DIAGRAM SEQUENCE SHOWING TYPICAL COMMERICAL FOUNDRY SAND MOULDING PROCEDURE

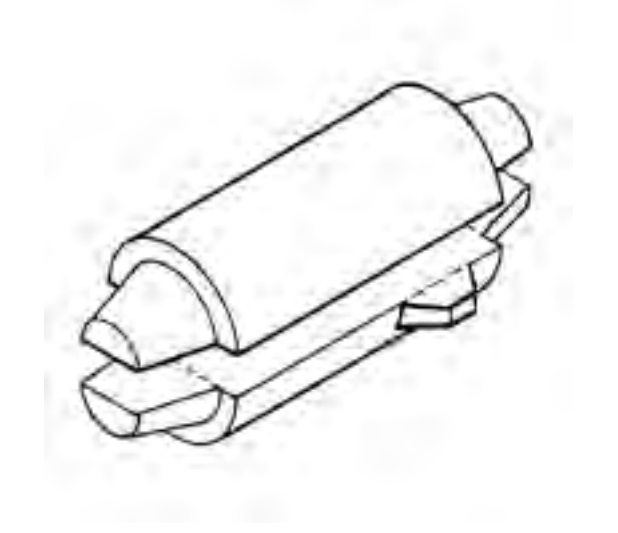

Fig 17
The Commercial Pattern
This type of pattern is usually produced by a specialist patternmaker. The pattern is split along it's parting line with a core print journals included, as well as an ingate point for the runner. Each half of the pattern will usually be mounted on a plate (not shown). The plate contains location points to correctly register each section of the pattern in relation to the moulding flask.

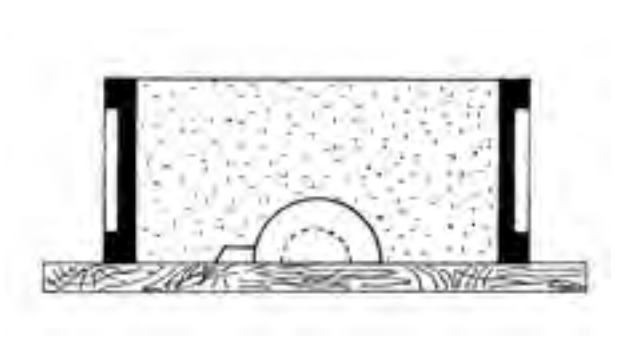

Fig 18
End View
The drag is registered over the lower part of the pattern. A parting powder is applied before the flask is filled with compacted sand and set hard.

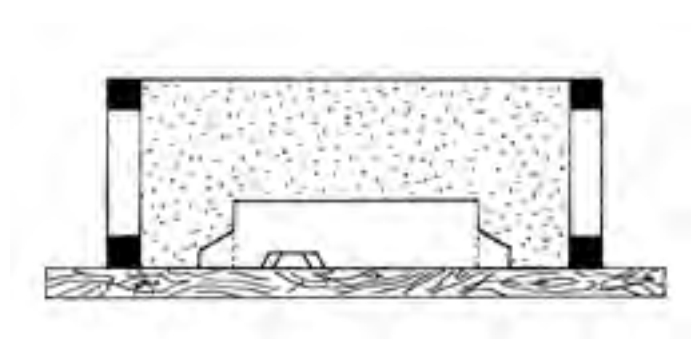

Fig 19
Transverse View

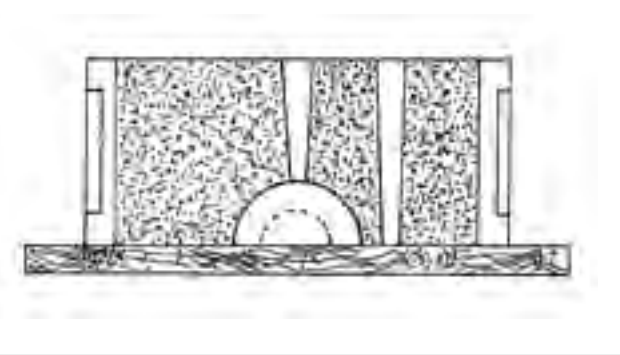

Fig 20
End View
The cope is prepared in a similar way to the drag, and a metal running system is added.

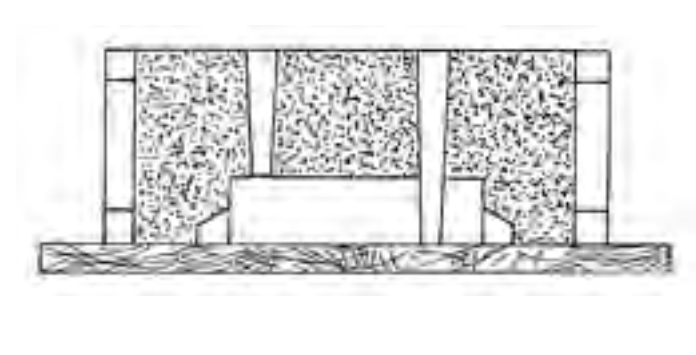

Fig 21
Transverse View

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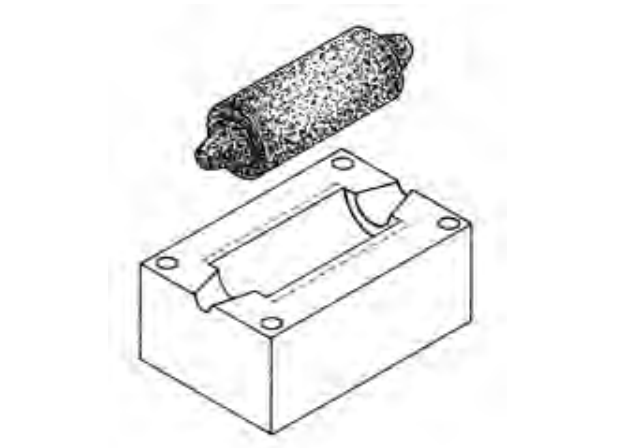

Fig 22
The Core Box (Lower Half Only)
A sand and breakdown powder mix is prepared, and a core is moulded in the core box (dotted line indicates diameter of pattern). A dressing is applied to the core to protect against sand burn, before the core is inserted into the main part of the mould.

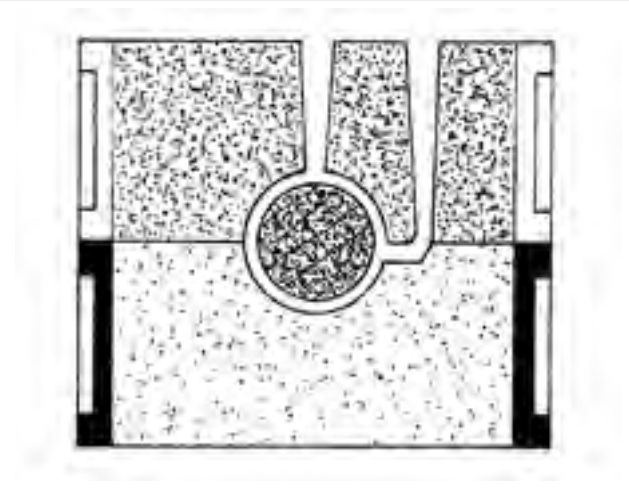

Fig 23
End View
The pattern parts are stripped from the flasks, and all facing surfaces are treated with a sand dressing before the mould is finally assembled and secured.

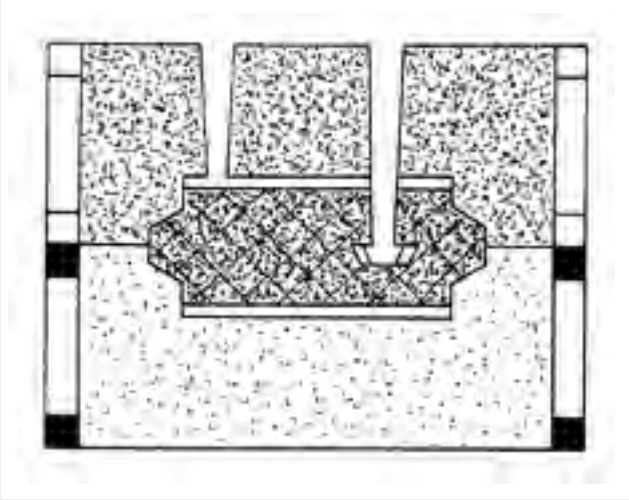

Fig 24
Transverse View
The core is located in it's mould print. If appropriate, armature bars, core vent and chaplets (not shown) are additionally used to support, vent and stabilise the core.

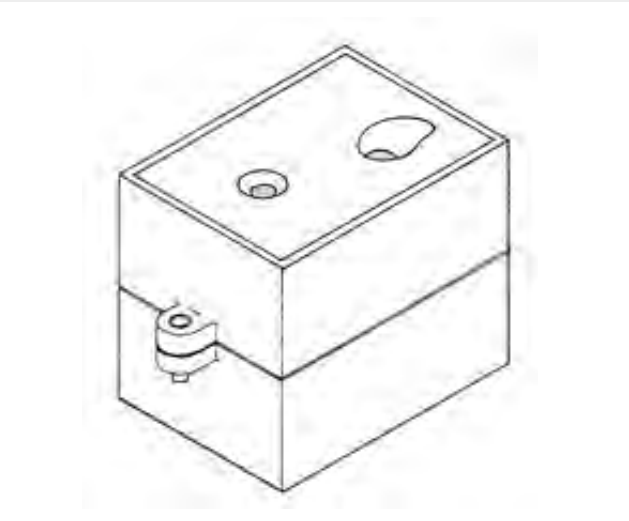

Fig 25
Prepared Flask (Left)
The pouring basin and ingate runner system is usually designed in such a way to trap loose sand and other inclusion, and may be significantly more complex than shown here. Exothermic sleeves for pouring cups and feeders may be added to the system, extending the freezing time of contained metal, and so better supplying the contracting cast.

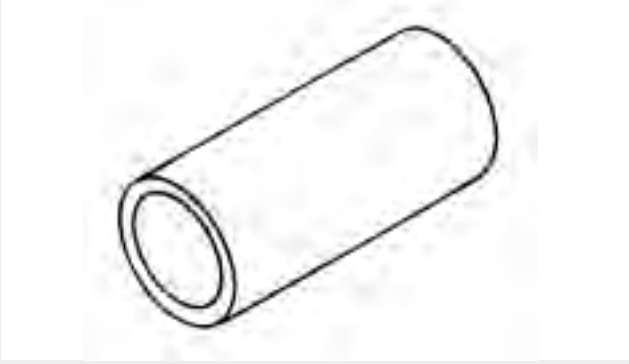

Fig 26
Hollow Cast (Right)
The produced cast (attachments & core removed).

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