S. J. OSWALD.

FORM FOR CONCRETE CONSTRUCTION.

APPLICATION FILED JUNE 2, 1919.

1,430,108. **Patented Sept. 26, 1922.**

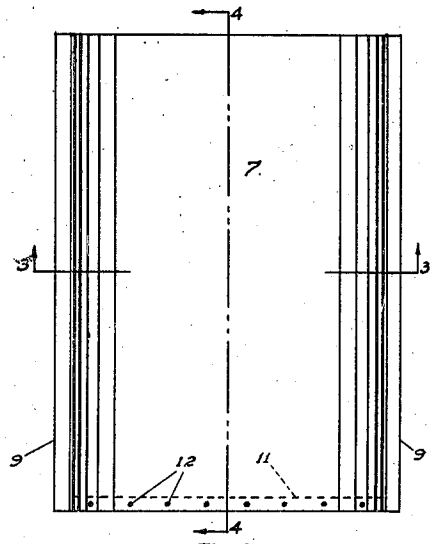


Fig. 2

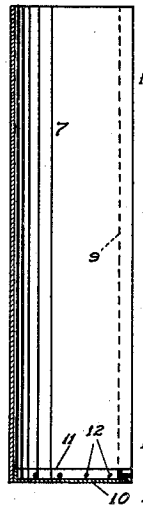


Fig. 4

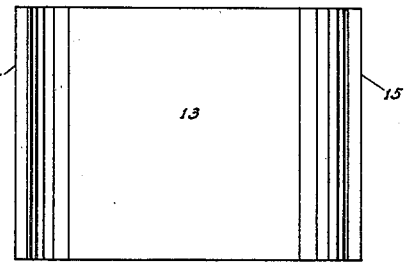


Fig. 5

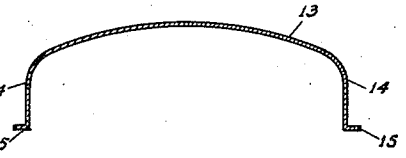


Fig. 6

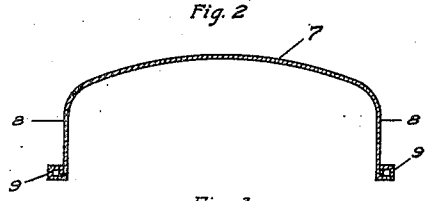


Fig. 3

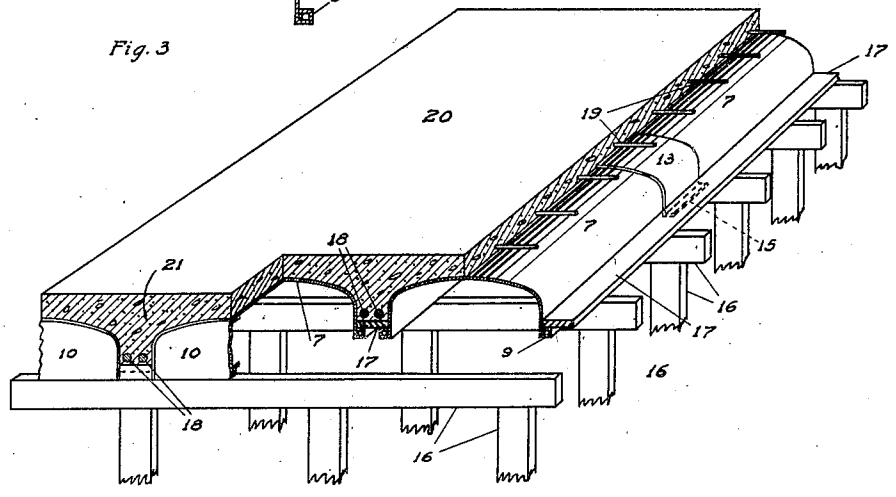


Fig. 1

INVENTOR.

Sylvester J. Oswald

BY Morsell + Keeney.

ATTORNEY.

Patented Sept. 26, 1922. 1,430,108

UNITED STATES PATENT OFFICE.

SYLVESTER J. OSWALD, OF MILWAUKEE, WISCONSIN.

FORM FOR CONCRETE CONSTRUCTION.

Application filed June 2, 1919. Serial No. 301,242.

To all whom it may concern:

Be it known that I, SYLVESTER J. OSWALD, a citizen of the United States, and resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in a Form for Concrete Construction, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

This invention relates to an improved method of and form for concrete constructions for building use, and more particularly adapted in building floor constructions.

The concrete floor constructions formed by the methods now in general use are extremely expensive in that a separate form is made for each floor to be built, and is then practically worthless for further use in that it is impossible to alter it to fit another type of floor requiring lighter or heavier re-enforcing ribs as the case may be.

With these inherent objections in view, my invention has for one of its objects to provide a method of the class described which will be capable of use in constructing any type of flooring in that the re-enforcing ribs may be made of any desired thickness, which will be economical and efficient in the disposition of materials, and which will entirely dispense with the longitudinal shoring and framework used in the present methods.

Another object of this invention is to provide a simple and durable metal form especially adapted for use in connection with the method herein described.

A further object of the invention is to provide a method of concrete construction of very simple form which may be easily used in connection with ordinary concrete construction.

With the above and other objects in view which will appear as the description proceeds, my invention resides in the novel construction, combination and arrangement of parts substantially as hereinafter described and more particularly defined by the appended claims, it being understood that such changes in the precise embodiment of the hereindisclosed invention may be made as come within the scope of the claims.

In the accompanying drawing, I have illustrated one complete example of the physical embodiment of the form construction used in connection with my method constructed according to the best mode I have so far devised for the practical application of the principles thereof, and in which:

Fig. 1 is a perspective view of a floor construction with my form used in connection therewith, parts being broken away and in section to more clearly illustrate structural details.

Fig. 2 is a top plan view of one of the longitudinal arch form members.

Fig. 3 is a transverse sectional view therethrough taken on the line 3—3 of Fig. 2.

Fig. 4 is a longitudinal sectional view taken on the line 4—4 of Fig. 2.

Fig. 5 is a top plan view of an insert or connecting arch form member used in connection with my method, and

Fig. 6 is a bottom plan view of the arch insert depicted in Fig. 5.

Referring now more particularly to the accompanying drawing, 7 designates a form made of sheet metal or the like bent to provide depending walls 8, the form 7 being U-shaped in transverse section. The walls 8 have formed on their free ends a hollow re-enforcing rib 9, formed by directing their ends laterally then upwardly, and then inwardly against the walls 8, and then downwardly terminating adjacent the bottom of the walls 8, this structure substantially re-enforcing the form 7 as will be obvious.

Each form 7 is made of the desired length and has one end thereof closed by means of a plate 10 which has its peripheral edges flanged as at 11 for securement to the form by means of rivets or the like 12 as best shown in Fig. 2 and Fig. 4. In the average floor construction, two lengths of form members will be generally sufficient, but should a space be left between the inner ends of the forms, I provide an insert or connecting member 13 shaped to conform with member 7 and provided at the free ends of its walls 14 with laterally projecting flanges 15 adapted to rest upon the flanges 9 of forms 7 thus providing a continuation of the forms 7 as best shown in Fig. 1.

As shown in Fig. 1, a plurality of forms 7 are disposed upon a temporary supporting structure formed by a series of horizontal or vertical beams 16 and the adjacent forms 7 have their opposed walls 8 spaced apart the desired width to provide a re-enforcing rib on the floor of proper thickness. The forms 7 are retained in this spaced relation by means of an insert 17 which rests upon, and

is held in place by means of the flanges 9. When the forms are thus arranged, re-enforcing bars or the like 18 are disposed in the rib formed by the space between adjacent walls 8, and then re-enforcing bars or the like 19 are disposed above the top of the forms 7 and transversely thereof, and then the concrete is poured over the forms to provide the flooring as illustrated in Fig. 1.

The forms 7 are removed after the concrete has set sufficiently to retain its form, and thus a substantial floor structure is provided, having a top surface 20 and a plurality of depending, re-enforcing, longitudinally extending ribs 21. The closed ends 10 of the form members are provided where the floor merges with the wall structure to insure the proper molding of the floor as will be obvious.

From the foregoing description taken in connection with the accompanying drawing, it will be readily apparent that I provide a method of and form for constructing concrete flooring which will be practical and efficient for the purposes described.

What I claim as my invention is:

1. An apparatus for constructing concrete floors comprising in combination a series of arched members each having a closed end arranged in longitudinal alinement with their adjacent ends spaced apart, a hollow re-enforcing rib, rectangular in transverse cross section, formed on each longitudinal edge of the arched members, and means for closing the spaces between the ends of the arched members to provide a continuous form comprising a relatively short rigid arched member adapted to be secured in intimate contact and with its ends overlapping adjacent ends of said first mentioned arched members.

2. An apparatus for constructing concrete floors, comprising in combination a series of arched members each having a closed end arranged in longitudinal alinement with their adjacent ends spaced a slight distance apart, a hollow reenforcing rib adapted to resist strains in all directions formed on each longitudinal edge of said arched member, means for connecting said arched members to provide a continuous form and including a relatively short rigid arched bridge member adapted to have its ends overlap the adjacent ends of said first mentioned arched members to close the space between said ends, said bridge member having a laterally directed flange formed on each longitudinal edge thereof adapted to rest upon the reenforcing ribs of the adjacent first mentioned arched members, and means engageable with the ribs of said first mentioned arched members and confining the flanges of said second mentioned arched member therebetween and the adjacent rib to secure said last mentioned arched member in position.

In testimony whereof, I affix my signature.

SYLVESTER J. OSWALD.