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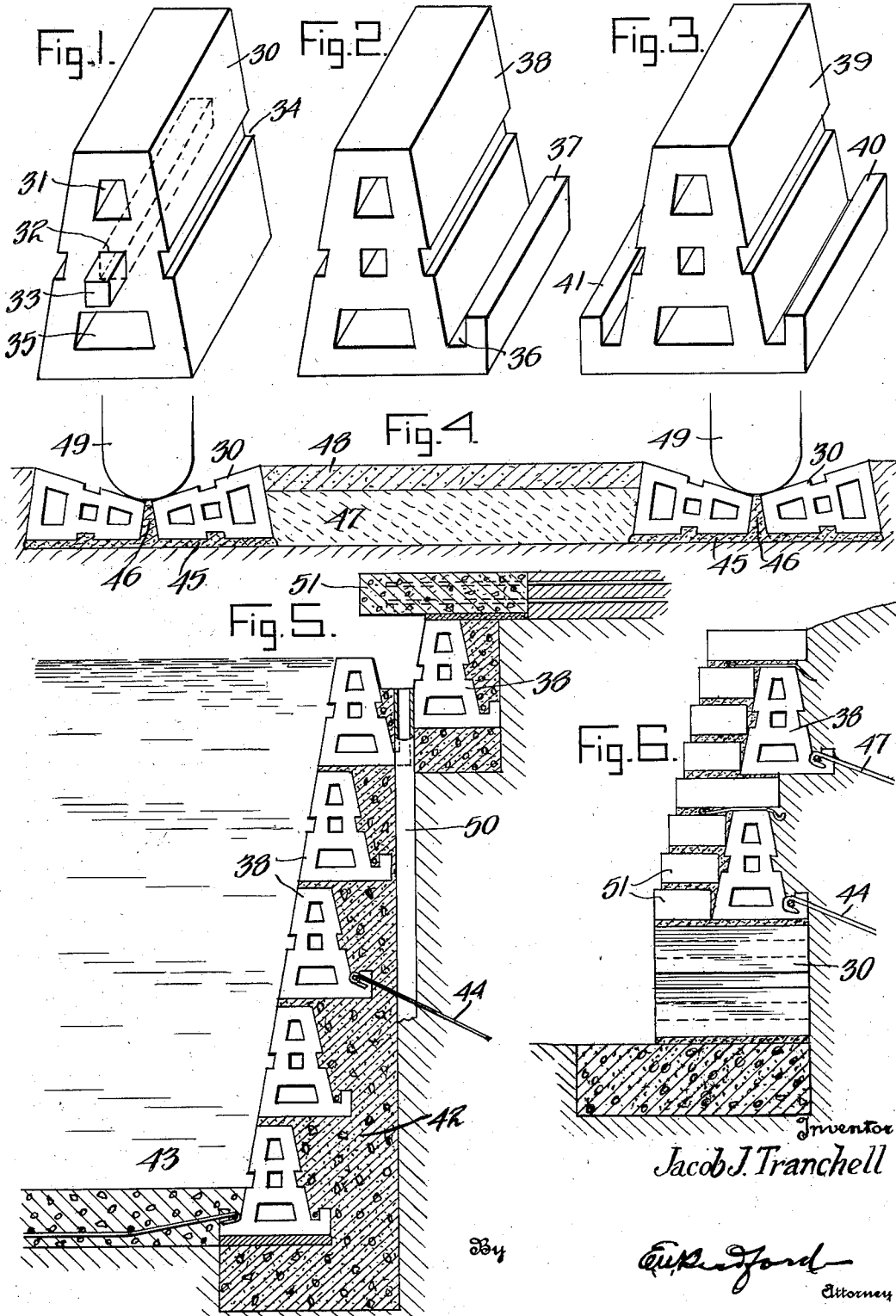
J. J. TRANCHELL

2,011,531

TILE OR BLOCK

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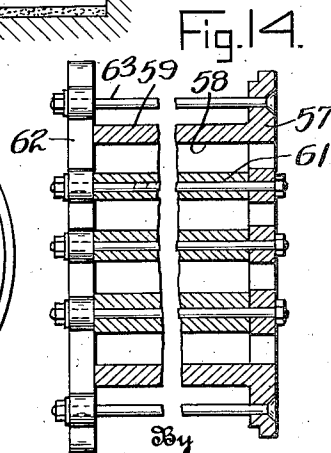
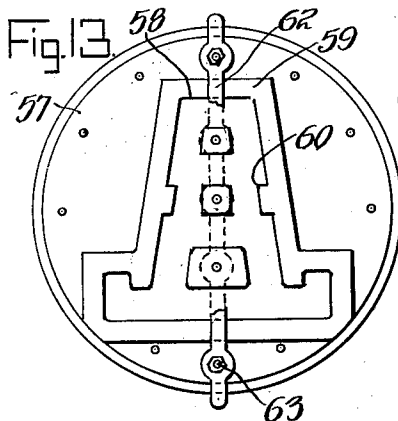
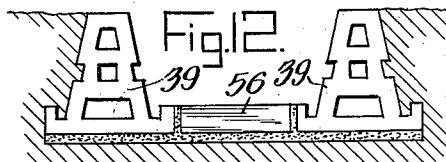
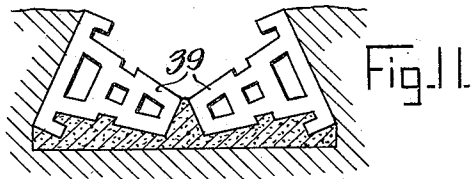
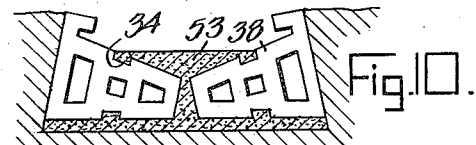
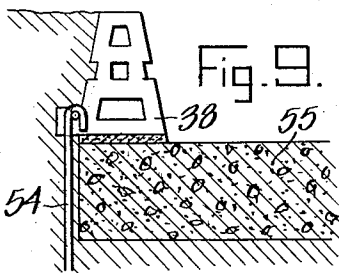
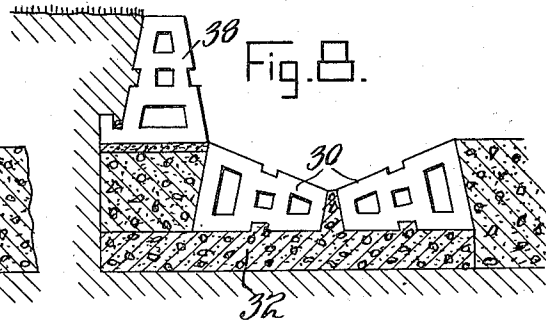
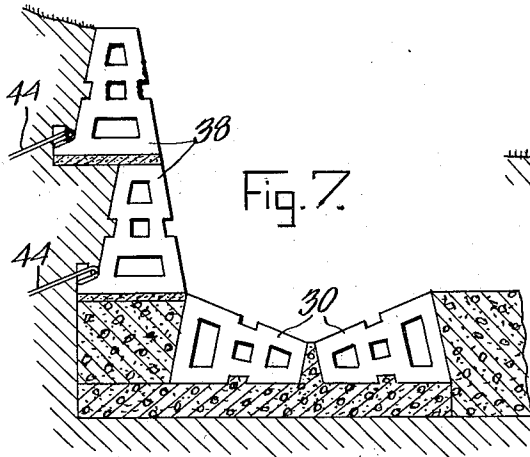
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3 Sheets-Sheet 2



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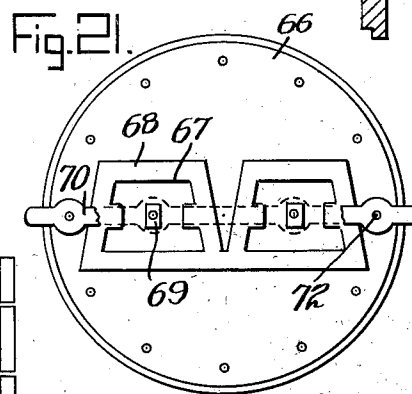
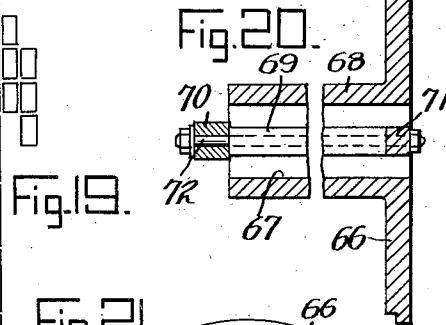
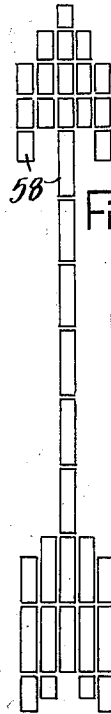
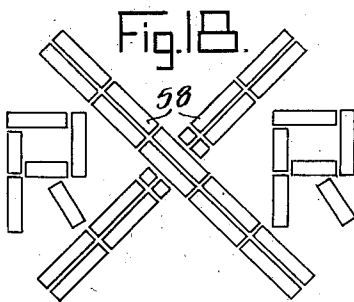
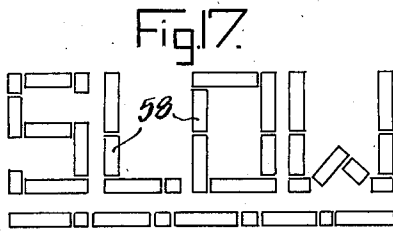
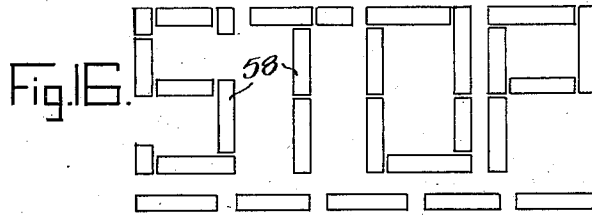
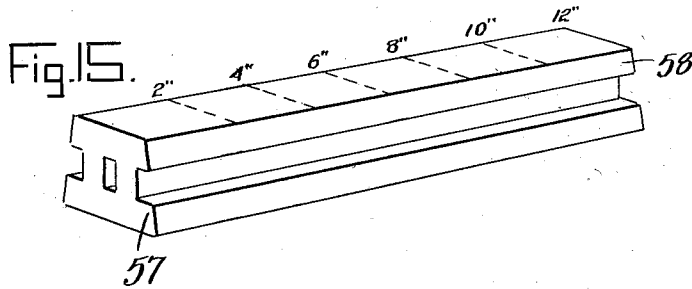
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TILE OR BLOCK

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3 Sheets-Sheet 3



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## UNITED STATES PATENT OFFICE

2,011,531

## TILE OR BLOCK

Jacob J. Tranchell, Portland, Oreg., assignor to  
Highway Form Company, Portland, Oreg., a  
corporation of Oregon

Application August 28, 1931, Serial No. 560,023

## 1 Claim. (Cl. 94—11)

This invention relates to tile or blocks designed for use as forms in laying concrete or for highways or in forming paths, gutters, driving lanes, etc. or for any purpose for which such blocks may be used.

An object of the invention is to provide a block of this type made of appropriate material to enable it to be used as a supporting wall when laying road material and as a conspicuous road marker or as a marker for any purpose when embedded in a road or floor or drive-way.

A further general object is to provide a block adapted for a great number of uses yet which is simple in construction, relatively cheap to produce and durable in service and having an attractive appearance.

Further general objects will become apparent from the description which follows:

Referring to the accompanying drawings, which are made a part hereof and on which similar reference characters indicate similar parts,

Figures 1, 2 and 3 show three different types of plastic block, each embodying principles of my invention,

Figure 4 is a section of a roadway showing the drive lanes formed of blocks forming a part of this invention in which the blocks shown in Figure 1 are used,

Figure 5, a vertical section through the wall of a pool or tank or reservoir which walls are constructed of blocks such as that shown in Figure 2.

Figure 6, a vertical section through a retaining wall showing the ends of blocks such as that shown in Figure 2 and showing in side elevation blocks such as that shown in Figure 1,

Figure 7, a vertical section showing the retaining wall formed of blocks such as that shown in Figure 2 and showing a gutter formed of blocks shown in Figure 1,

Figure 8, a view similar to Figure 7 with only one retaining block forming the side wall or curb,

Figure 9, shows a block such as that shown in Figure 2, the block being held on the roadway by dowel pins and resting on the bed of the road or path,

Figures 10 and 11 show two gutters, one formed of the blocks shown in Figure 2 and the other of blocks shown in Figure 3,

Figure 12 shows a gutter, path, roadway or street having its sides formed of blocks such as that shown in Figure 3,

Figures 13 and 14 illustrate a form of molds for forming the blocks shown in Figure 3,

Figure 15 shows a modified form of block used as a road marker, surfacing form and screed,

Figures 16, 17, 18 and 19 illustrate various designs which may be made in the road bed by the blocks shown in Figure 15, and

Figures 20 and 21 show a form of mold in which the block shown in Figure 15 is made.

In the drawings numeral 30 indicates a block which is made out of suitable material such as will serve as a support for concrete or other road building material. This block is provided with longitudinal passages 31 and 32 in the latter of which a dowel pin 33 may be placed to hold the blocks together. Grooves 34 may preferably be placed on the sloping sides of the blocks, these grooves serving to receive plastic material out of which the road is built to form dove-tailed or securing ledges on the edge of the road.

A passage 35 extends longitudinally through the block near its bottom in order to lessen the weight of the block. In the form shown in Figure 2 a groove 36 is provided near the base of the block and the base of the block is turned up to form a rib 37. In the block shown in Figure 3 ridges 40 and 41 are provided on each side of the base of the block. In assembling the blocks in a roadway or along the roadway, dowel rods 42 are placed in the grooves 36 and reinforcing rods 43 are secured to the dowel rods 42. The reinforcing rods 43 may be laid in the road bed as shown in Figure 5 or they may connect to dead men not shown along the side of the road, by rods 44. When used for the latter purpose they support the blocks against the pressure of the bank forming the walls of a tank such as shown in Figure 5 or the side of a roadbed to serve as a retaining wall as shown in Figure 6.

In the form shown in Figure 4 blocks 30 are provided with their narrow sides adjacent each other and rest upon a bed of concrete 45 and preferably are filled at 46 with concrete or other road material. Between the bases of the inner blocks 30 are placed clay or clay and cinders 47 and 48 to form a filler between the tracks of a roadway. Wheels of a motor vehicle are shown at 49 resting upon the drive-way tracks.

In Figure 5 blocks 38 are used to form the walls of a water tank or reservoir and are placed one upon the other, the lowermost of the blocks has reinforcing rods 43 attached to dowel rods 42. Rods 44 attached to dowel rods on the back of all the blocks are attached to dead men, not shown, buried in the ground surrounding the tank. In order to provide a smooth wall around the reservoir a block 38 is positioned back of the

topmost block forming the edge of the tank and a pipe or other drain 50 is positioned between the blocks. The brick or other wall 51 provides a guard over the channel 50 and water freely flows over the topmost block forming the wall and out through the opening 50.

In the form shown in Figure 6 a retaining wall is built up by two or more layers of blocks 30 placed endwise against the back and alternate blocks inverted so as to fit together more evenly. Upon these blocks are positioned blocks 38 which are anchored by rods 44 to dead men not shown. The front of the wall is built up of brick 64 so as completely to cover the face of the tier of blocks 38.

In the use of the blocks as illustrated in Figure 7 blocks 38 placed one upon the other form a retaining wall and are held in place by rods which are secured to dead men not shown.

In Figure 8 only one block 38 is used in each case, the gutter is formed by two rows of blocks 30 placed with their narrow ends toward each other so as to form a channel which will serve as a gutter. The blocks may be placed upon a hard under pan 52 if desired.

In the form shown in Figure 9 blocks 38 are held to the ground by staples 54 and in this form the blocks preferably rest upon a solid road bed 55.

In the form shown in Figure 10 concrete 53 may be poured into the gutter and fill the blocks up substantially to the level of the slots 34.

In the gutter shown in Figure 11 the block 39 is used.

In the form shown in Figure 12 blocks 39 are used and are spaced apart and brick or other paving material 56 is placed between the walls of side forms or blocks.

In Figure 15 is shown a new form of block which is designed for use as a road marker, surfacing form and screed. This block has the lower flange 57 and upper flanges 58 and may be made any desired length. For purposes of convenience the block has been indicated as marked into lengths of 2, 4, 6, 8 and 10 inches. The object of having a number of different lengths is for convenience in the making of street markers and signs.

In the form shown in Figure 16 the block shown in Figure 15 is used. Blocks of suitable length are selected and placed together so as to indicate the word "Stop". When placed in the road bed the blocks are embedded in the road but the block surface is of such material and such color as to make it durable as a block and conspicuous as a marker.

Figure 17 shows blocks arranged to indicate the legend "Slow".

Figure 18 indicates the arrangement to denote railroad crossings.

Figure 19 indicates an arrow.

Obviously blocks could be arranged in any suit-

able or desirable manner so as to indicate any sign or legend desired. The surface of the blocks made of appropriate material and having the same consistency and color throughout, preferably white or yellow, are always conspicuous and durable.

Figures 13 and 14 show a form of die or mold for making the block shown in Figure 3. With suitable changes obviously the die could be adapted to make blocks shown in Figures 1 and 2. The die consists of a disk of iron 57 having a vent 58 therethrough which vent is the shape of the outside surface of the block. Around the vent there is a protruding collar 59. Longitudinal ribs 60 are provided on the inside of the collar for forming the grooves 34 in the sides of the tile or block. In order to make the longitudinal channels 31, 32 and 35 core pieces 61 are positioned within the collar. These core pieces are attached to bridge bars 62 which bars serve to space the cores and to hold them in position. The bridge bar is attached to the die plate in any suitable way as by means of bolts 63.

Figures 20 and 21 illustrate a form of die for making blocks shown in Figures 15 to 19 inclusive. Figure 21 shows a circular disk or iron 66 having two cuts 67 in the shape of the block shown in Figure 15 around which cuts there is a collar 68 within which the block is molded or cast. Core pieces 69 are mounted centrally of the collar and are secured to bridge bars 70 and 71 which bars support the cores in position centrally of the block. The bridge bars may be secured in any suitable way as by means of bolts 72 to the disks 66. The plates 66 may be made any shape desired so as to fit in a pugmill.

It will be obvious to those skilled in the art that various changes may be made in my device without departing from the spirit of the invention and therefore I do not limit myself to what is shown in the drawings and described in the specification, but only as indicated by the appended claim.

Having thus fully described my said invention, what I claim as new and desire to secure by Letters Patent is:

A block of the character described comprising a body of substantially inverted T-shaped cross section and having vertically spaced longitudinal channels of relatively small cross section extending therethrough, the side portions of the block being upturned and providing lateral supporting and anchoring flanges of substantial height and lateral area, the sides of the body sloping toward each other from the base to the top and being longitudinally grooved to assist in anchoring the body in place the exterior configuration of the body being designed to provide anchorage and immobility of the block in the roadway.

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