

A New Type of Jaggery Mould

By V. T. SUBBIAH MUDALIAR

Jaggery is made by concentrating sugarcane juice and allowing the resulting syrup to set hard. It is cast in various shapes - big buckets, balls of various sizes, slabs, small cubes, etc. Each cane-growing tract seems to have its preference for a particular type of mould. The choice of the mould-types may have been influenced originally by the type of cane grown in the tract, the keeping quality of the jaggery under the weather conditions prevailing in the consuming market, the fastidiousness of the consumer and the type of labour available for making moulds.

The Ordinary Mould The small "cubes" seem to be the most popular of the shapes. They are called "cubes", but are really frustums of square pyramids. Suitable shaped holes are cut in large numbers in wood and they serve as the mould for casting the "cubes". The concentrated cane-syrup is poured in the mould and after it sets, the mould is turned upside down and struck heavily with wooden mallets to shake the "cubes" out of the holes and they drop down. The "cubes" made all over the country are of the same shape, with wide variations in the size. The biggest "cubes" weigh half to a pound and the smallest a third of an ounce.

The moulds are generally made of *Babool* (*Acacia arabica*), *Vahai* (*Albizzia* sp.) and similar hard fibrous woods that can withstand the hard knocks given with wooden mallets to dislodge the "cubes". The moulds are about 15 ft. × 1 ft. 4 in. × 7 in., and would ordinarily have about 1,500 holes cut in it. The moulds cost (pre-war rate) Rs. 2-8 per hundred "cubes", inclusive of the cost of wood and making, at Coimbatore. The cost of the mould is high and cultivators prefer to hire the moulds during the crushing season, and avoid purchasing them. The moulds are heavy and difficulty is experienced in handling them. They tend to crack under the heavy malleting in the course of a few years. The frequent renewal of the moulds increases the capital outlay and the cost of making jaggery. Any improvement aiming at either reducing the cost of the mould or lengthening its life should be welcome.

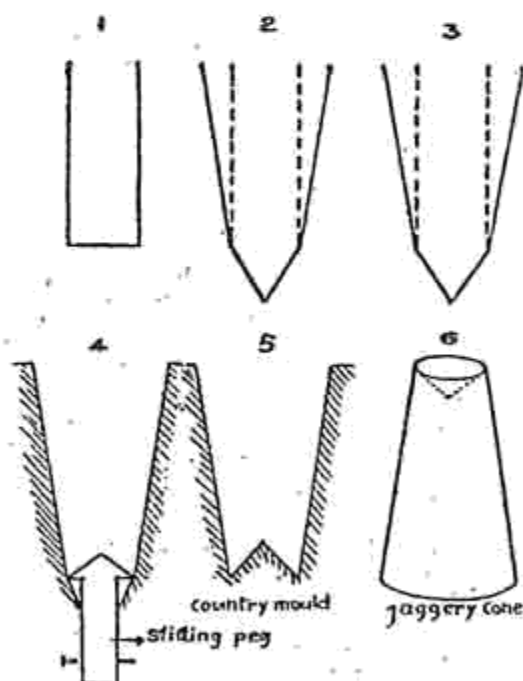
Attempts made to improve the mould have aimed at minor variations in the method of making, rather than at changing the shape of the holes. In the earlier years, the "cube" form was probably fixed upon as the only shape possible for the village carpenter with a few chisels to help him on. A tapering conical shape was not possible without the necessary tools.

The jaggery moulds have a flat pyramid provided at the bottom, called the *lingam*. The play of the chisel being limited by the narrowness of the hole, no other base is possible. No conceivable shape of the chisel could give a horizontal base.

The Peg-mould An improved type of mould appears to have been evolved a few years back, which may be called the 'Peg-mould', i. e.,

mould having pegs. The form and shape of the "cubes" made with both the ordinary and the peg-moulds are the same, but the pegged type eliminates the malleting done to shake the "cubes" out of the mould. Quality wood, free from knot and cracks is sawn into planks, planed to a thickness of $1\frac{3}{4}$ in. and used for cutting the mould holes. The holes run right through the wood and have a double taper as illustrated in Fig. 2. The hole at the bottom is closed by a sliding peg. The peg has a small stem and is surmounted by the *lingam*. When the mould is in position, the peg slides down and closes the bottom of the hole. The boiled cane syrup is poured in and it sets in a short time. The mould is then turned upside down and the pegs are pressed down lightly with the aid of a small plank about a foot square. The pegs in turn press the jaggery "cubes" and they drop down easily. The mould has the advantage of dislodging the "cubes" without the usual heavy malleting. The mould lasts far longer than the ordinary mould. The mould is further not heavy and is handled easily. The mould, however, costs Rs. 4 to Rs. 4-8 per hundred holes and a mould with 1,500 holes costs Rs. 65 and the prohibitive cost makes the extension of its use impossible, more or less. It has not come into general use, though a few moulds are made here and there by enthusiastic people. The mould is alright as far as it goes and the problem is to reduce the cost of making the peg-mould.

The Round-mould The round mould that is now suggested as an improvement embodies all the main features of the ordinary and the peg-moulds. The frustum shape that gives a distinctive appearance to the



cube-jaggery and that facilitates its extraction from the mould is retained, but the hole is circular and the resulting jaggery is in the form of a truncated cone and which may be designated the 'jaggery-cone'. In other respects, it is just like the peg-mould. But the change from the square to the round form alters the method of making the mould completely. The planks are cut to size, planed and the centres of the holes are marked on the upper surface. Augur bits, having the same width as the small end of the truncated cone, are used for drilling the holes preliminarily as in Fig. 1. The depth of the hole is the same as the height of the "cone". The hole is then tapered with a special bit having a double taper shown in Fig. 2 & 3. This bit is made with longitudinal grooves, more or less like the grooving in rose-head countersink bits. The taper bit is regulated to pass through

the wood and just make a mark on the other side. The sides of the hole can be smoothed with a tapering sand paper block, made for the purpose. The plank is then turned upside down and the hole marked already is enlarged to permit the stem of a sliding peg being inserted. The hole then takes the final form, fig 4. The sliding peg, is made of wood with a thin stem and surmounted by a flat cone. The peg is inserted in the hole and prevented from falling out by putting in a nail on the stem, an inch from the surmounting cone. It provides a play of an inch for the sliding peg.

As has been seen, the circular mould is made in an entirely different manner. The technique of making the hole is a radical change and mould-making is speeded up. The drill makes the hole instead of the chisel and mallet. The mechanical efficiency of the hand is not such a big and important factor in making the moulds as in the case of the square moulds. A specially skilled workman turns out 80 holes in a day in the ordinary mould or 50 holes in the peg-mould. A skilled workman, not specialised, would drill a large number of round holes in a day.

With the size of wood and the labour for turning out the job reduced and the specialised workman set aside, the cost of making the moulds is bound to be considerably reduced. The precision in the round tapering holes, eliminates the possibility of "cones" sticking in the holes, as often happens in the square holes, when the sides are lightly hollowed or bulged out. The round mould is likely to last fairly long with reasonable care.

The jaggery cones resemble the old cubes in general form and appearance and are not likely to be minded by the consumers, at least not after the novelty of the new shape wears off.

It is likely that small and minor difficulties will present themselves when the mould making is first attempted as with all new attempts, but they will, it is hoped, be overcome in the usual manner by local resource and talent.

Cultivation of Leafy Vegetables in the Northern Circars

By A. SANKARAM, B. Sc. (Ag.)

There is a great and real need for increasing the production of vegetables at present. With the present shortage of food grains, the use of large quantities of vegetables would to that extent relieve the pressure and make up the deficiency. Vegetables are valuable human food and our country is not having a sufficiency of vegetables in general. Among the vegetables, the leafy vegetables deserve to be placed high up in the list, as being highly valuable. They are rich in calcium, iron and other minerals and are therefore capable of making up the deficiency of minerals in the food grains, especially the polished rice and the various refined grain products. Also the greens abound in vitamins A and C, which are deficient in the staple articles of the South Indian diet. The greens may therefore be classed as highly protective foods. And the greens supply liberal