

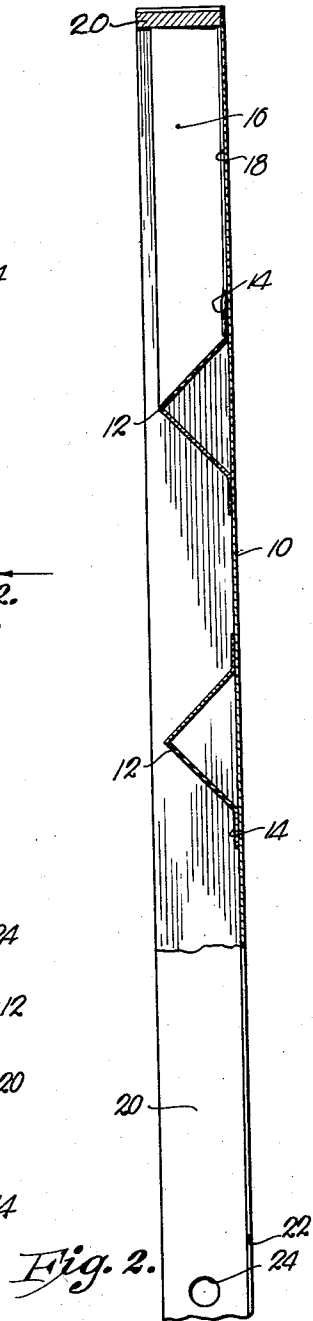
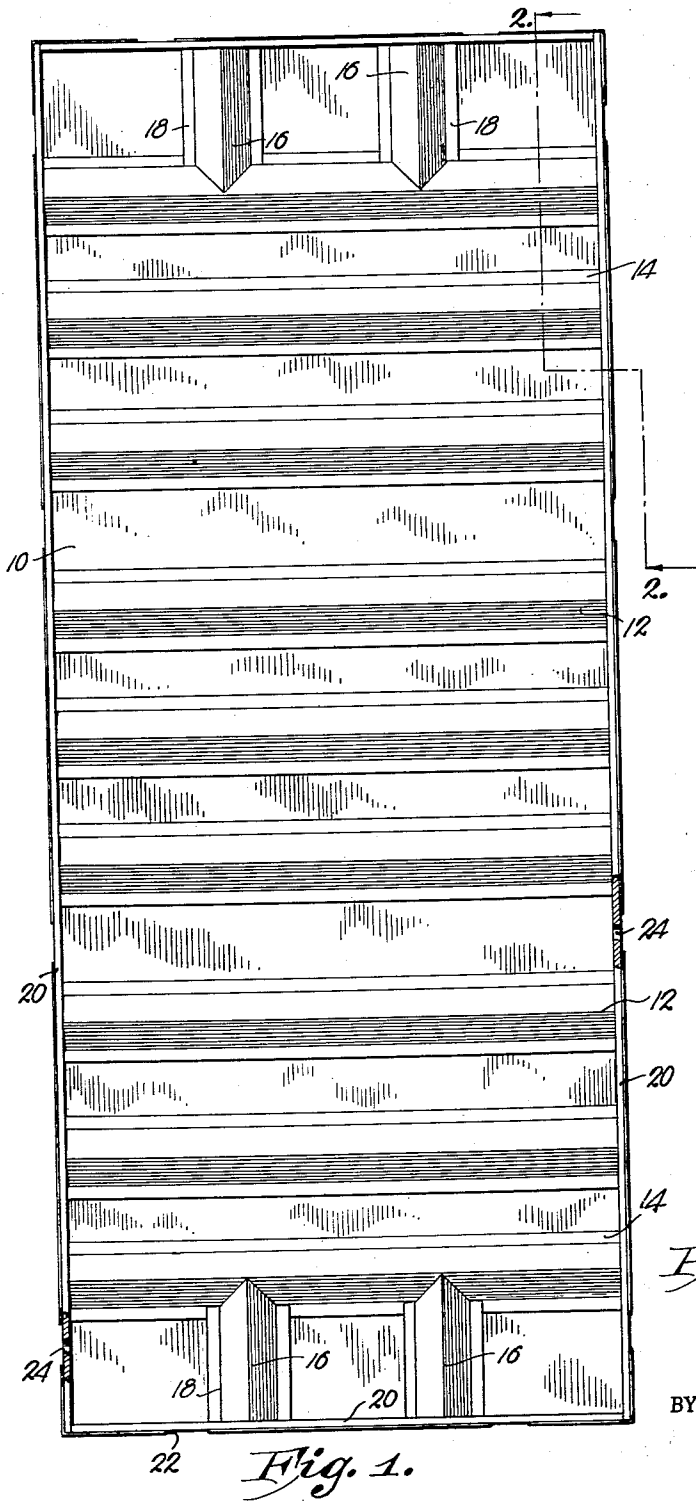
Dec. 13, 1960

L. P. LE CLUYSE  
CONCRETE FORM PANEL

2,963,763

Filed Aug. 18, 1958

2 Sheets-Sheet 1



INVENTOR.

Leonard P. LeCluyse

BY

*Carl H. Hoenig*  
ATTORNEY.

Dec. 13, 1960

L. P. LE CLUYSE  
CONCRETE FORM PANEL

2,963,763

Filed Aug. 18, 1958

2 Sheets-Sheet 2

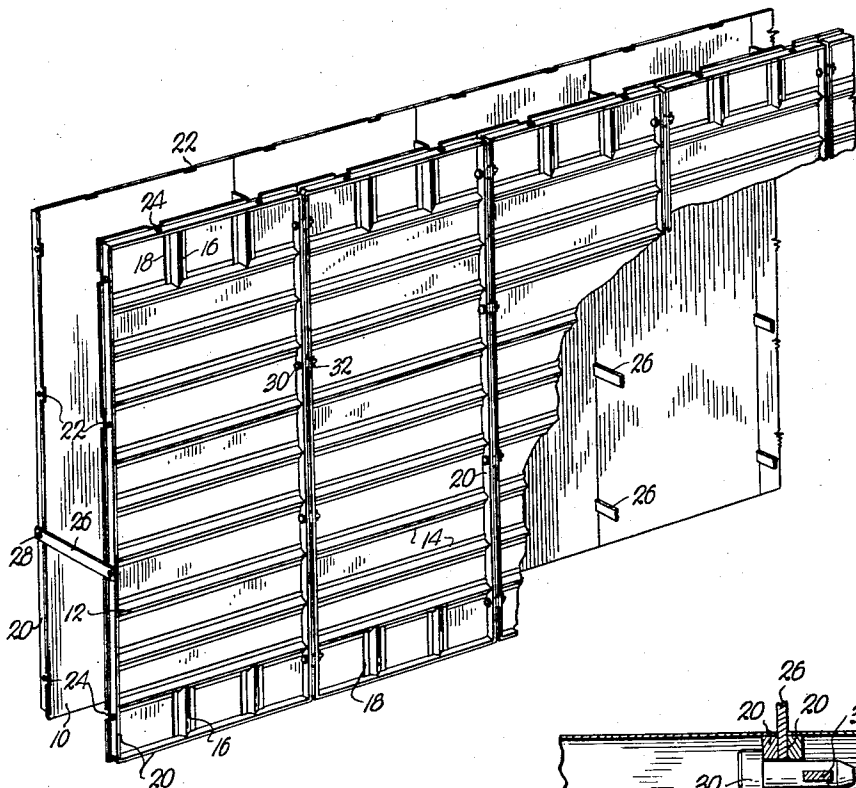


Fig. 3.

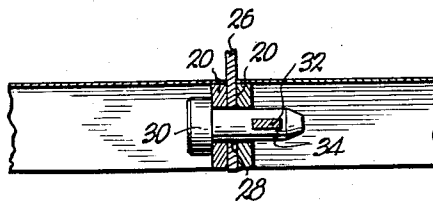


Fig. 4.

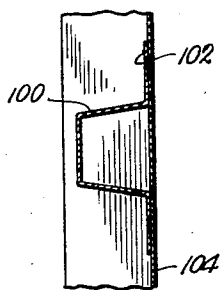


Fig. 5.

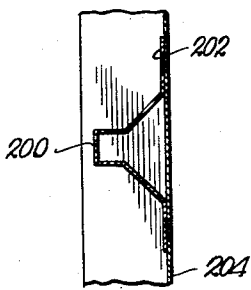


Fig. 6.

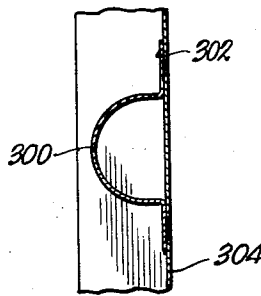


Fig. 7.

INVENTOR.  
Leonard P. LeCluyse

BY *Carl H. Hays*  
ATTORNEY.

1

2,963,763

## CONCRETE FORM PANEL

Leonard P. Le Cluyse, 111 W. Southside Blvd.,  
Independence, Mo.

Filed Aug. 18, 1958, Ser. No. 755,691

2 Claims. (Cl. 25—131)

This invention relates to concrete forms and particularly that type of structure composed of a number of panels disposed in edge-to-edge relation and spaced-apart condition so that the concrete may be poured therebetween and thereby construct the wall after which the form may be dismantled and the panels thereof stacked in convenient condition for transportation to another location of use.

The primary object of this invention is to provide a panel for concrete forms of the aforementioned character which panel is especially devised and made to present a plate having a smooth surface, a reinforcing frame at the marginal edge of the plate and extending around the side thereof opposite the smooth surface and a number of specially constructed and placed reinforcing ribs rigidly secured to the face of the plate opposite from the smooth surface thereof to not only insure that the plate will assume a definite planar condition when in work and during transportation but will protect the edges of the plate so that damage thereto cannot occur through rough handling.

A further object of this invention is the provision of a concrete form panel constructed of metal and particularly aluminum which normally is conveniently light in weight yet strong and capable of withstanding the pressures of the cementitious material which is poured between the panels of the form which the panels create when the panels are in edge-to-edge relation and tied together through appropriate tie rods or bars of conventional character.

Specific details of construction constitute highly important aims and objects of the invention and include the manner of reinforcing one side of the plate of the panel, the manner of spacing laterally extending peripheral, flat, perforated strips along a line spaced inwardly from each of the edges of the main plate and the manner of notching the main plate adjacent to the perforations of the strips so that the conventional tie rods may be inserted while the adjacent abutting edges of the plate of the panel are in close proximity to present an uninterrupted smooth surface.

Other minor objects of the invention will appear during the course of the following specification referring to the accompanying drawings wherein:

Fig. 1 is a plan view of one of the faces of the concrete form panel made in accordance with the present invention;

Fig. 2 is an enlarged fragmentary sectional view taken along line 2—2 of Fig. 1;

Fig. 3 is a fragmentary view of a concrete form comprising a number of the concrete form panels made in accordance with this invention and indicating the manner of bringing the panels together to create a complete form;

Fig. 4 is an enlarged fragmentary sectional view taken on line 4—4 of Fig. 3; and

Figs. 5, 6 and 7 are fragmentary cross-sectional views through three reinforcing ribs, each made pursuant to a different form of the invention.

2

Those skilled in the art will readily recognize that the concrete form panel may create a form such as that shown in Fig. 3 by placing a number of the panels in edge-to-edge relation and in groups that are spaced apart and that have tie bars for holding the groups in condition for receiving cementitious material therebetween. The fragmentary portion of the wall shown in Fig. 3 reveals the manner in which the panels made in accordance with the preferred embodiment of the invention may be placed in edge-to-edge relation with the smooth surfaces inwardly directed and in opposed relation so that when the wall of concrete is created between the forms the face of the wall will be smooth.

Since the several panels of the form shown in Fig. 3 are identical reference will now be made to the panel per se more clearly illustrated in Figs. 1 and 2 of the drawing. Each panel is composed of a plate 10 cut to size for convenient handling and assembly and in this respect it has been found advantageous to use panels that are 88 inches long and 36 inches wide. The panels are placed on end as shown in Fig. 3 and therefore create a wall that is proper in height for a house foundation. The material from which the panel is constructed should be of suitable material to present a light weight and the parts of the panel may be welded together as is conventional practice in such matters. The side of plate 10 opposite from the smooth side which is inwardly directed when the form is erected is provided with a plurality of hollow, polygonal reinforcing ribs 12 each having outwardly extending flanges 14 along their longitudinal edges and which lie directly on the face of plate 10 and that present a part of the means for securement to the plate. In other words, the flanges 14 are welded or otherwise secured directly to plate 10 when the reinforcing ribs 12 are in position shown in Figs. 1 and 2. As indicated in Fig. 1 there are a number of transversely disposed ribs 12 in parallelism (which may be either horizontally or vertically disposed) and extending across the plate 10 from one longitudinal edge to the other and the ribs 12 adjacent to the ends of plate 10 are spaced inwardly from said ends. A pair of ribs 16 are provided at the ends of plate 10 and extend from rib 12 to the end of plate 10. These ribs 16 have flanges 18 similar to flanges 14 of ribs 12 and these flanges are welded or otherwise secured to plate 10 when the panel is assembled. The hollow polygonal nature of ribs 12 and 16 insure great strength to the plate 10 and it is conceivable that modified forms of these ribs may be employed. If desired, the aforementioned flanges 14 and 18 may be eliminated and the ribs 12 and 16 welded or otherwise secured directly to plate 10.

Plate 10 has a laterally extending, peripheral, flat perforated strip along each marginal edge thereof and this strip 20 is welded or otherwise secured to plate 10 along a line spaced inwardly from the edge of plate 10. Ribs 12 and 16 have their ends in abutting relation to the strips 20 and the height of ribs 12 and 16 is substantially the same as the height of strips 20.

Notches 22 are milled or otherwise cut into the edges of plate 10 adjacent to each perforation 24 thereof to afford clearance for tie bars 26 which are disposed as shown in Fig. 3. As is the custom, each tie bar 26 is provided with an opening 28 and the tie bars 26 lie between strips 20 of adjacent abutting panels as shown in Fig. 4. The perforations 28 of tie bars 26 and the perforations 24 of strips 20 are in register when the form is assembled and a pin 30 is passed through these openings and locked in position by a transverse key 32 which passes through a slot formed in pin 30. This slot 34 is near the end of pin 30 opposite to that which has a head thereon, all as shown in Fig. 4.

Through such structural arrangements plates 10 of

the several panels which constitute the form may have their longitudinal edges in direct abutting relation and the use of tie bars 26 will not interrupt the continuity of the plates 10. By spacing strips 20 slightly inwardly from the edges of plate 10 at least a distance equal to the thickness of tie bars 26 plates 10 will present a smooth continuous inner face for the formation of the wall between the groups of panels when assembled as shown, for example, in Fig. 3.

Modified forms of the reinforcing ribs 12 and 16 illustrated in Figs. 1 and 2 are shown in Figs. 5, 6 and 7. In Fig. 5 the reinforcing rib 100 has flanges 102 that are welded to the plate 104 which is similar to plate 10 of the panel illustrated in Figs. 1 and 2. The reinforcing rib 200 illustrated in Fig. 6 is similar yet different in specific cross-sectional contour yet has flanges 202 which are secured to plate 204 of this form of the invention by welding or the like. The reinforcing rib 300 illustrated in Fig. 7 has longitudinal flanges 302 along each longitudinal edge thereof and these flanges are welded or otherwise secured to plate 304 of the form of the invention shown in Fig. 7.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. A panel for forming a concrete wall comprising a plate having a pair of opposed sides, a pair of first opposed edges and a pair of second opposed edges substantially transverse to the first edges, one of said sides presenting a smooth surface for forming one surface of the wall; a plurality of hollow, polygonal reinforcing first ribs se-

cured to the other of said sides in spaced-apart relationship, said first ribs including a pair of outermost ribs each proximal to a corresponding second edge, each of said first ribs substantially bridging the distance between the first edges; a plurality of hollow, polygonal reinforcing second ribs secured to said other side in spaced-apart relationship, each of said second ribs substantially bridging the distance between a corresponding outermost rib and the second edge respective thereto; and an elongated strip for each of said first and second edges, said strips being secured to said other side and extending outwardly therefrom substantially normally thereto, said ribs abutting corresponding strips at the ends of the ribs.

2. The structure as set forth in claim 1, wherein said strips are spaced inwardly from the corresponding edges, each of said edges having a plurality of spaced notches therein, the innermost parts of said notches being flush with the corresponding strip, the latter being perforated proximal to each of said notches, said notches being adapted to receive tie bars and said perforations in said strips adapted to receive tie bar-retaining pins therein.

#### References Cited in the file of this patent

##### UNITED STATES PATENTS

1,963,986	Garrett	June 26, 1934
2,236,616	Bosco	Apr. 1, 1941
2,763,911	Rumble	Sept. 25, 1956
2,816,345	Symons	Dec. 17, 1957