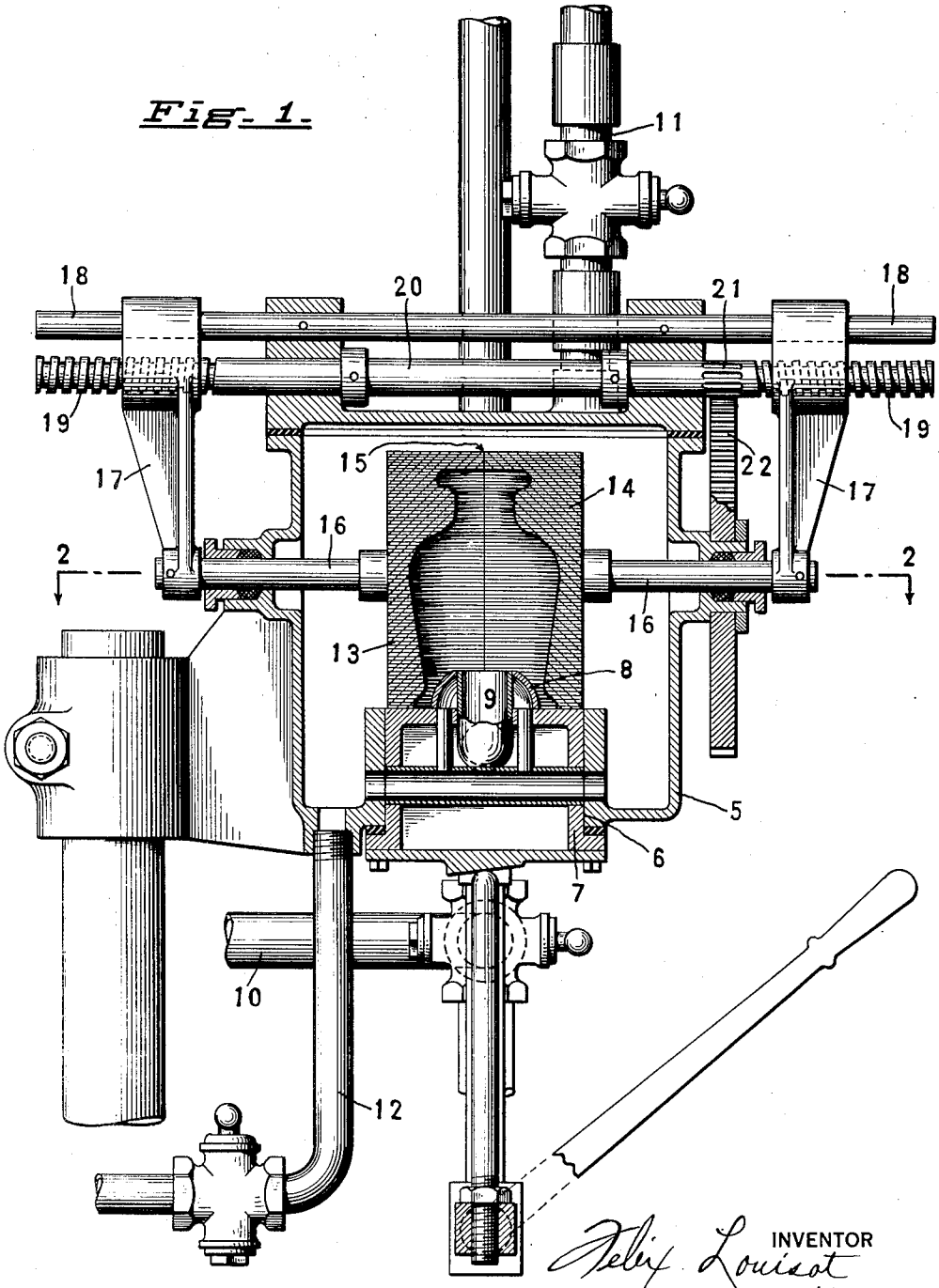
Nov. 2, 1926. 1,605,358

F. LOUISOT

MOLD

Original Filed June 9 1925 2 Sheets-Sheet 1

Fig. 1.



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Fig. 2.

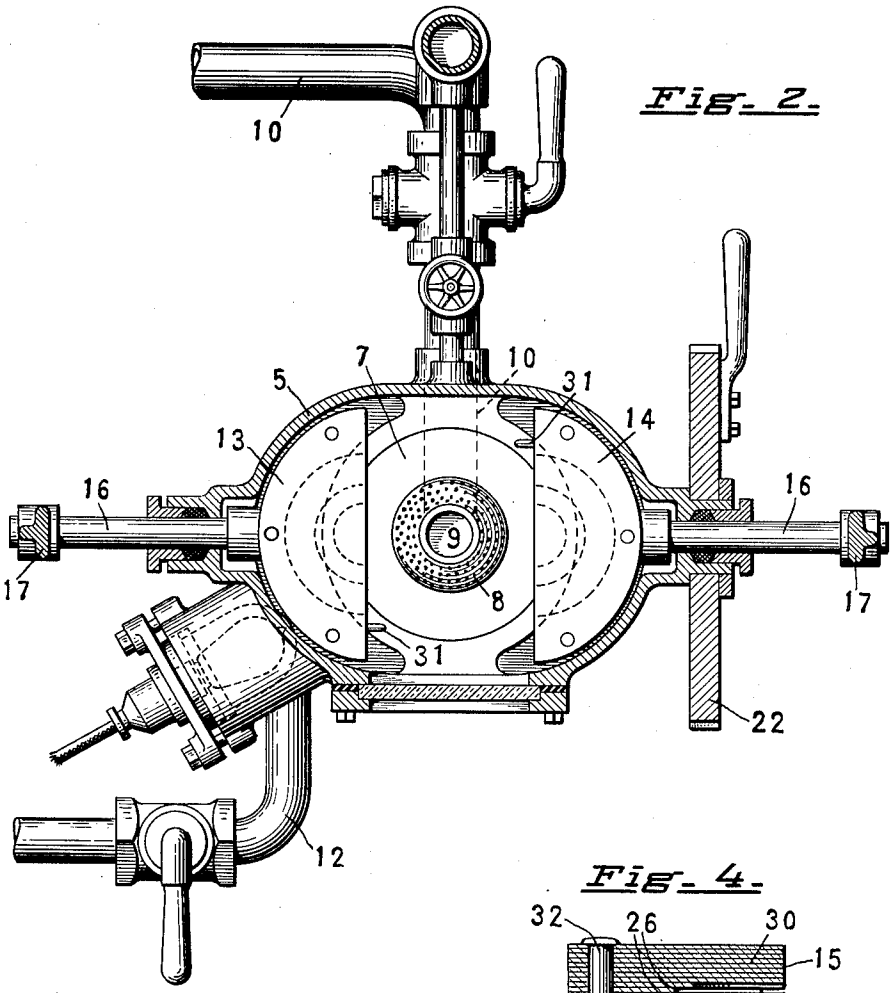


Fig. 4.

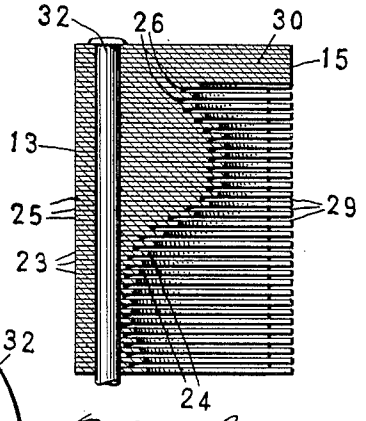
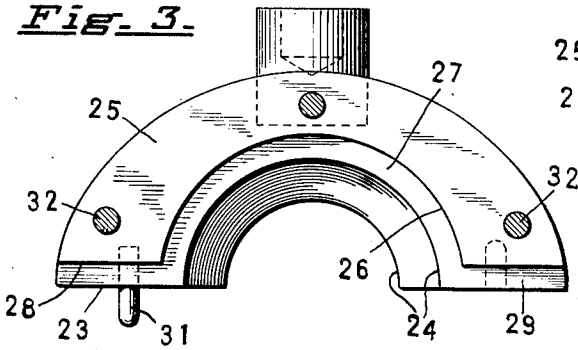


Fig. 3.



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Patented Nov. 2, 1926. 1,605,358

UNITED STATES PATENT OFFICE.

FELIX LOUISOT, OF HASBROUCK HEIGHTS, NEW JERSEY, ASSIGNOR TO WILLIAM M. SHEFFIELD, OF NEW YORK, N. Y.

MOLD.

Application filed June 9, 1925, Serial No. 35,848. Renewed February 2, 1926.

The present invention is an improvement on the perforate molds heretofore used in pulp molding machines and the like. Such molds have usually been made with perforate walls of wire mesh or other fabric which is more or less fragile. Such mold walls are fragile, leave an imprint of their mesh on the molded surface and cannot well be used to produce very sharply angled outlines.

The objects of this invention are to provide a mold in which the foregoing objections and limitations will be overcome, which will be relatively simple, inexpensive and wholly practical for producing any desired shapes.

The foregoing and other objects are attained in part by forming the mold as a laminate structure in which the mold cavity is outlined by the edges of thin laminæ spaced by interposed thin laminæ set back from the edges of the mold defining laminæ so as to form minute drainage channels in the face of the mold wall.

Various other novel features of the invention will appear as the specification proceeds.

The drawings accompanying and forming part of this specification illustrate the invention as embodied in a practical commercial form but it should be understood that the structure may be modified as regards this disclosure without departure from the broad spirit and scope of the invention as hereinafter defined and claimed.

Figure 1 is a vertical sectional view of the mold, in the suction chamber, closed ready to receive a charge of the pulp or other material.

Figure 2 is a horizontal cross sectional view as on substantially the plane of line 2—2 of Figure 1, showing the two parts of the mold separated for the discharge of the molded article.

Figure 3 is a horizontal sectional view of one of the separable mold elements on an enlarged scale.

Figure 4 is a vertical central sectional view of the same.

In the illustration the mold receiving suction chamber of a molding machine is indicated at 5 having a bottom opening 6 through which the molded product is withdrawn, said opening being closed by a plug 7, carrying a support 8 for the molded article with a pulp supply passage 9 opening up through such support. This pulp passage opens out through the side of the plug so as to be in communication with the pulp supply conduit 10 when the plug is in its closed position. Suction is applied to the mold containing chamber by suction conduit 11 and the drainage is carried off by a conduit 12.

The mold is shown as made up in two parts 13, 14 separable on a vertical center line 15 and actuated by rods 16 entered through stuffing boxes in the sides of the mold chamber and engaged by the arms 17 sliding on guides 18 and operated by screws 19. The shaft 20 which carries these screws is shown as provided with a pinion 21 engaged by an operating gear 22.

The laminate structure of the mold is indicated in a general way in Figure 1 and is shown in detail in Figures 3 and 4. In the latter two views, the thickness of the laminæ is exaggerated for purposes of illustration but the thickness may be variable, depending on the size, quality and configuration of the work. Certain of the laminæ, the alternate ones 23 in the illustration, have their inner edges 24 cut or positioned to collectively define and outline the side walls of the mold cavity and the intermediate or intervening laminæ 25 have their inner edges 26 recessed or "set back" to outline circumferential drainage channels 27 in the face of the thus formed mold wall. The intervening, spacing or channel forming laminæ 25 are shown also as having their edges 28 adjacent the meeting faces of the mold members as set back from such faces to provide the passages 29 opening from the circumferential channels 27 into the interior of the suction chamber. The top of the mold is shown as closed by the solid top laminæ 30 and the bottom of the mold is provided by the top surface of the plug 7. Dowels 31 are shown provided on the meeting faces of the mold blocks to guide them into proper

cooperative relation. The laminæ of which the blocks are composed are suitably secured together as by means of suitable through bolts 32 which may be simple headed over at their opposite ends in the nature of long rivets.

The edges of the mold wall defining laminæ form narrow continuous circumferential ribs collectively defining the shape of the mold cavity and they are spaced so closely together as to produce a substantially smooth continuous molded surface, as distinguished from the broken or lined surface produced by a wire mesh mold. The drainage channels between the mold outlining laminæ are so minute as to afford no substantial breaks in the continuity of the mold face but because of their depth, their continuous extent and easy access at both sides of the separable molds, are fully capable of carrying off all the extracted liquid. The spacing laminæ brace the mold defining laminæ forming with them practically a solid mass which is fully self-sustaining and can be handled without the exercise of any special care.

Because of the wide distribution of the drainage channels in the face of the mold and the full and free access of suction thereto, the mold cavity can be quickly and uniformly filled with the pulp or other material by a single suction application and this construction furthermore enables the material to be the more firmly compacted and dried against the mold wall. Also, because of the relative continuity of the mold wall, a higher degree of suction may be employed, resulting in faster operation and more uniform product.

What is claimed is:

1. A mold of laminate structure having a mold wall defined by the edges of alternate laminations and with the edges of intervening laminæ set back from the outline of such mold wall to provide drainage channels in the face of the mold wall.

2. A mold consisting of horizontally disposed thin laminations with the edges of alternate laminæ positioned to define a mold wall and the edges of the intervening laminæ set back from the outline of the mold wall thus defined to provide drainage channels at the surface of the mold wall.

3. A mold consisting of superposed thin laminations arranged in relatively separable blocks with the opposing edges of certain laminæ in the blocks defining mold walls and intervening laminæ set back from the outline of such mold walls to form drainage channels at the faces of such walls.

4. A mold consisting of superposed thin laminations with the edges of certain of the laminæ positioned to define a mold wall of desired outline and separated by intervening laminæ set back from such outline to form drainage channels in the face of such mold wall.

5. A mold consisting of superposed thin laminations with the edges of certain of the laminæ positioned to define a mold wall of desired outline and separated by intervening laminæ set back from such outline to form drainage channels in the face of such mold wall and a suction chamber enclosing the laminate structure and into which the drainage channels open.

6. A mold consisting of superposed thin laminations arranged in relatively separable blocks with the opposing edges of certain laminæ in the blocks defining mold walls and intervening laminæ set back from the outline of such mold walls to form drainage channels at the faces of such walls and a suction chamber enclosing the separable laminate blocks and in communication with the drainage channels in the faces of the mold walls.

7. A mold consisting of superposed thin laminations arranged in relatively separable blocks with the opposing edges of certain laminæ in the blocks defining mold walls and intervening laminæ set back from the outline of such mold walls to form drainage channels at the faces of such walls and a suction chamber enclosing the separable laminate blocks and in communication with the drainage channels in the faces of the mold walls, the edges of the inset laminæ being set back at the meeting faces of the blocks to provide communication between the interior of the chamber and the drainage channels aforesaid.

8. A mold having a mold chamber defined by continuous narrow ribs arranged in spaced order with intervening continuous narrow channels.

9. A mold consisting of superposed thin laminations of alternately larger and smaller dimensions and with the edges of the larger laminæ defining a mold wall and the edges of the smaller intervening laminæ defining drainage channels at the surface of such mold wall.

10. A mold comprising relatively separable blocks of superposed thin laminæ with the opposed edges of such laminæ shaped to form a ribbed mold chamber with intervening drainage channels between the ribs.

11. A mold comprising relatively separable blocks of superposed thin laminæ with the opposed edges of such laminæ shaped to form a ribbed mold chamber with intervening drainage channels between the ribs, said drainage channels opening out through the meeting faces of the blocks and a chamber enclosing the laminate molds and in communication with such open channels.

12. A mold of the character disclosed, comprising superposed thin horizontally dis-

posed laminations having edges positioned collectively to define the side walls of a mold chamber with drainage channels in the face of the same.

13. A mold of the character disclosed, comprising superposed thin horizontally disposed laminations having edges positioned collectively to define the side walls of a mold chamber with drainage channels in the face of the same, said laminæ being secured together in blocks separable on substantially vertical lines and with the drainage channels extending out to the edges of such blocks.

In testimony whereof I affix my signature.

FELIX LOUISOT.