

No. 753,641.

PATENTED MAR. 1, 1904.

C. SHEPHERD.
PANEL.

APPLICATION FILED AUG. 13, 1903.

NO MODEL

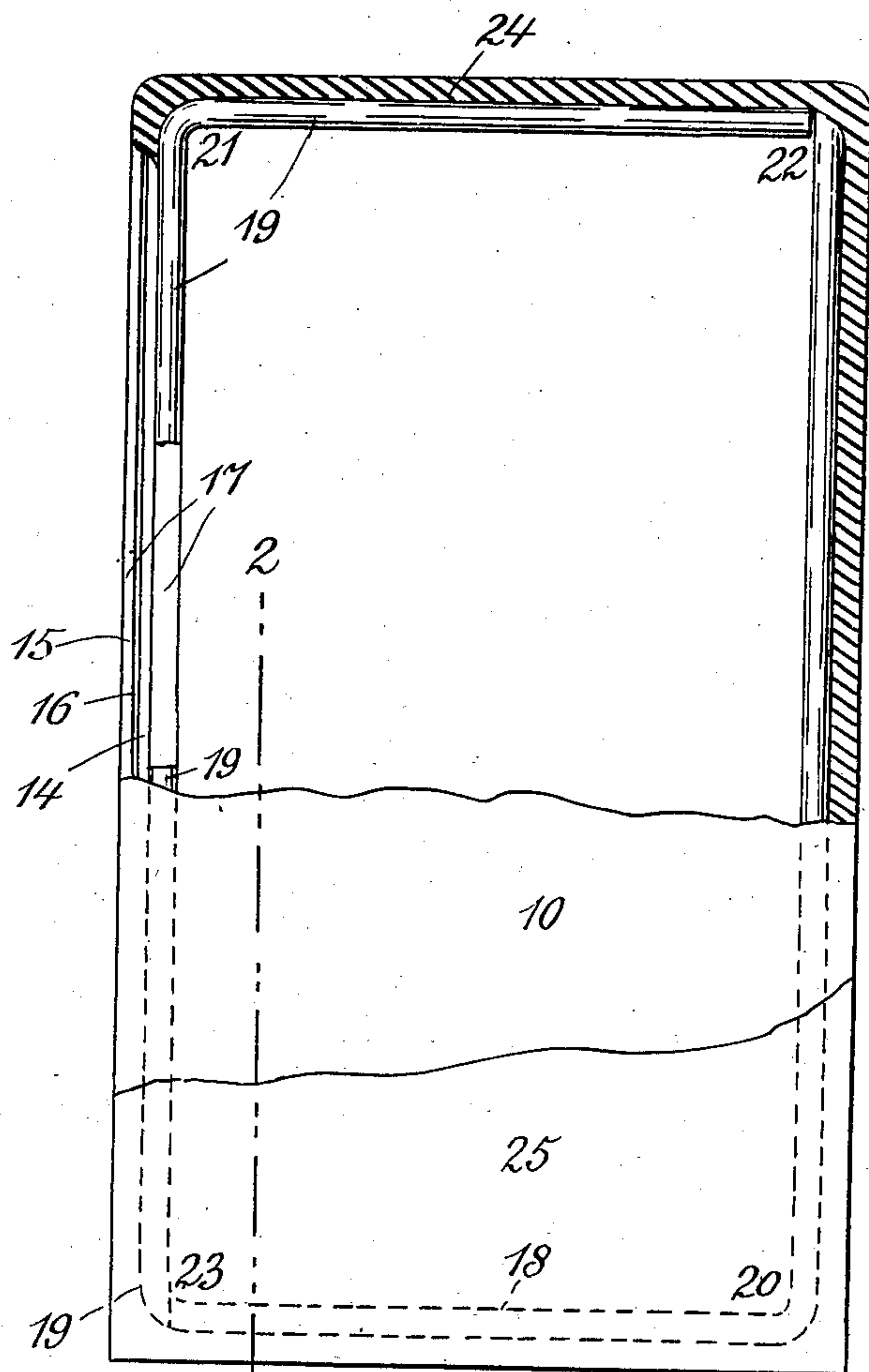


Fig. 1.

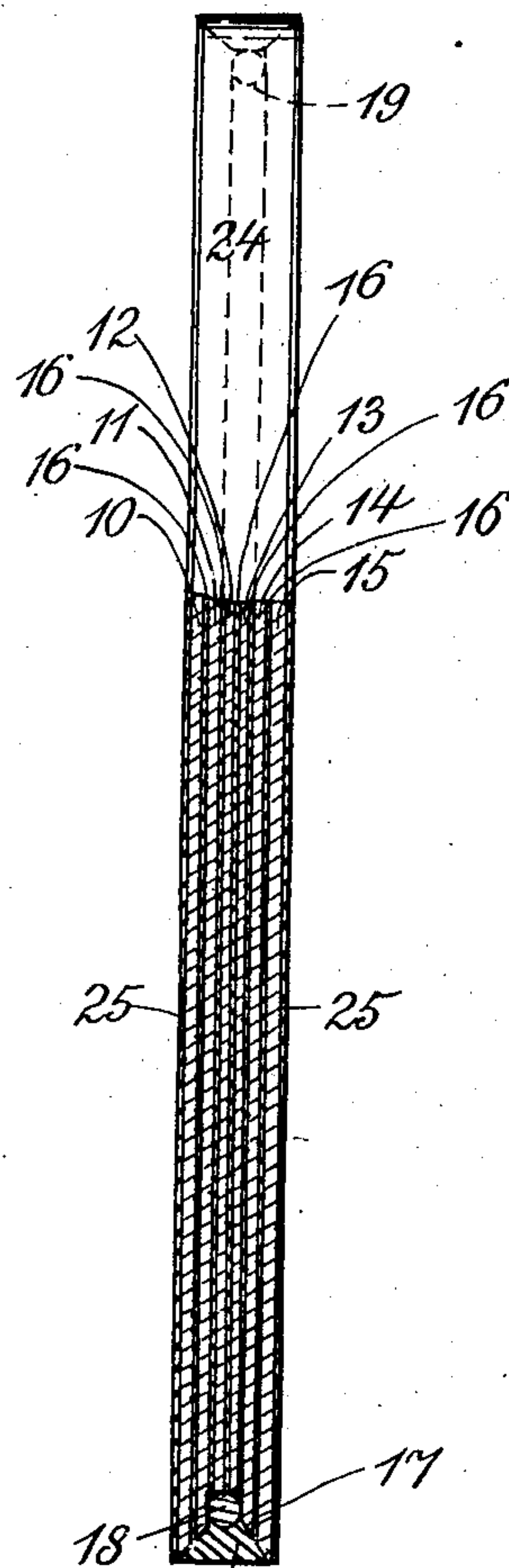


Fig. 2.

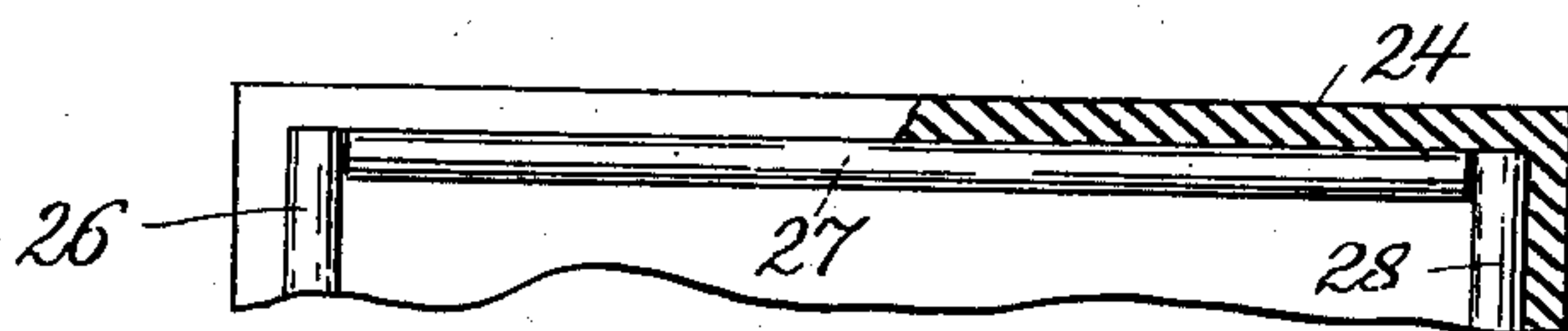


Fig. 3.

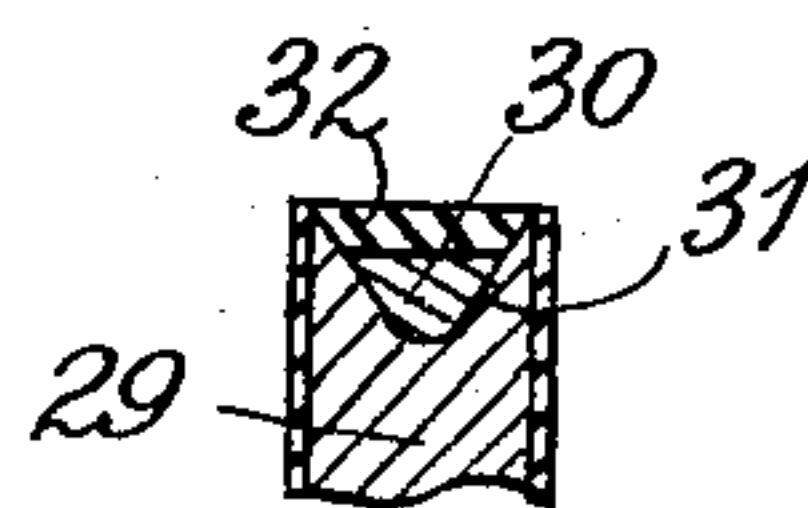


Fig. 4.

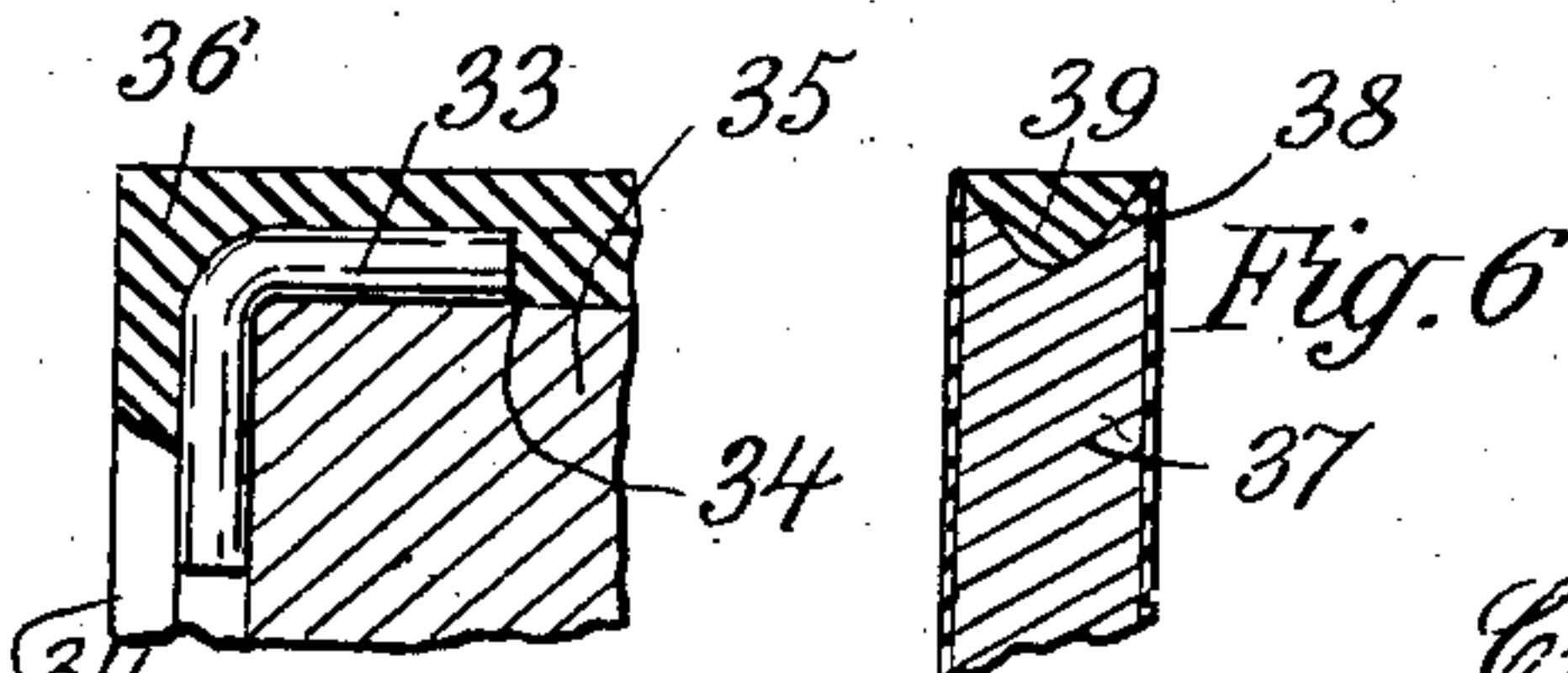


Fig. 5.

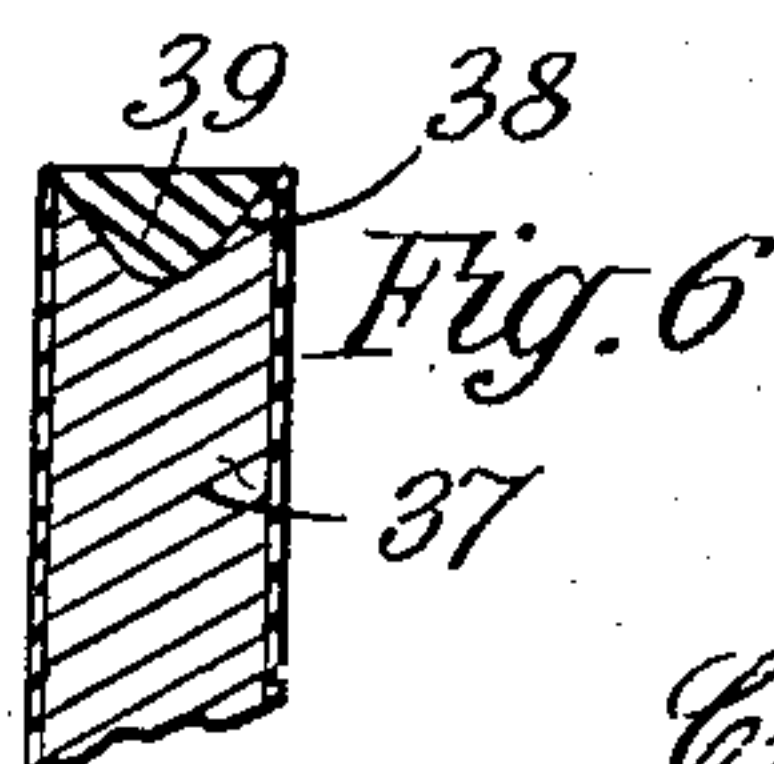


Fig. 6.

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UNITED STATES PATENT OFFICE.

CHARLES SHEPHERD, OF NEW YORK, N. Y.

PANEL.

SPECIFICATION forming part of Letters Patent No. 753,641, dated March 1, 1904.

Application filed August 13, 1903. Serial No. 169,341. (No model.)

To all whom it may concern:

Be it known that I, CHARLES SHEPHERD, a citizen of the United States, and a resident of the borough of Brooklyn, city of New York, in the county of Kings and State of New York, have invented certain new and useful Improvements in Panels, of which the following is a specification.

My invention refers to panels which are to be employed for various purposes, and particularly in cases where heretofore sheets of metal or boards or a multiplicity of layers of boards joined together have been employed, as has, for instance, been the case with reference to artists' panels.

The objects of my invention are to provide a panel which shall be of simple construction, protected against the injurious effects of moisture, light in weight, and capable of maintaining its shape and resisting warping and splitting or cracking under varying conditions. I accomplish these and other useful objects by the means hereinafter specified, and set forth more particularly in the claims.

In the accompanying drawings, forming part of this specification, and wherein corresponding figures of reference refer to corresponding parts, Figure 1 is a front view with parts broken away of a panel constructed according to my invention, while the upper portion of Fig. 2 is a side elevation of such panel, its lower portion representing a section along line 2 2 in Fig. 1. Figs. 3 to 6, both inclusive, represent modified constructions embodying certain features of my improvements, Fig. 3 being a longitudinal section of part of a panel, Figs. 4 and 6 cross-sections of the end portions of different panels, and Fig. 5 a longitudinal section of the corner of a panel.

Referring first to Figs. 1 and 2, 10, 11, 12, 13, 14, and 15 are sheets or leaves of compressed pulp joined together by intermediate layers of a suitable cement 16, the different leaves, together with such interposed layers of cement, having been subjected to heavy transverse pressures, so as to be made to form a solid and rigid body either with smooth and straight faces or with portions thereof in relief, according to the different uses to which it is intended to put the panel.

17 represents a groove extending entirely around the edges of the panel. That portion of said groove opposite leaves 12 and 13 extends farther into the body of the panel than the portions of the outer leaves 10, 11, and 14 and 15, and in said deeper portion iron or steel rods or wires 18 and 19 are placed. The same are made angular, each being bent around one of the angles of the panel at corners 20 and 21, respectively, and the ends of said wires being made to abut against or to face each other at corners 22 and 23.

24 is a body of hard cement used to fill out the outer portion of groove 17, so as to bring the outer surface of the cement even with the outer edges of leaves 10 and 15 and to have said cement closely adhere to the edges of leaves 10, 11, 14, and 15 and to rods or wires 18 and 19. By so filling out the outer portion of groove 17 the body of cement inserted therein will connect with and extend laterally to both sides of the layers of cement 16 between leaves 10 and 11 and leaves 14 and 15. Such cement may also be placed between the edges of leaves 12 and 13 and said wires or rods. I prefer to use for such cement a mixture of glue and whiting with some carbol added and made of such consistency that when heated it may form a pasty mass, which can be readily poured into said grooves, and that upon cooling it may form a solid and hard mass impervious to moisture and firmly tying together the edges of said leaves and said wires or rods. The same kind of cement I also prefer to interpose between the various leaves of pulp in form of layers 16, as I have found that thereby and particularly also by the use of said wires or rods I am enabled to produce panels or boards which will neither warp nor crack and into which nails may be driven freely or screws inserted, as may be required. The faces of leaves 10 and 15 I cover with coatings of shellac, as 25, to complete the protection of the panels against moisture.

While I prefer to use a multiplicity of leaves in forming my panel, a single leaf might be employed instead, and instead of using pulp, paper, or even wood any other suitable material might be employed. Where a multiplicity of leaves are employed, the same may

originally be so shaped and cut to sizes that when joined together they may form around their edges a channel, as 17, of proper cross-section, or else all the sheets may be made of
5 the same size, and the channel may be cut out afterward.

In Fig. 3 I have illustrated the use of straight rods, as 26, 27, and 28, placed along the different edges and made to abut against
10 each other, so as to avoid the use of angular pieces.

In Fig. 4 I show a panel having a single leaf 29, with a rod 30 of wedge-shaped cross-section made to fit the interior portion of its
15 groove 31 and a body of cement 32 filling the outer portion of said groove.

In Fig. 5 the use of an angular wire 33 is illustrated in the portion of the groove 34 around one of the corners of a leaf 35, forming the main body of the panel, while a body of cement 36 is placed outside of said angular
20 wire and also between the ends of said wire and those on the opposite ends, (which are not shown in the drawings.)

In Fig. 6 I show a single grooved leaf 37, having its groove 38 filled only with a body of cement 39 and without the use of any iron
25 rod or wire.

The body of cement 24, inserted within
30 groove 17, not only adds stiffness to the panel, but also makes the cut edges of the leaf or leaves forming the same impervious to moisture. By making the sides of the grooves flaring or by reducing the widths of said
35 grooves toward the interior of the panel I obtain larger surfaces along which the cement adheres to the edges of the leaves forming the panel than I would obtain otherwise, and I thereby increase the strength and rigidity of
40 the panels and make it possible to connect all the layers of cement 16 with the surrounding body of cement 24 and make such body extending from face to face of the panel.

It will readily be seen that many of the de-

tails of my invention as described above may
45 be varied materially, particularly also with reference to the materials employed, without departing from the spirit of my invention, and I therefore do not wish to confine myself to the details and detail combinations above
50 set forth.

I claim—

1. In a panel, the combination with its main body provided with a groove having flaring sides, of a reinforcing-rod placed within said
55 groove, and a filling of cement of greater width than the thickness of said rod, secured to the outer flaring portions of said groove along said rod.

2. In a panel, the combination with its main body provided with a groove extending around one of its corners, of reinforcing-rods placed in said groove on both sides of the corner and having their ends placed opposite each other at said corner, and a body of cement attached
60 to said groove and to said rods on both sides of said corner.

3. In a panel, the combination with its main body comprising a multiplicity of leaves with layers of cement interposed between the same
65 and having a groove along its outer edge, of a body of cement attached to the edges of such layers forming said groove, and being continuous with such layers of cement.

4. In a panel, the combination with its main body comprising a multiplicity of leaves cemented together and having a groove along its outer edge, a rod or wire inserted in said groove along an interior leaf and a body of cement attached to the edges of the outer leaves.
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Signed at New York, in the county of New York and State of New York, this 12th day of August, A. D. 1903.

CHARLES SHEPHERD.

Witnesses:

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