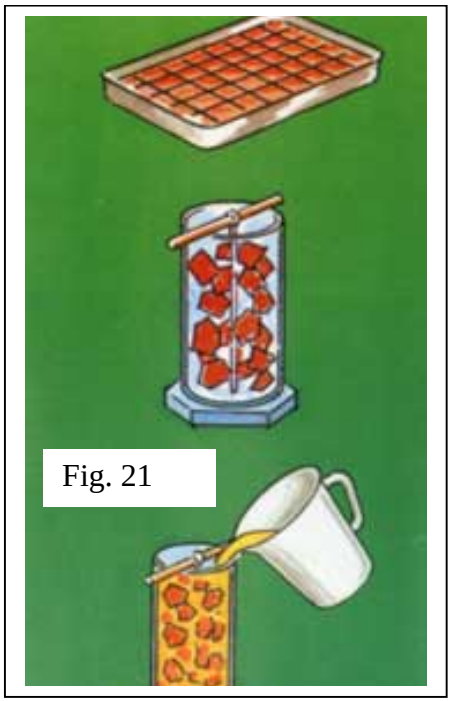


Fig. 21

Ice Candles

An interesting effect can be achieved by putting chunks of ice into the mould. When the candle is removed from the mould, it will be honeycombed with cavities.

First you will need a core candle. Colour some wax, cut a generous amount of wicking. Pour the coloured wax into a deep container and dip the wick into this. Pull the wick taut, and repeat the process until you have built up a candle of about 1/2" (12mm) diameter, place in the mould. Make some ice cubes and put these in the mould. Pour the wax into the mould.

Hold the mould over the sink to remove the candle. (Fig. 22).

Mosaic Candles

Prepare the mould.

To make the mosaic chunks, make some coloured wax and pour this into an old baking tray. When the wax has set, break it into chunks. Place these chunks into the prepared mould making sure that the wick is centred. Melt some more wax of a contrasting colour but do not add stearin as you want to be able to see the contrasting chunks clearly. Use a pale shade of wax. Allow this coloured wax to cool to about 70°C. If the coloured wax is poured when too hot it will melt the wax chunks. Slowly pour the wax. You will see that the wax will bind the chunks together.

Remove from mould and finish candle. (Fig. 21).

Fig 22

Tinfoil Candles

Cut some strips of tin foil. Crumple these and put into the mould before the wax is poured.

Melt the wax but do not add stearin, (you want a transparent effect so that he foil can be seen), and add dye.

Make candle.

Remove from mould and finish. (Fig 23).

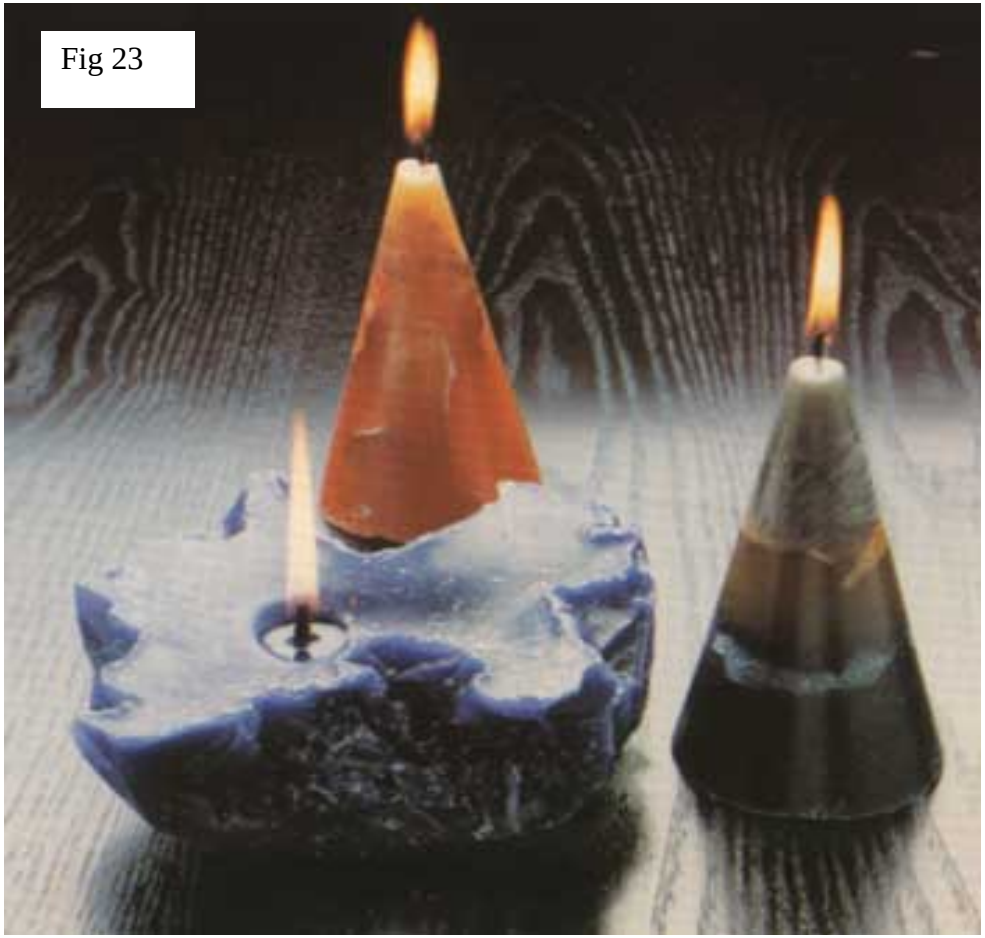


Fig 23

Free Form Candles

Sand Candles

Thoroughly dampen some good, clean sand and place in a small bucket or large tin. Make a shape in the sand. You can make any shape you like. When you are happy with the shape pour the prepared wax into the sand. Allow the wax to set and then remove the candle from the mould. Make a hole in the sand candle with a hot skewer and insert a wax stiffened wick. Fill any gaps between wicking and wax.

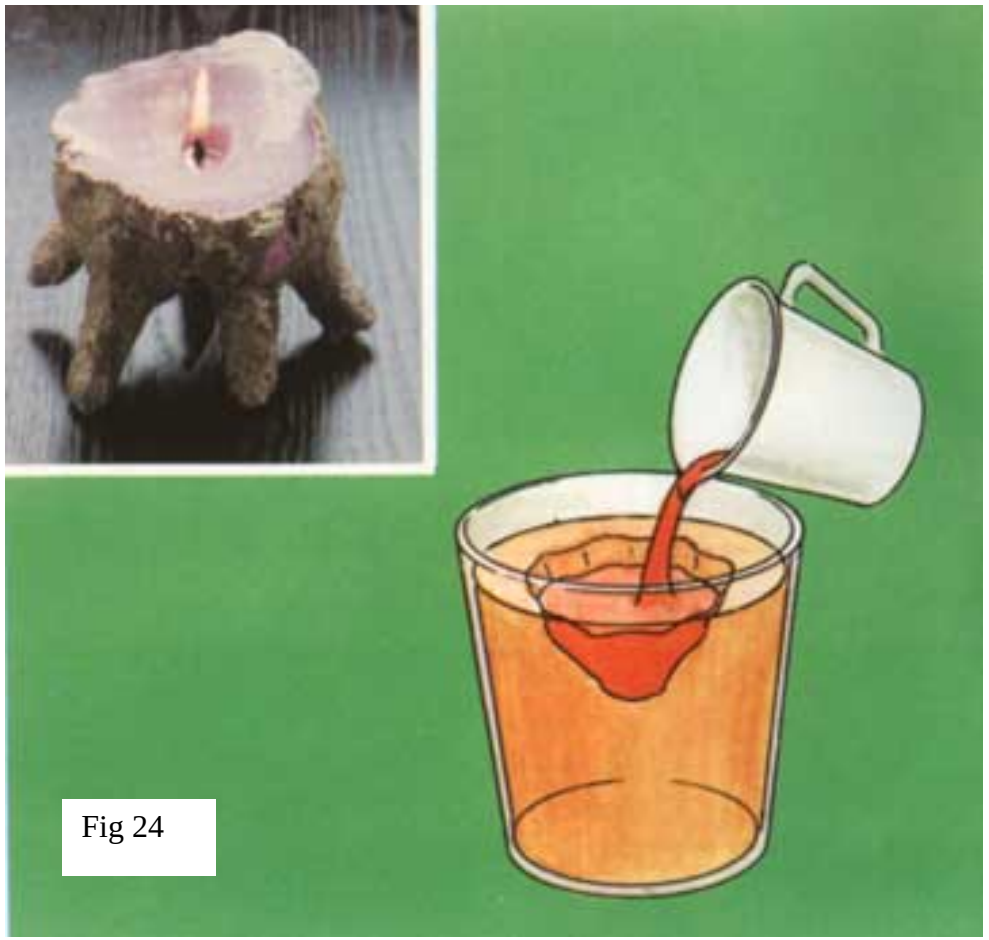


Fig 24

Candles Made In Heavy Duty Polythene Bags

Push the bag into a glass jar, letting the top of the bag hang around the jar. Melt the wax and remove as soon as it registers 80°C on the thermometer. Leave the wax to cool until scum forms on the surface. Now carefully pour wax into the polythene bag, and allow it to cool.

When it is still pliable remove the bag from the jar and slip a rubber band around the top. Now you can mould the bag of soft wax into any shape you choose. Put the bag into cool water to harden. Release the candle, by removing the rubber band and tearing away the polythene bag. Inset wax stiffened wick and finish the candle.

Fig 25

HOMECRAFTS DIRECT
PO BOX 38
LEICESTER
LE1 9BU

www.homecrafts.co.
TEL: 0116 2513139
FAX: 0116 2514452
EMAIL: info@homecrafts.