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2,728,216

COMBINATION FORM AND FACING DEVICE FOR CONCRETE

Filed Oct. 26, 1950

2 Sheets-Sheet 1

Fig.1

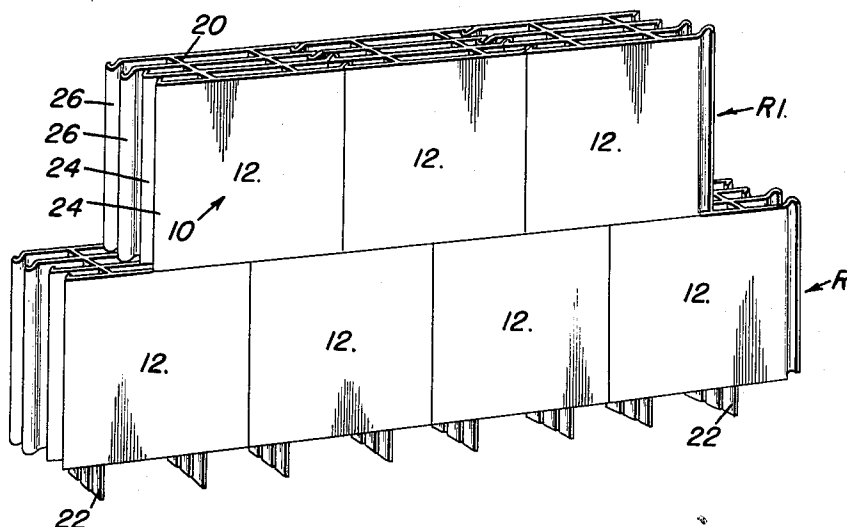


Fig.2

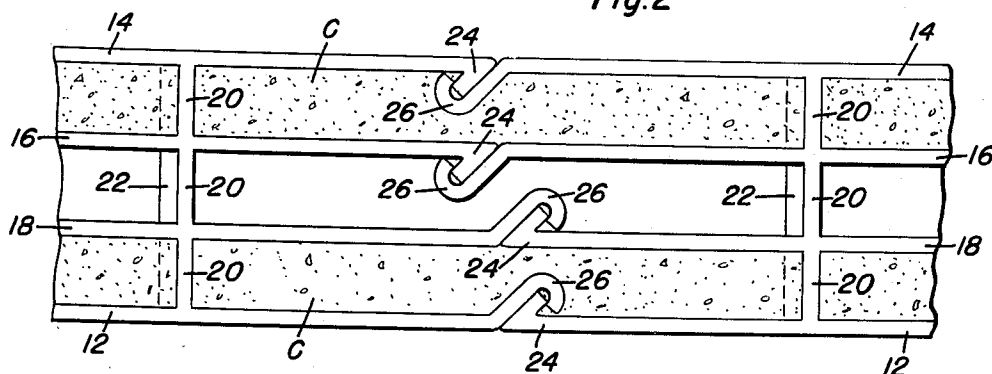
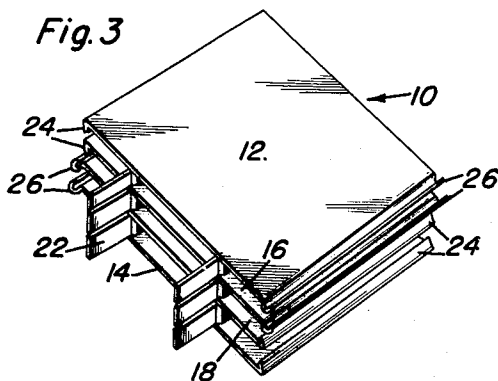


Fig. 3



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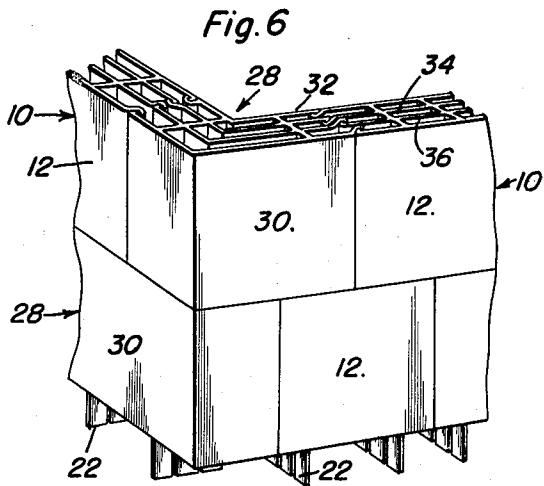
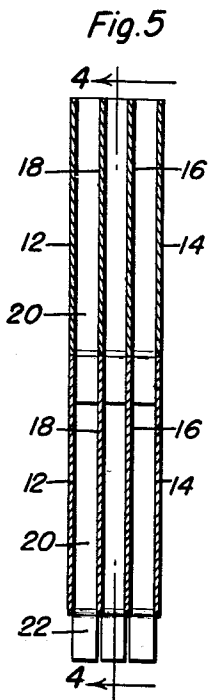
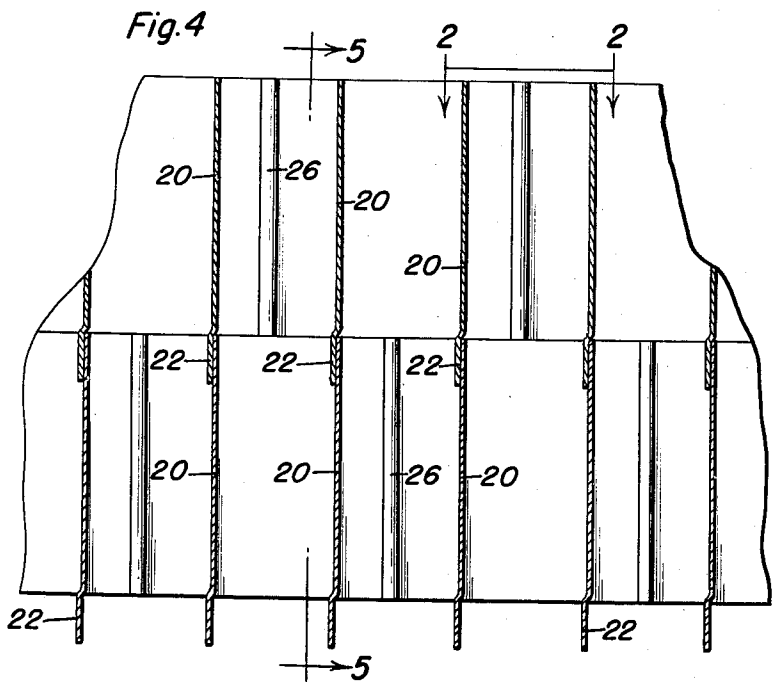
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COMBINATION FORM AND FACING DEVICE FOR CONCRETE

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2 Sheets-Sheet 2



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COMBINATION FORM AND FACING DEVICE FOR CONCRETE

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1 Claim. (Cl. 72—29)

This invention relates to new and useful improvements in wall structures and the primary object of the present invention is to provide a combination form and facing device for concrete.

Another important object of the present invention is to provide a plurality of multiple units that are interlocked in a novel and improved manner to form a wall.

A further object of the present invention is to provide a combination form and facing device composed of a plurality of units that are so arranged in an interlocking manner so as to form a wall, and wherein each unit is of multi-walled construction to form inter-wall spaces that will receive concrete whereby all the units will be secured together in a monolithic whole, eliminating the need for separate forming procedures, and also eliminating the need for facing the concrete with metal, brick, or plastic in another operation as is now the general practice.

A still further aim of the present invention is to provide a combination form and facing device for concrete that is simple and practical in construction, strong and reliable in use, neat and attractive in appearance, inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view of a plurality of the instant wall forming units stacked together to form two rows;

Figure 2 is an enlarged horizontal sectional view taken substantially on the plane of section line 2—2 of Figure 4;

Figure 3 is a perspective view of one of the present wall forming units;

Figure 4 is a vertical sectional view taken substantially on the plane of section line 4—4 of Figure 5;

Figure 5 is a vertical sectional view taken substantially on the plane of section line 5—5 of Figure 4; and

Figure 6 is a fragmentary perspective view of a wall corner formed by the present wall forming units.

Referring now to the drawings in detail, wherein for the purpose of illustration, there is disclosed a preferred embodiment of the present invention, the numeral 10 represents a wall-forming member or unit composed of inner and outer substantially rectangular facing plates 12 and 14, and at least two substantially rectangular plate members or partition plates 16 and 18 that are located between the walls 12 and 14. Vertical spacer strips 20 are suitably fixed between the partition plates 16, 18 and the plates 12, 14 and the partition plates 16, 18 to space and join the plates 12, 14 and the partition plates 16, 18.

The spacer strips 20 are provided with lower offset ends 22 that project well below the lower coincident edges of the plates 12, 14 and the partition plates 16, 18 for a purpose which will later be more fully described.

The right vertical edges of the plate 14 and the partition plate 16 and the left vertical edges of the plate 12 and the

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partition plate 18 are bent inwardly to form vertical channels or V-shaped ribs 24, and the left vertical edges of the plate 14 and the partition plate 16 and the right vertical edges of the plate 12 and the partition plate 18 are bent inwardly to form offset vertical channels or smoothly curved ribs 26.

In practical use of the present invention, a first row R of the units 10 are assembled with the channels 24 and 26 of one member 10 interlocking with the channels 26 and 24 of an adjacent member 10 and with the plates 12, 14 and partition plates 16, 18 of adjacent members 10 coplanar. The lower ends 22 of the strips 20 of the lower row of members 10 are embedded in a concrete footing.

Another row of members 10, indicated by R1 in Figure 1, is placed upon the row R in staggered relationship to the members forming the row R. The lower ends 22 of the strips 20 of the upper row R1 overlap and engage the upper ends of the strips 20 of the lower row R.

Concrete C is poured between the partition plates 16, 18 and the plates 12, 14 and extends between the spacer strips of adjacent members 10 to anchor and bind adjacent members 10 of each row and to also anchor and bind the members of one row to the members of the other rows.

The spaces between the partition plates 16 and 18 are not occupied by concrete so that these spaces will constitute insulating means or air pockets.

In order that two relatively perpendicular walls may be joined, there is necessarily provided corner wall-forming members or units that are designated by the numeral 28 in Figure 6. These units are quite similar to the units or members 10 since they include inner and outer plates 30 and 32, and a pair of partitions 34 and 36. The plates 30 and 32 and the partitions 34 and 36 are bent to provide right angular extensions whose vertical edges are bent to form vertical channels that are engaged with the channels of an adjacent unit 10.

The corner-forming members 28 are arranged as shown in Figure 6 so that the adjacent rows of blocks will be staggered to add to the appearance of the wall formed by the present invention.

The building units 10, 28 are formed of plastic, metal, or any other suitable material. The units may be molded in a single operation to reduce considerably the cost thereof and the same will form the permanent facing of a wall.

Obviously, the number of partitions may be increased or decreased depending upon the width of wall desired or required.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the construction, operation and advantages of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claim.

Having described the invention, what is claimed as new is:

A wall structure comprising a plurality of superimposed horizontal rows of wall forming members, each of said wall forming members including first and second spaced parallel facing plates, first and second partition plates disposed between the facing plates in spaced parallel relation to each other and to the facing plates, vertical spacer strips disposed between and secured to the partition plates and between the partition plates and the facing plates, each of said strips having a main portion extending throughout the depth of the member and a vertically depending offset lower end portion disposed below the bottom edges of the plates, a horizontal shoulder extending between the

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offset end portion and the main portion of each of the strips at the bottom edges of the plates, the lower end portions of the strips of an upper row of members overlapping and contacting the vertical surfaces of the upper end portions of the strips of a lower row of members with the shoulders on the strips of the upper row of members engaging the upper edges of the strips of the lower row of members whereby the strips of the rows of members will have the main portions thereof disposed between the plates substantially in vertical alignment, the first facing plate and the first partition plate being disposed in adjacent relation and the second facing plate and the second partition plate being disposed in adjacent relation, each of said first plates having a vertical flange at one end thereof, said vertical flanges extending inwardly towards the second plates in acute angular relation to the respective first plates, the vertical flanges forming substantially flat bearing surfaces throughout the depth of the first plates, the other end of each of said first plates terminating in a vertical flange extending inwardly towards the second plates with the flanges disposed in obtuse angular relation with the first plates, each of said vertical flanges on the other end of the first plates terminating in an outwardly opening channel, the ends of the second plates being constructed similarly to the ends of the first plates with the position of the flanges and channels on the ends of the second plates being reversed in end to end relation to the flanges and channels on the ends of the first plates, the vertical flanges on one end of the first plates being received within the vertical channels on the other ends of the first plates of a similar

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longitudinally aligned member in the same row and the channels on one end of the second plates receiving the vertical flanges on the other ends of the second plates of said similar longitudinally aligned member whereby the outer surfaces of the longitudinally aligned facing plates of the members will be coplanar, and concrete disposed between the first facing plates and the first partition plates and between the second facing plates and the second partition plates.

References Cited in the file of this patent

UNITED STATES PATENTS

378,838	Hiatt	Feb. 28, 1888
390,175	Lee	Sept. 25, 1888
875,158	Cooper	Dec. 31, 1907
1,041,401	Anderson	Oct. 15, 1912
1,131,437	Stockman	Mar. 9, 1915
1,447,041	Roeth	Feb. 27, 1923
1,456,330	Mueller	May 22, 1923
1,742,947	Brash	Jan. 7, 1930
1,945,030	Davenport	Jan. 30, 1934
1,949,079	Loeffler	Feb. 27, 1934
2,284,229	Palmer	May 26, 1942
2,539,868	Schultz	Jan. 30, 1951

FOREIGN PATENTS

20,879	France	of 1919
236,325	Great Britain	of 1925
254,808	Great Britain	of 1926