H. C. SEIPP.

MOLD FOR CONCRETE CONSTRUCTIONS.

APPLICATION FILED JULY 9, 1909.

986,767.

Patented Mar. 14, 1911.

2 SHEETS—SHEET 1.

Fig. 2.

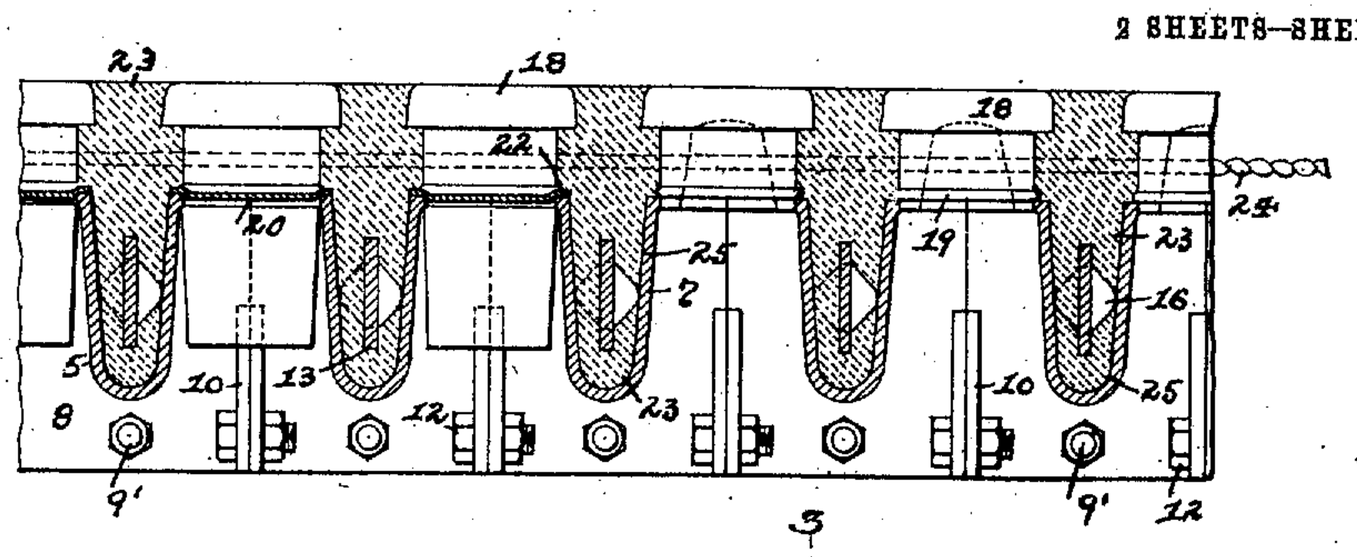


Fig. 1.

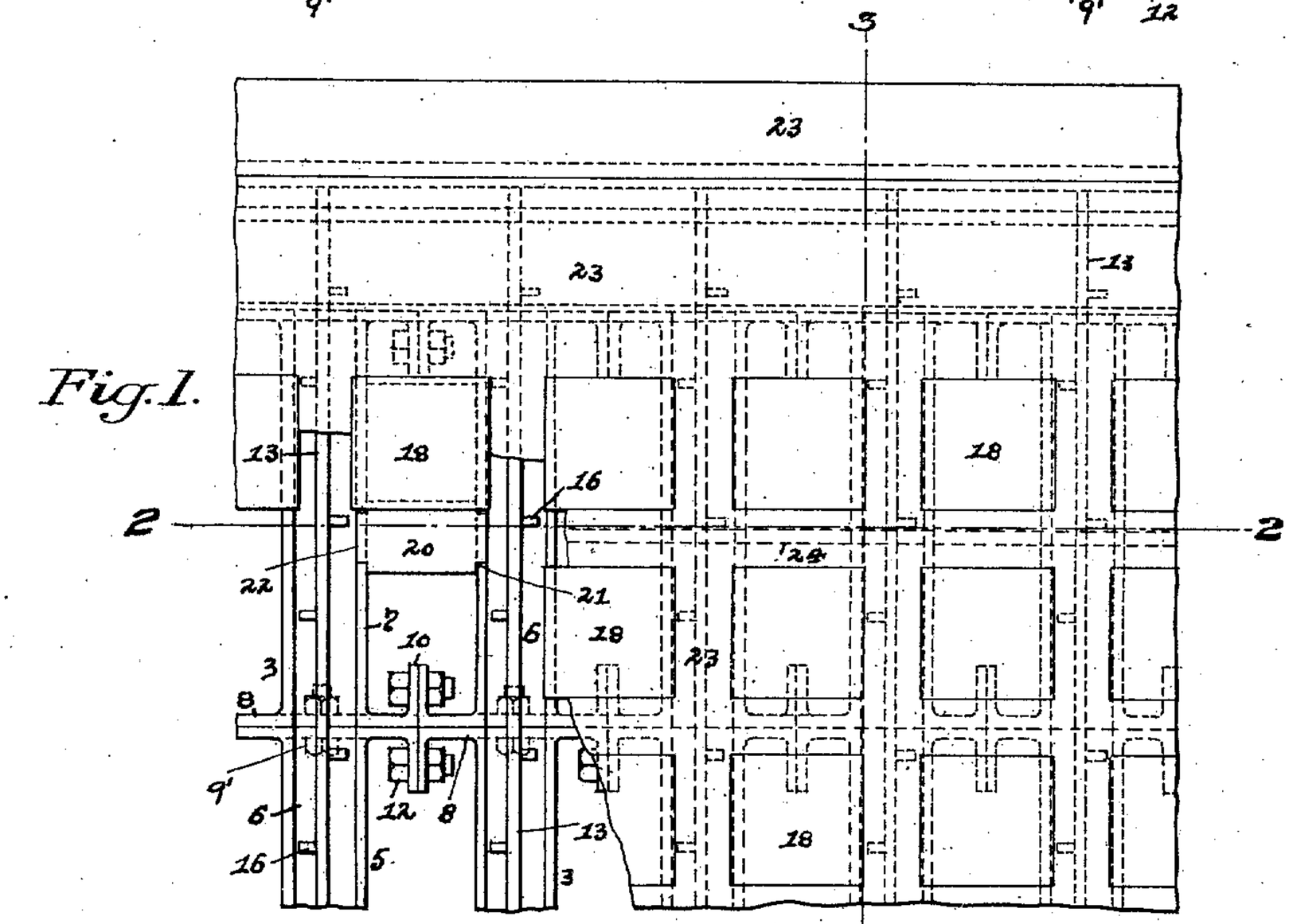
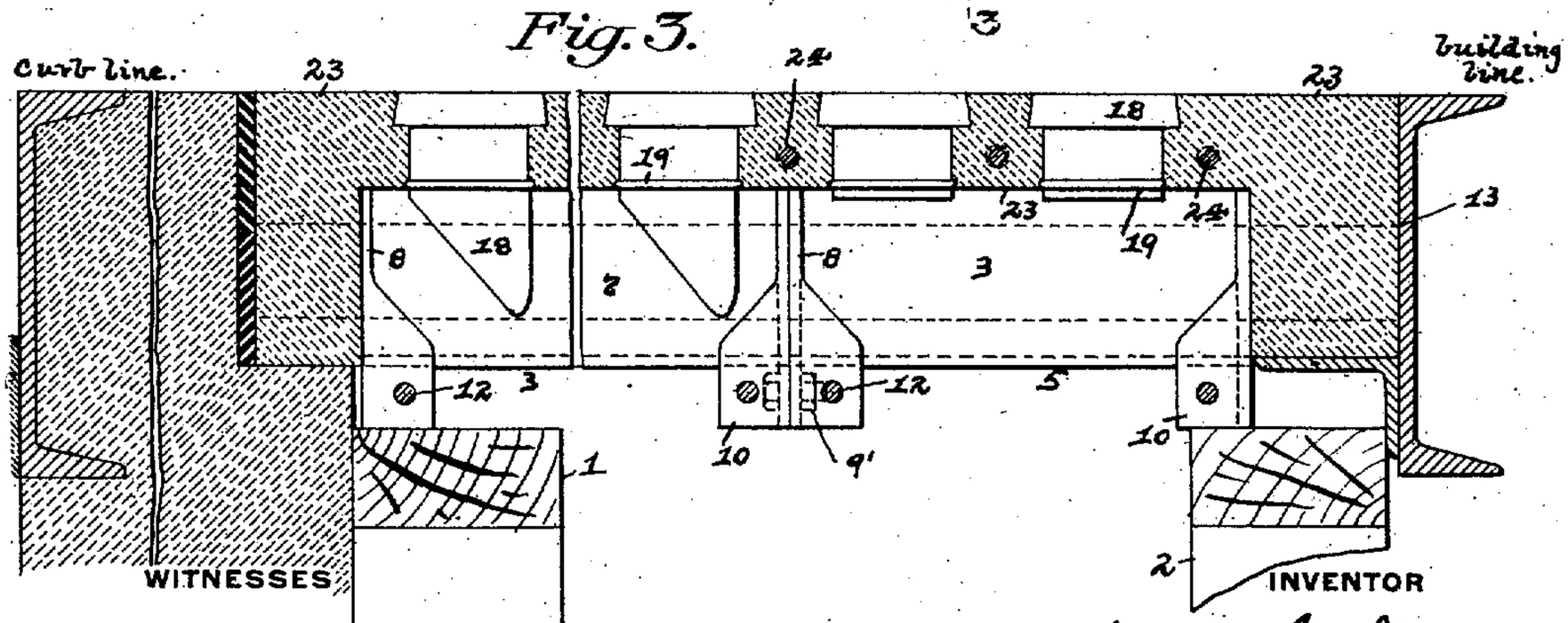


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 4.

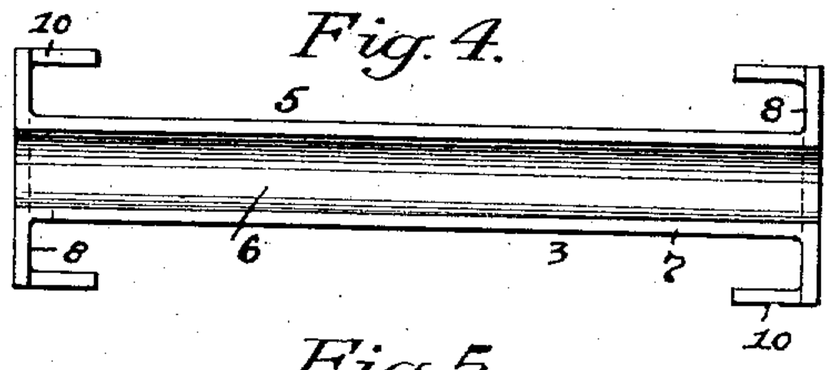


Fig. 6.

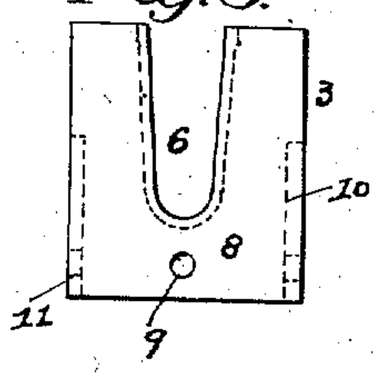


Fig. 7.

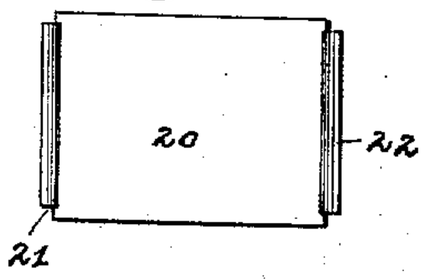


Fig. 5.

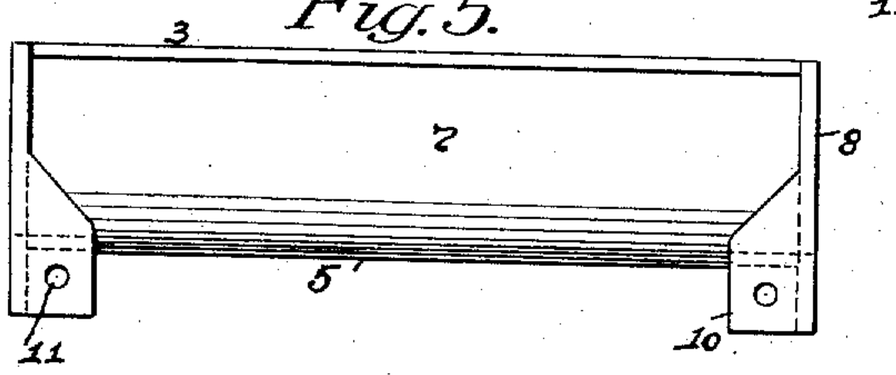


Fig. 8.

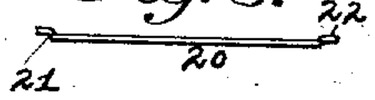


Fig. 9.

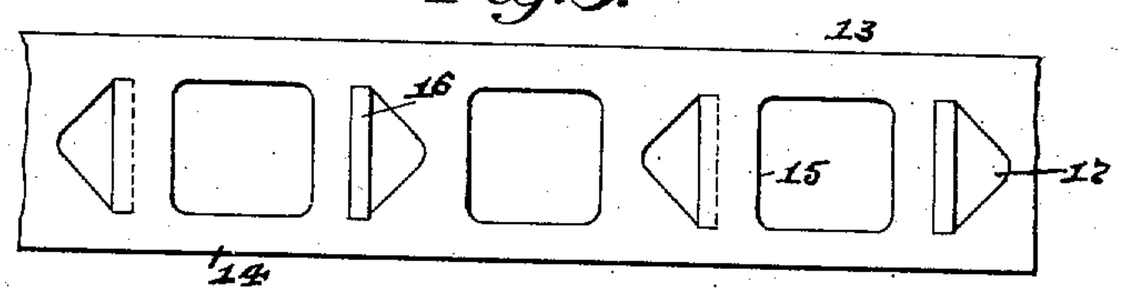


Fig. 10.

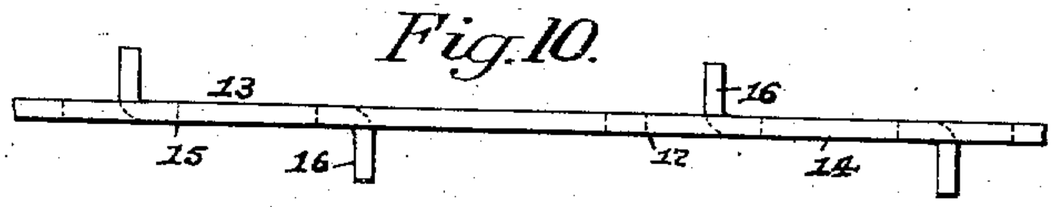


Fig. 11.

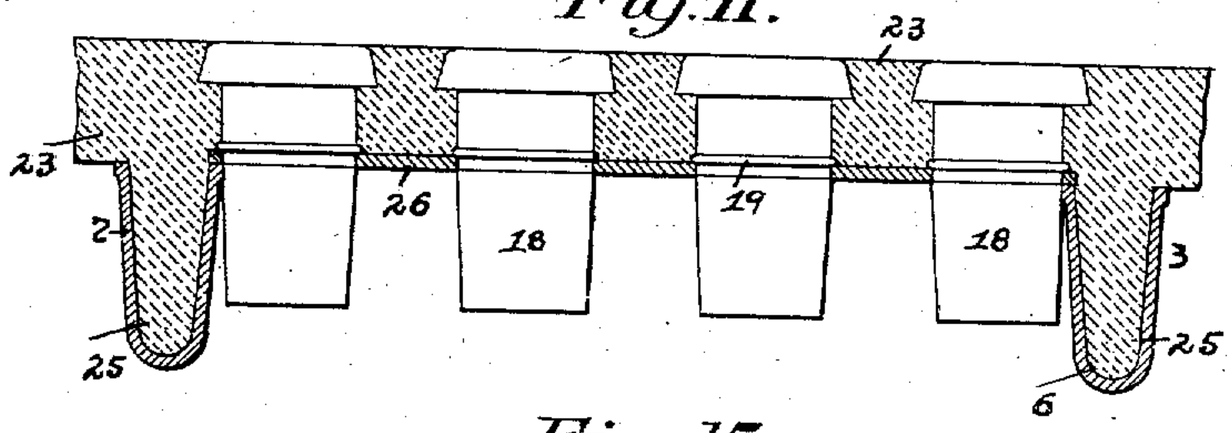


Fig. 12.

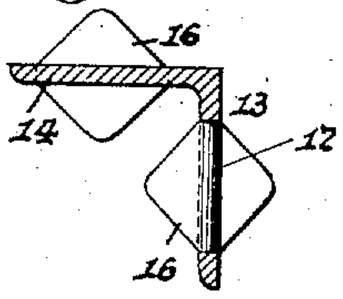


Fig. 15.

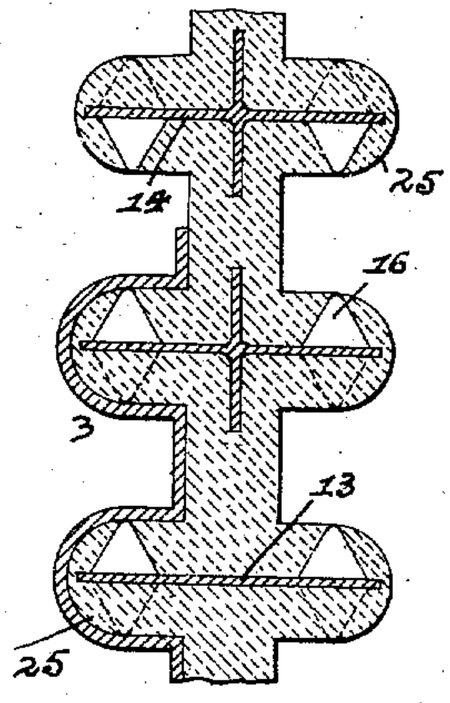


Fig. 14.

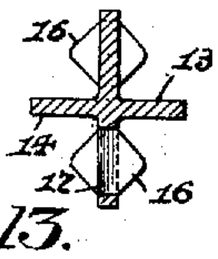
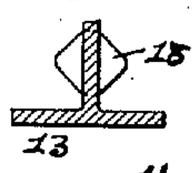


Fig. 13.



WITNESSES

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UNITED STATES PATENT OFFICE.

HENRY C. SEIPP, OF CORAOPOLIS, PENNSYLVANIA.

MOLD FOR CONCRETE CONSTRUCTIONS.

986,767. Specification of Letters Patent. **Patented Mar. 14, 1911.**

Application filed July 9, 1909. Serial No. 506,748.

To all whom it may concern:

Be it known that I, HENRY C. SEIPP, a resident of Coraopolis, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Molds for Concrete Constructions; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to a mold for concrete constructions and has special reference to the formation of what are commonly known as "pavement or sidewalk lights", floors, roofs, vaults, walls and other parts of buildings.

The object of my invention is to provide for a cheap, simple and efficient means for forming such constructions, which will enable them to be formed rapidly, cheaply and conveniently, and will allow for the easy and rapid placing and removal of the forming parts and for their use at other places.

My invention consists, generally stated, in the novel arrangement, construction and combination of parts, as hereinafter more specifically set forth and described and particularly pointed out in the claims.

To enable others skilled in the art to which my invention appertains to construct and use my improved mold for concrete constructions, I will describe the same, referring to the accompanying drawings, in which—

Figure 1 is a plan view of my improved mold for concrete constructions, partly broken away, and showing the same applied to form a sidewalk light. Fig. 2 is a sectional view on the line 2—2 Fig. 1. Fig. 3 is a like view on the line 3—3 Fig. 1. Figs. 4, 5 and 6 are plan, side and end views, respectively, of the metallic mold section. Figs. 7 and 8 are plan and side views, respectively, of the spacer plate. Figs. 9 and 10 are side and edge views, respectively, of the reinforcing bar. Fig. 11 is a sectional view of the concrete construction mold, showing the same applied to form a roof. Figs. 12, 13 and 14 are sectional views of other forms of the reinforcing bar. Fig. 15 is a sectional view of the concrete construction mold, showing the same applied to form a wall.

Like symbols of reference herein indicate like parts in each of the figures of the drawings.

As illustrated in the drawings, in the formation of sidewalk or pavement lights my improved mold for concrete constructions is built up, as shown in Figs. 1, 2 and 3, by first placing the temporary ledges 1 on the ordinary standards or trestles 2, and such ledges are so arranged that they will conform strictly to the profile of the sidewalk or street. These ledges 1 support a metallic mold 3 formed of series of sections, such as is shown in Figs. 4, 5 and 6, which are laid upon said ledges side by side and parallel to each other to form such mold, and such sections when in position to form such mold serve at once as a pattern, a support for the glass or other tile, a support for the reinforcing bars, and as a uniform spacer for the tiles, as hereinafter described.

Each of the sections for the mold 3 is preferably made of cast metal, such as iron, and is provided with a body portion 5 having the mold cavity 6 therein of grooved or trough-shaped form. The walls 7 of the grooved mold cavity 6 are parallel to each other horizontally, and the space or distance across the same diminishes toward the bottom of the same and increases toward the top thereof to form a tapered mold cavity. At one or both ends of the grooved body portion 5 on each section for the mold 3 and extending out at right angles therefrom are the flanges 8, which are provided with bolt holes 9 therein, and when these sections are placed upon the ledges 1 as before described, bolts 9′ connect the sections together through such holes and form such mold of any length desired to reach from the said ledges and across varying widths of areas. Projecting from the flanges 8 are the flanges 10, which extend parallel with the grooved body portion 5 and are provided with the bolt holes 11 for the bolts 12 to connect the parallel sections of the molds together, if desired, through the flanges 10 on said sections, while such flanges 10 also act as a uniform separator or spacer for said parallel sections.

The parts of the sections of the molds 3 which abut against each other are machined true and straight, as well as the top faces of the grooved body portion 5 and flanges 8 and 10 on such sections to insure flush and finished joints or connections, and even and regular surfaces in the finished work.

When the sections of the molds 3 are thus placed in position on the ledges 1 and connected together by the bolts 9 and 12, a reinforcing bar 13 is placed in the grooved cavity 6 of the body portion 5, and such bar

is formed of a flat piece of metal such as steel, which has its body portion 14 provided with openings 15 through the same and with wings 16 thereon. These wings 16 are cut from body portion 14 of the bar 13 in any suitable manner, and are preferably of angular shape, so that they will extend out at right angles from each side of said bar and leave like shaped holes or openings 17 in said body portion. When the bar 13 is placed within the cavity 6 of the molds 3, it is supported therein by the converging side walls 7 of such cavity through the outer pointed edge on the wings 16 on such bar coming in contact with said walls, and at a point high enough in said cavity to leave a space of sufficient size between the under face of said bar and bottom of said cavity for the admission of sufficient cement or concrete therein to embed said bar. The molds 3 are now ready for the placing of the glass lenses or tiles 18, which are set between two of the sections forming such molds, and the ribs or beads 19 on two sides of said lenses or tiles rest upon the upper faces of the walls 7 on the mold body portions 5, so that such walls will space or separate said lenses or tiles in one direction, while they will be separated and spaced in the other direction by the metallic separators or spacers 20, which are formed of thin sheet metal and placed between each of the said lenses or tiles. These spacers 20 fit under the other two side ribs or beads 19 on the lenses or tiles on two of their sides and the corners of the same are cut away in an angular shape, as at 21, in order to permit the ends of said spacers to be bent up, as at 22, and fit on the upper faces of the mold body portions 5, while at the same time such cut-away portions will prevent contact with the beads 19 on the lenses or tiles 18 which rest upon the molds 3 and enable the spacers 20 to fit around the said beads and rest upon the said molds by such bent ends 22. The spacers 20 serve for holding the lenses or tiles 18 in a uniformly separated position on a line from a building to the outer extreme of the sidewalk light, and the body portions 5 on the molds 3, which support the said lenses or tiles, also serve as a means of uniformly spacing or separating such lenses or tiles on a line parallel to the curb of the street. With the lenses or tiles 18 and spacers 20 thus in place, the parts are ready for the completion of the sidewalk light by the pouring and spreading of the cement or concrete 23 which fills the cavity 6 of the molds 3 and perforations or openings 15 and 17 in the bar 13 and extends around the lenses or tiles 18 and over the tops of the molds 3 and spacers 20. After thus filling all voids and crevices in the parts by the cement or concrete 23, and when it has extended to and above the top surface of the lenses or tiles 18, it is troweled and worked down to a smooth finished surface and even with such top surfaces of the lenses or tiles. When the structure so formed is dry and of sufficient age and strength to be self-sustaining, the temporary ledges 1 and supports 2, together with the molds 3 and separators 20, are removed from such structure, and are ready and again available for use in similar constructions. If desired, the structure so formed can be provided with an ordinary reinforcing bar 24, and made from steel into twisted or spiral form, which can be laid in the concrete or cement 23 when such concrete or cement is being placed in the structure and at right angles to the longitudinal direction of the mold cavity 6.

It will be obvious that the converging mold walls 7 will serve as a wedging support for the bar 13 and as a mold to form a cement or concrete rib 25 in the structure so formed, which diminishes in thickness toward its bottom and thus increases the distance from such rib to its neighbor or next rib of similar construction and form, while at the same time obtaining a greater line of incidence for the transmission of light rays through the lenses or tiles 18, and thereby resulting in a greater divergence or diffusion of light upon the area below.

It will thus be seen that the structure formed by my improved mold construction will be more rigid and unyielding than the ordinary approved structures of this class and will overcome the scuffing of the glass lenses or tiles so common in the heretofore pliant and springy structures, while the structure formed by my improved construction is also resisting to any change of form when acted upon by force within the limits of any reasonable span.

In the construction of a roof or other similar structure not intended to support any great amount of live load, the construction may be modified, as shown in Fig. 11, in which case the ribs 25 are placed at a greater distance from each other, and an ordinary flat mold plate 26 is used. This plate 26 rests upon and spans between two of the molds 3 and is perforated for the insertion of the glass lenses or tiles 18, which it supports only until the cement or concrete 23 is set, and then it is removed, together with the grooved molds 3 which support the same.

In Fig. 15 is shown my improved mold construction for forming a vertical wall 27, in which case the molds 3 are used in a vertical position and on both sides of the structure, so that the ribs 25 are formed on both sides of said wall.

In Figs. 12, 13, 14 and 15, are shown various forms of the reinforcing bar 13, and various other forms of such bar and various other changes in the design, shape, arrange-

ment and combination of my improved concrete construction, as well as changes in the shape or design of the structure formed thereby, may be resorted to, without departing from the spirit of the invention, or sacrificing any of its advantages.

It will be evident that my improved mold for concrete constructions will enable the work of building structures to be performed in such a manner as to permit the use of a supporting means to act as a mold or former for such work, and such means can be used continuously in this work and for different kinds of structures, while such construction can be applied in forming various structures other than those described, and will permit the employment of different forms of glasses, lenses or tiles, or supporting or reinforcing bars. The structures formed by the construction will be strong and durable, will be light in weight and material, and will present to the eye a neat and finished piece of work.

What I claim as my invention and desire to secure by Letters Patent, is—

1. In a mold for forming side-walks and other like constructions, the combination with the supporting means, and a series of parallel removable mold sections of trough-shaped form on said means and adapted to support lenses or tiles placed between the same, said sections having abutting flanges and L-shaped side flanges for connecting the ends of the mold sections together and the parallel sections.

2. In a mold for forming side-walks and other like constructions, the combination with the supporting means, and a series of parallel and removable mold sections of trough-shape form on said means and adapted to support lenses or tiles placed between the same by the trough walls, said sections having abutting flanges and L-shaped side flanges for connecting the ends of the mold sections together and the parallel sections.

3. In a mold for forming side-walks and other like constructions, the combination with the supporting means, a series of parallel removable mold sections of trough-shape form on said means and adapted to support lenses or tiles placed between the same by the trough walls, and means between said lenses or tiles and supported on the said walls for spacing said lenses or tiles.

4. In a mold for forming side-walks and other like constructions, the combination with the supporting means, a series of parallel removable mold sections of trough-shape form on said means and adapted to support lenses or tiles placed between the same by the trough walls, and metallic plates between the lenses or tiles and supported on said walls for spacing the lenses or tiles.

5. In a mold for forming side-walks and other like constructions, the combination with the supporting means, a series of parallel removable mold sections of trough-shape form on said means and adapted to support lenses or tiles placed between the same by the trough walls, and metallic plates between and under the lenses or tiles and supported by said walls.

6. In a mold for forming side-walks and other like constructions, the combination with the supporting means, a series of parallel removable mold sections of trough-shape form on said means and adapted to support lenses or tiles placed between the same by the trough walls, and metallic plates between and under the lenses or tiles to space the same, said plates having cut-away corners for fitting around the lenses or tiles and having its ends bent up for engaging with said walls to support the same.

7. As a new article of manufacture, a sheet metal spacer for lense or tiles in pavement lights and other like construction having its ends extended upwardly for engaging with parallel supporting means for the lenses or tiles.

8. As a new article of manufacture, a sheet metal spacer for lenses or tiles in pavement lights and other like constructions having its corners cut away and its ends extended upwardly for engaging with parallel supporting means for the lenses or tiles.

In testimony whereof, I, the said HENRY C. SEIPP, have hereunto set my hand.

HENRY C. SEIPP.

Witnesses:
JAMES L. WEHN,
J. N. COOKE.