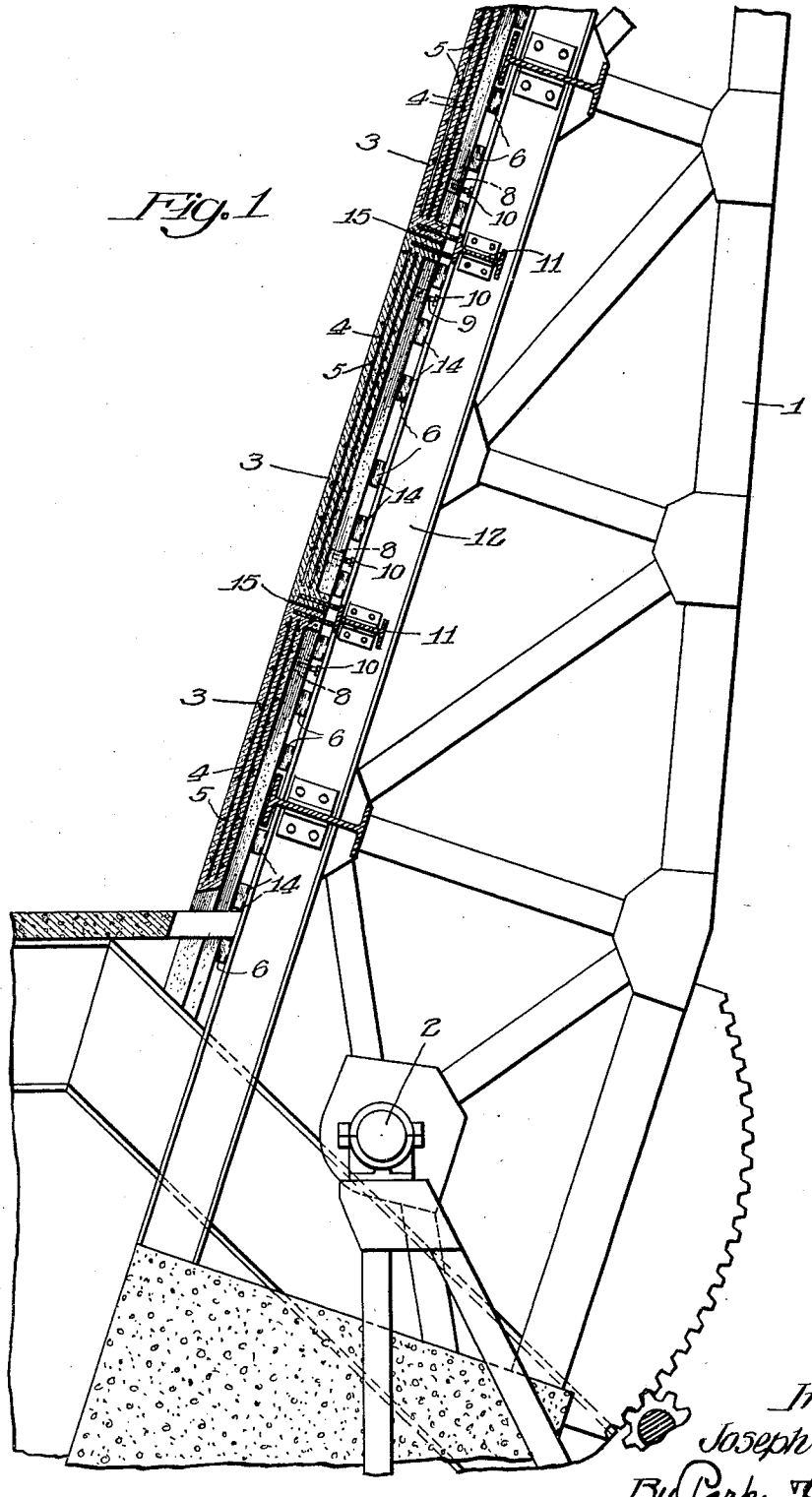
March 8, 1932. J. B. STRAUSS 1,848,582

PAVEMENT

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Fig. 1



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Fig. 2

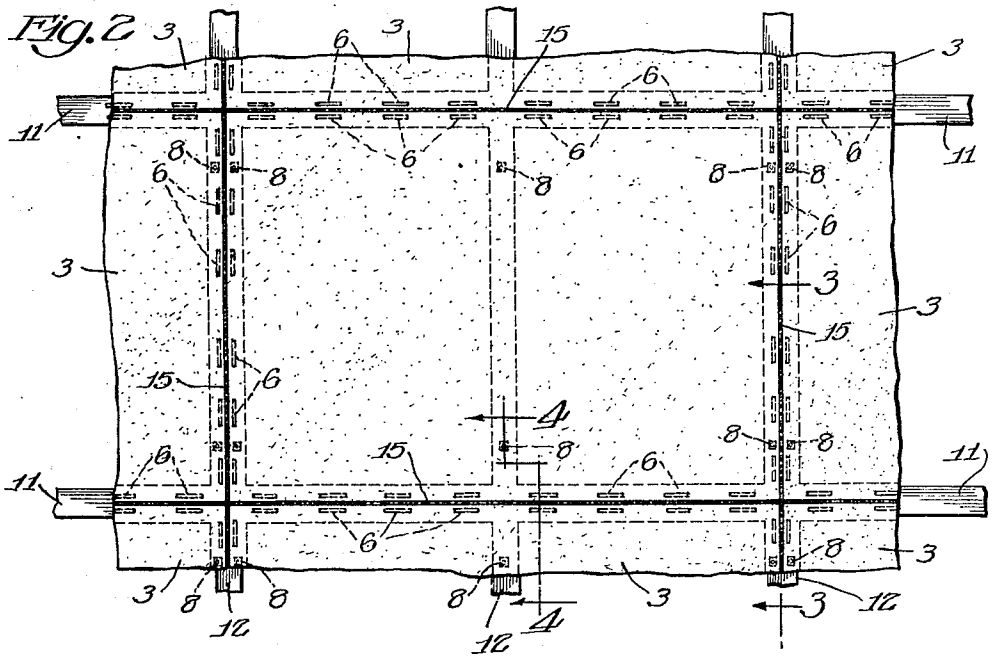


Fig. 3

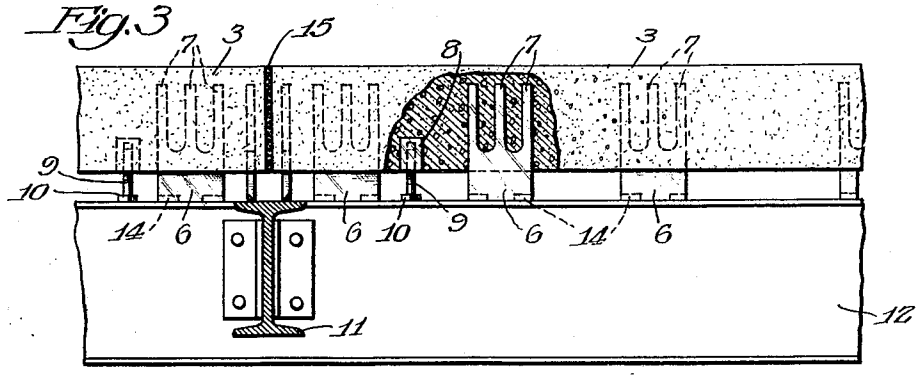


Fig. 4

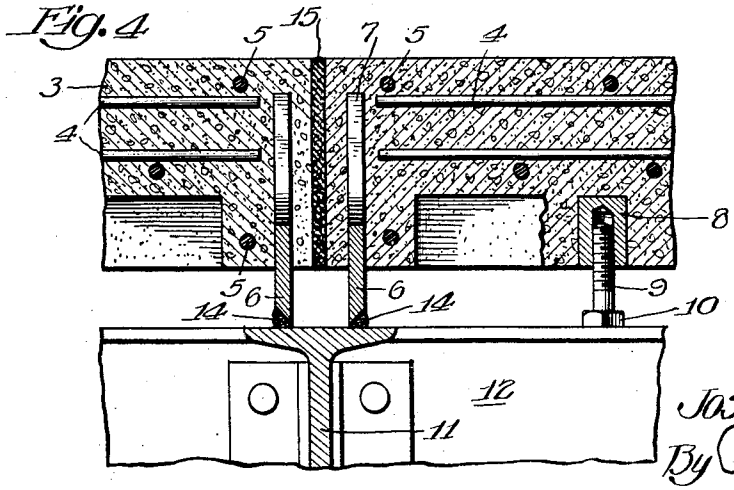
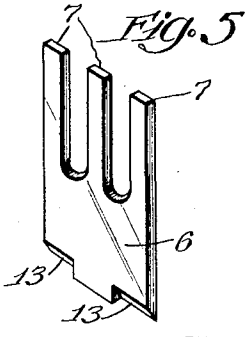


Fig. 5



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UNITED STATES PATENT OFFICE

JOSEPH B. STRAUSS, OF CHICAGO, ILLINOIS

PAVEMENT

Application filed December 9, 1929. Serial No. 412,668.

This invention relates to a paving system and has for its object to provide a new and improved system of this description.

The invention has as a further object to provide a paving system wherein the sections of the pavement can be easily and quickly permanently attached to the supports upon which they are carried.

The invention has as a further object to provide a precast paving system particularly adapted to be used in connection with bascule bridges.

The invention has as a further object to provide a paving system wherein the pavement is formed of precast sections supported around their edges with means for adjusting them to their proper position in the pavement and then permanently connecting them in position.

The invention has further objects which are more particularly pointed out in the accompanying description.

Referring now to the drawings, Fig. 1 shows a sectional view with parts omitted, of a bascule bridge with the pavement in position.

Fig. 2 is an enlarged plan view with parts broken away showing a portion of the pavement.

Fig. 3 is an enlarged sectional view with parts broken away, on line 3—3 of Fig. 2, showing the adjusting means and the means for connecting the sections to their supports.

Fig. 4 is an enlarged sectional view taken on line 4—4 of Fig. 2.

Fig. 5 is a perspective view of one of the connecting elements for connecting the sections to their supports.

Like numerals refer to like parts throughout the several figures.

Referring now to the drawings, I have shown my invention as applied to a bascule bridge but it is, of course evident that it may be used for any other form of pavement. In Fig. 1 I have illustrated a moving span 1 with a bascule bridge supported upon trunnions 2. The floor of this moving span is provided with a pavement made up of precast sections 3 of suitable material such as concrete. These sections are preferably provided with reinforcing members 4 and 5 embedded therein. Each section 3 of the pavement is provided at its edges with a series of connecting elements or shoes 6. These connecting elements have one end embedded in the section, the other end projecting therefrom. The embedded end is preferably provided with a series of separated fingers 7. This secures a better union between the elements and the sections. The sections of the pavement are also provided at suitable points around their edges with the adjusting devices which consist of metal blocks 8 embedded in the material of the sections each block being provided with a threaded opening. Working in the threaded opening in each block is a threaded adjusting member 9 preferably provided with an enlarged head 10. The sections are supported upon longitudinal supports 11 and cross supports 12. The adjusting members are arranged to engage these supports 11 and 12.

When the sections of the pavement are placed in position on these supports, the adjusting members are in proper position with their upper faces in alignment and the connecting members 6 in proper position. These connecting members are then permanently connected to the supports 11 and 12.

In the construction shown, this connection is made by welding the connection 6 to these supports. This welding may be done in any suitable manner. I prefer to make the connecting pieces prong shaped at the bottom. This is done by providing the connecting pieces with recesses 13. (See Fig. 5.) Two of these recesses are made one at each side thereof, the recesses being made by removing the metal so as to provide the recess with an inclined wall at the back thereof. When the sections are properly adjusted, welding material 14 is placed in these recesses and utilized to weld or permanently connect the connecting members 6 with the supports 11 and 12. The supports 11 are the main floor members carrying the load and the cross supporting members may simply be like secondary members which act to support portions of the sections and transmit the forces to the main supporting members. The con-

necting members 6 are distributed around the edges of the sections and underlie these sections and connect them with the supports, each slab or section being thus supported on all its edges to prevent settlement and fracture.

The sections or slabs are also supported throughout their length by these metal shoes or connecting pieces. The sections or slabs have a plastic filling material 15 between them which is preferably filled in after the slabs are placed in position. The slabs are also provided with a hard wearing surface where the wear takes place. The slabs are separated from the supports by a clear space. By welding the shoes or connecting pieces to the supports, there is secured a stiffening effect of a continuous concrete floor.

The use and operation of my invention are as follows:

The concrete slabs are made of the proper size and shape and the supports 11 and 12 are placed in position. The slabs are then placed on the supports in proper relation to each other and are properly adjusted by means of the adjusting screws 9. When the slabs are properly adjusted, the shoes 6 are welded to the supports and the plastic filling inserted between the slabs. This forms a continuous pavement wherein all the sections or slabs are rigidly supported entirely around their edges and are separated from their supports by an air passage.

I claim:—

1. A precast paving system comprising a series of concrete slabs, metal shoes projecting therefrom on the underside, members separate from the slabs and underlying them and on which they are supported, said shoes being welded to said members.

2. A precast paving system comprising a reinforced concrete slab, two sets of metal beams separate from the slabs, one set of beams being longitudinal and one set being transverse, said beams underlying the edges of the slabs, metal shoes projecting from the bottom of said slabs along the edges thereof, and means for welding said shoes to the beams.

3. A precast paving system comprising a reinforced concrete slab, two sets of metal beams separate from the slabs, one set of beams being longitudinal and one set being transverse, said beams underlying the edges of the slabs, metal shoes projecting from the bottom of said slabs along the edges thereof, and means for welding said shoes to the beams, said beams being separated by a clear space from the bottom of the slabs.

4. A precast system of the kind described comprising two series of supporting beams, one series being the main floor members, carrying the load, the second series being light secondary beams at right angles to the main beams, a series of precast concrete slabs supported on the said beams so that each edge of each slab is supported throughout its length, metal shoes projecting from the under side of said slabs, said shoes welded to said beams.

5. A precast system of the kind described comprising two series of supporting beams, one series being the main floor members, carrying the load, the second series being light secondary beams at right angles to the main beams, a series of precast concrete slabs supported on the said beams so that each edge of each slab is supported throughout its length, metal shoes projecting from the under side of said slabs, said shoes welded to said beams, said beams and slabs being separated by a clear space.

6. A precast system of the kind described comprising two series of supporting beams, one series being the main floor members, carrying the load, the second series being light secondary beams at right angles to the main beams, a series of precast concrete slabs supported on the said beams so that each edge of each slab is supported throughout its length, metal shoes projecting from the under side of said slabs, said shoes welded to said beams, whereby the stiffening effect of a continuous concrete floor is produced.

7. A precast paving system comprising a series of concrete slabs, members separate from the slabs and underlying them and on which they are supported and means for accurately aligning each slab upon its supports.

8. A precast paving system comprising a series of concrete slabs, metal shoes projecting therefrom on the under side, members separate from the slabs and underlying them and on which they are supported, said shoes welded to said members, the slabs provided with a wearing surface of harder material than the body of the slab surface.

9. A precast paving system comprising a series of concrete slabs, metal shoes projecting therefrom on the under side, members separate from the slabs and underlying them and on which they are supported, said shoes being welded to said members, and a plastic filling material in the joints between the slabs.

10. A precast paving system comprising a series of concrete slabs, downwardly projecting ribs on the under side of said slabs, metal shoes at the edges of said slab and projecting from the under side thereof, members separate from the slabs and underlying them and on which they are supported, said shoes being welded to said members, said shoes being prong-shaped to facilitate welding.

Signed at Chicago, county of Cook, and State of Illinois, this 22nd day of November, 1929.

JOSEPH B. STRAUSS.