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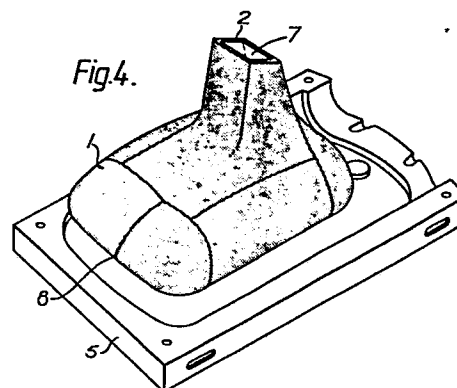
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54 Envelope for covering, during the casting stage, male mould pieces composed of several adjacent parts for casting ceramic sanitary appliances.

57 A covering envelope (1) for mould pieces comprising separate portions (7, 8) which fit together, constituted by a water-permeable pocket provided with at least one insertion mouth and arranged to perfectly cover and adhere to the moulding surfaces of the assembled mould piece.



- 1 -

ENVELOPE FOR COVERING, DURING THE CASTING STAGE, MALE MOULD
PIECES COMPOSED OF SEVERAL ADJACENT PARTS FOR CASTING CERAMIC
SANITARY APPLIANCES

Sanitary appliances in general are known to be produced inside
suitable casting moulds which comprise a set of component
mould pieces constructed of plaster of Paris, which are
arranged to define a moulding cavity into which a material in
5 the form of an aqueous suspension (slip) is then fed.

It is also well known that moulds are widely used at the
present time which enable projecting or undercut parts to be
produced on the corresponding sanitary appliances.

10

This is so for example in the case of water closets, bidets
and urinals with an integral rim.

Said projecting or undercut parts, for example an integral rim
15 as heretofore described, are produced by making the "male"
part of the mould, commonly known as the "piston", in the form
of several adjacent portions which are dismantled to enable
the casting to be withdrawn.

20

Because of the presence of said separate portions which fit
together, the respective sanitary appliances, on stripping
the mould, comprise small ribs which are created at the
inevitable small gaps existing between the various separate
portions which fit together, and between these latter and the

respective mould pieces.

Because said small ribs are normally found on an exposed surface of the cast article, for example on the inner surface
5 of the bowl in the case of a water closet with an integral rim, it is obviously necessary to manually correct said imperfections in order to make the exposed surfaces for glazing perfectly smooth.

10 In order to carry out said finishing operation, highly specialised personnel must be used because the operation is very delicate and also difficult to effect, as the work must be carried out inside said cast articles.

15 Consequently such finishing operations are very long and complicated, they increase the casting time for the finished articles, and heavily affect the costs and thus the profitability of the firm.

20 The main object of the present invention is to provide simple and rational means for obviating these drawbacks.

Basically, the invention proposes to prevent raised lines forming at the junction lines between adjacent portions of the
25 mould, on sanitary appliances in general during the casting of these latter.

According to the invention, this is attained by a covering element in the form of a thin walled envelope of pocket or
30 sleeve configuration constructed of water-permeable elastic fabric such that it can be mounted over and perfectly adhere to the corresponding mould piece which is to be protected.

This re-establishes the continuity of the moulding surface of
35 that mould piece comprising separate portions which fit together, so as to prevent the formation of the undesirable

raised lines on the surfaces of cast articles.

The merits and characteristics of the invention will be more apparent from the description given hereinafter with
5 reference to the accompanying figures, which show by way of non-limiting example an embodiment thereof suitable for moulds for casting water closets with an integral rim.

Figure 1 is a perspective view of the envelope according to
10 the invention.

Figures 2 and 3 are two mutually orthogonal vertical sections through a mould for casting water closets with an integral rim, in which the upper mould piece is covered by
15 the invention.

Figure 4 is a perspective view of the same upper mould piece, but inverted.

20 From the accompanying Figure 1 it can be seen that the proposed envelope is in the form of a floppy sleeve 1 of frusto-conical shape, open at both ends.

Said frusto-conical shape is determined by the particular use
25 of the invention, which as stated is for the compound piston of a mould designed for casting water closets with an integral rim.

However, it is obvious that said sleeve can assume any shape
30 as dictated by the particular configuration of the mould pieces with separate portions which fit together, to be covered.

For example, it can comprise only one mouth or opening, in
35 which case it assumes the shape of a pocket or stocking.

The sleeve 1 comprises a thin water-permeable wall of constant thickness constituted by a suitable permeable elastic fabric.

- 5 Said fabric can for example be a natural or synthetic elasticised fabric of very dense mesh, for example a mesh of synthetic elastic fibres such as nylon, helanca or the like.
- 10 Each mouth of the frusto-conical sleeve 1 is bounded by a reinforced edge 2 which is also elastic.

The described sleeve can be used for a mould of the type shown in Figures 2, 3 and 4, designed for moulding water
15 closets with an integral rim.

Said mould, of known type, comprises a lower mould piece 3, two side mould pieces 4 to be placed on the lower mould piece to define a casting cavity, an upper mould piece 5
20 arranged to upperly close said casting cavity, and a rear mould piece 6 lying between the upper mould piece 5 and side mould pieces 4.

Furthermore, the upper mould piece 5 is constituted by a
25 central core 7, of which the central part is surrounded by a collar 8 of known type comprising a set of separate portions which fit together.

As is known, the collar 8 is intended to mould the integral
30 rim of the relative water closet, and is locked to the upper mould piece 5 by usual magnetic devices 9.

As is clearly shown in Figure 4, before mounting the upper mould piece 5 on to the mould, the sleeve 1 is mounted over
35 this latter mould piece, and as it is taut it adheres

perfectly to the moulding surface of the core 7 and collar 8.

By means of its two reinforced end edges 2, it also engages securely with the outer upper edge of the collar 8 and the
5 perimetral edge of the free end of the core 7.

This ensures the correct operative positioning of the invention during the casting stage, and its use ensures continuity of the moulding surfaces of that mould piece 5
10 constituted by the separate portions 8, so as to obviate the formation of the undesirable raised lines on the cast article in positions corresponding with the mould joining lines.

15 No description will be given of the mould assembly, the casting of the ceramic material and the withdrawal of the cast articles from the mould as these are well known normal operations.

20 It will merely be stated that after extracting the upper mould piece 5 and the constituent parts of the collar 8, the sleeve 1 can be separated from the still soft cast article, and be used for a subsequent casting operation after suitable cleaning.

25 The invention is not limited to the single embodiment heretofore described, and modifications and improvements can be made thereto without leaving the scope of the invention, the basic characteristics of which are summarised in the following
30 claims.

PATENT CLAIMS

1. An envelope for covering, during the casting stage,
mould pieces comprising separate portions which fit together,
5 characterised by being constituted by a water-permeable thin
walled pocket or sleeve (1) provided with at least one
opening for mounting it over the corresponding mould piece
comprising separate portions (7, 8) which fit together, and
constructed of an elastic material arranged to perfectly
10 adapt or fit itself to the moulding surface of said
corresponding mould piece comprising separate portions which
fit together.
2. An envelope as claimed in claim 1, characterised in that
15 said elastic pocket or sleeve (1) is in the form of a thin
deformable water-permeable sheath of synthetic material.
3. An envelope as claimed in claim 1, characterised in that
said elastic pocket or sleeve is constituted by a natural
20 or synthetic elasticised fabric of very dense mesh.
4. An envelope as claimed in claim 1, characterised in that
said at least one opening is bounded by a reinforced edge
(2) which is also elastic, and arranged to securely grip the
25 respective mould piece comprising separate portions which
fit together.
5. An envelope as claimed in claim 1, characterised in that
the surface area of the elastic pocket when not being used is
30 decidedly less than that of the moulding surface of the
corresponding mould piece comprising separate portions which
fit together.

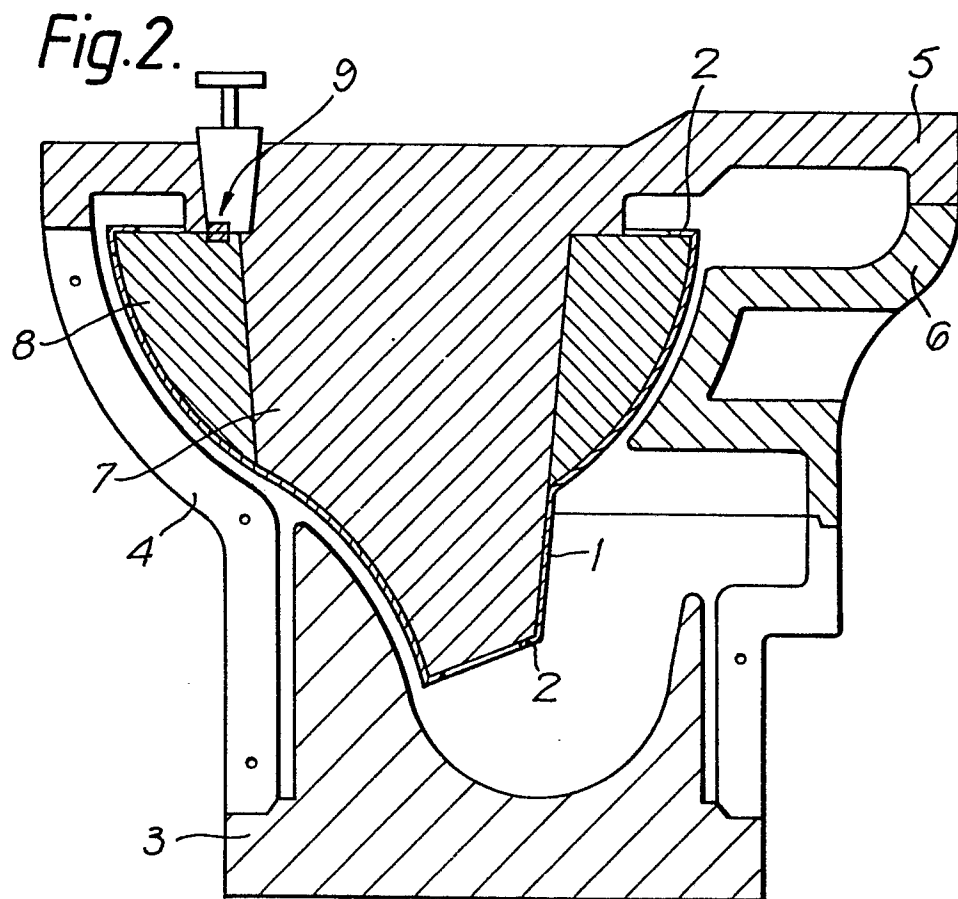
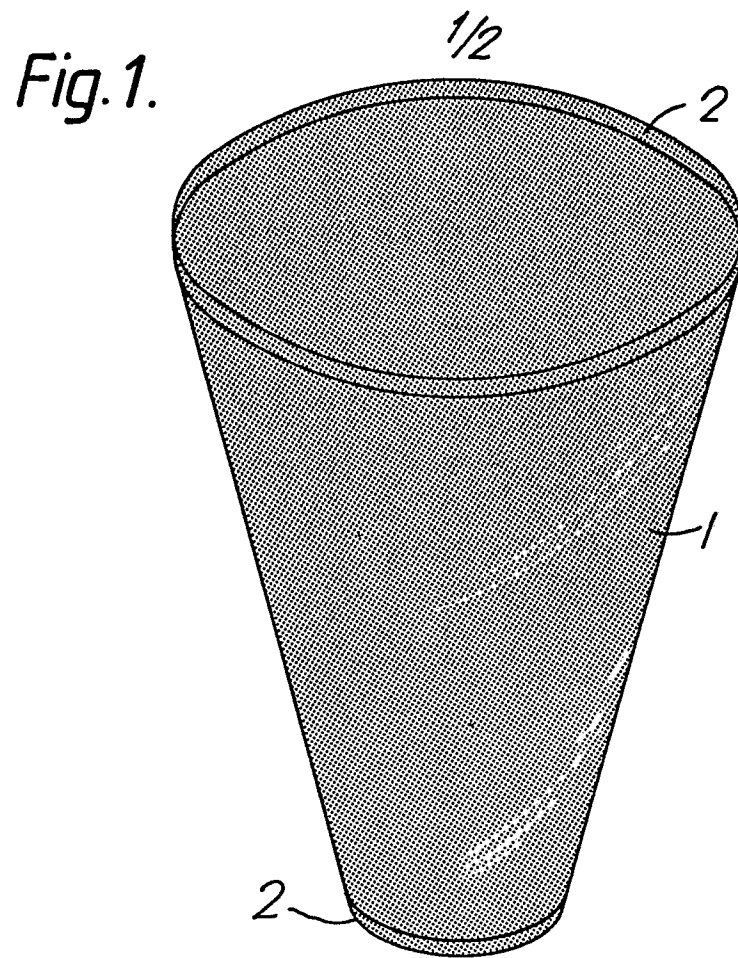


Fig.3.

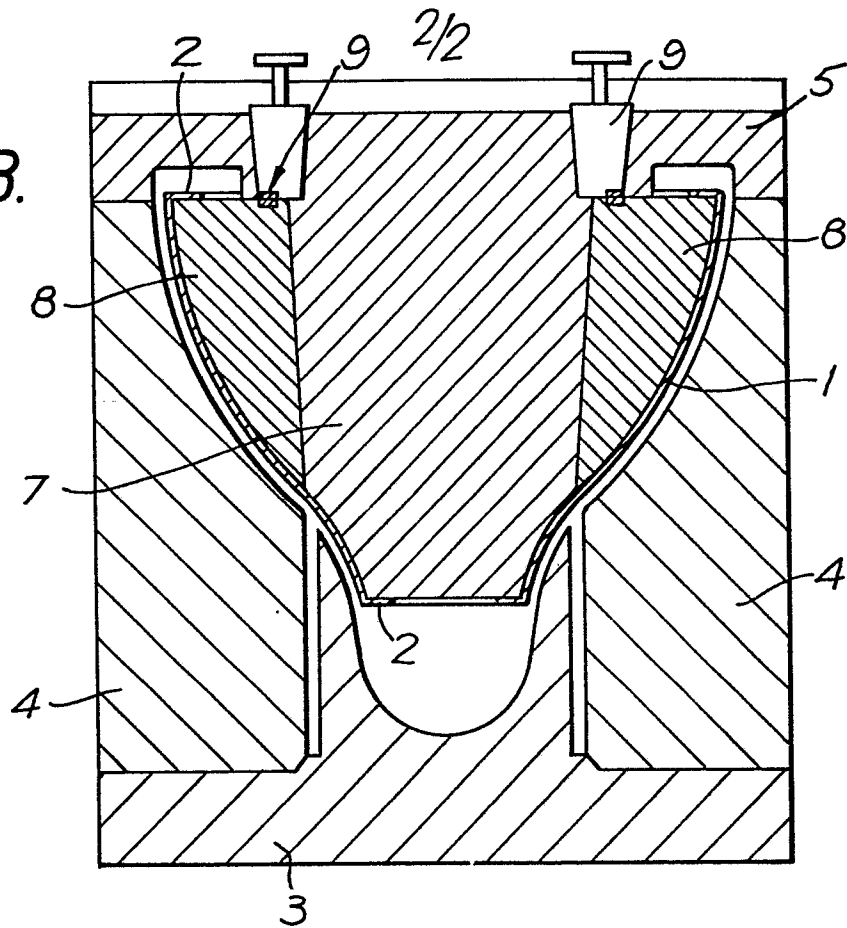


Fig.4.

