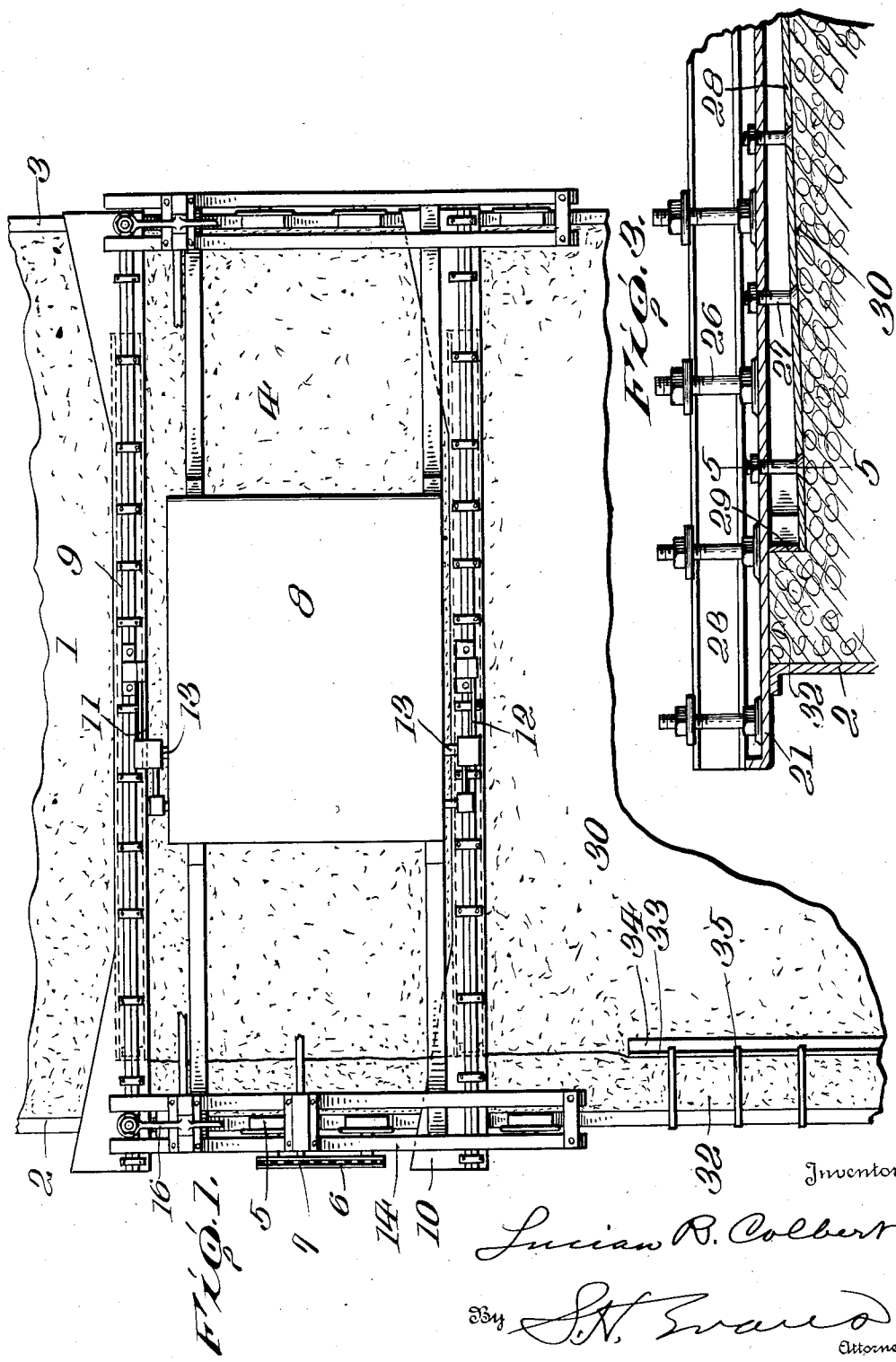
Feb. 12, 1935. L. R. COLBERT 1,990,931

ROAD FINISHING MACHINE

Filed Sept. 27, 1932 3 Sheets-Sheet 1



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ROAD FINISHING MACHINE

Filed Sept. 27, 1932 3 Sheets-Sheet 2

Fig. 2.

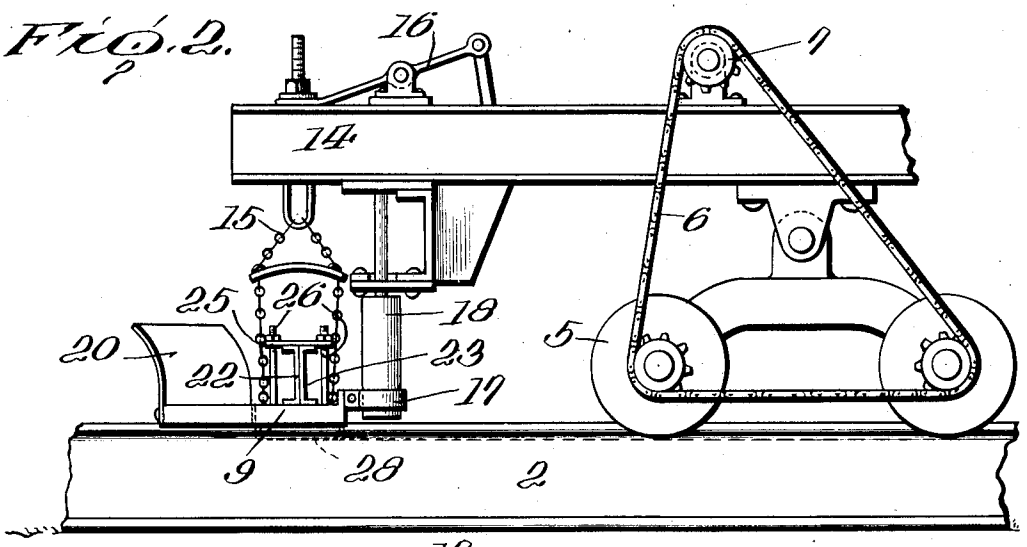


Fig. 4.

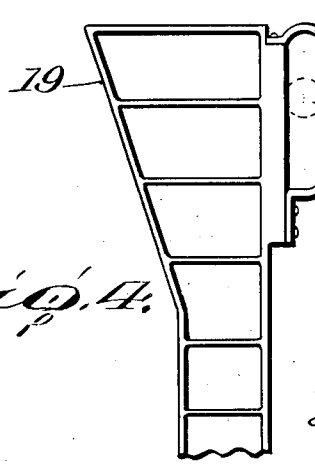


Fig. 6.

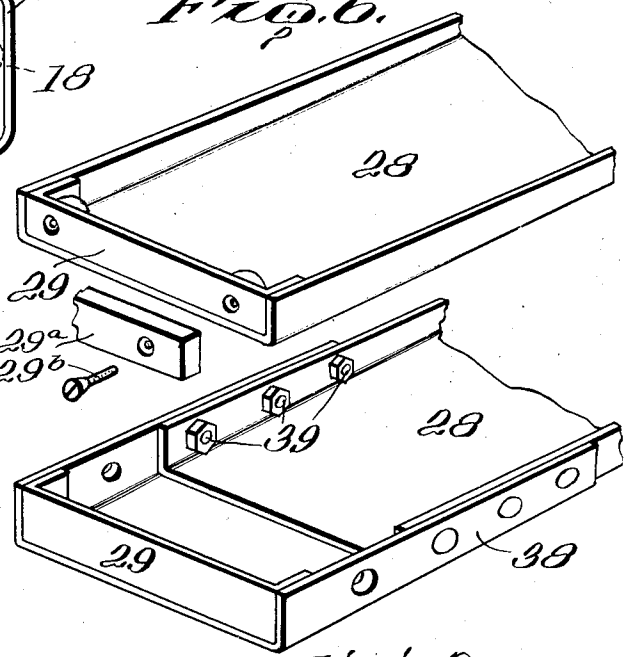


Fig. 5.

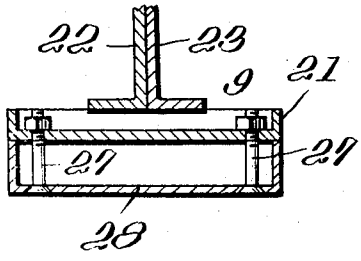


Fig. 7.

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ROAD FINISHING MACHINE

Filed Sept. 27, 1932 3 Sheets-Sheet 3

FIG. 8.

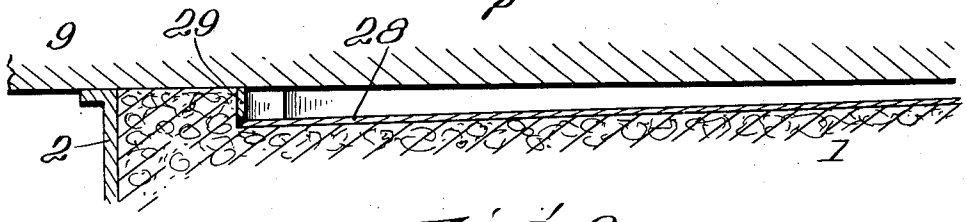


FIG. 9.

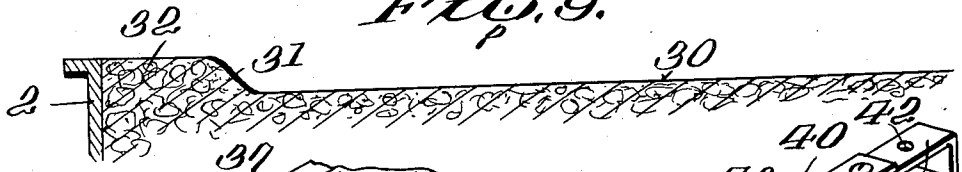
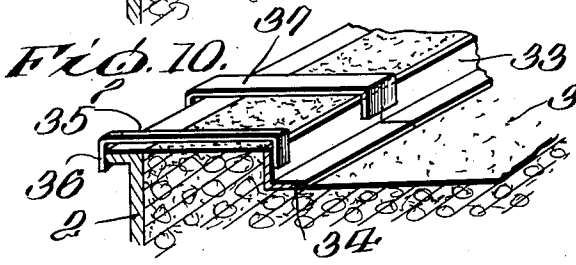


FIG. 10.



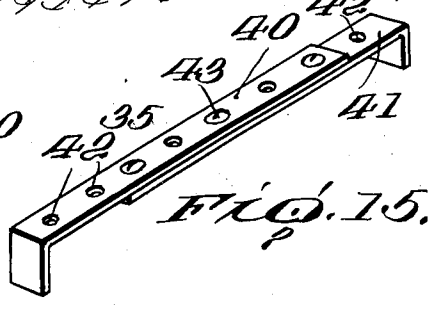


FIG. 15.

FIG. 11.

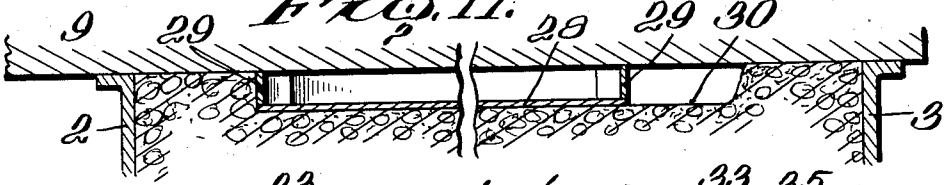


FIG. 12.

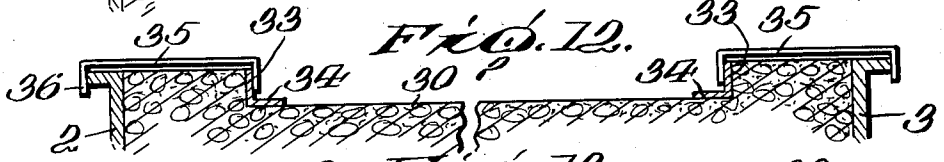


FIG. 13.

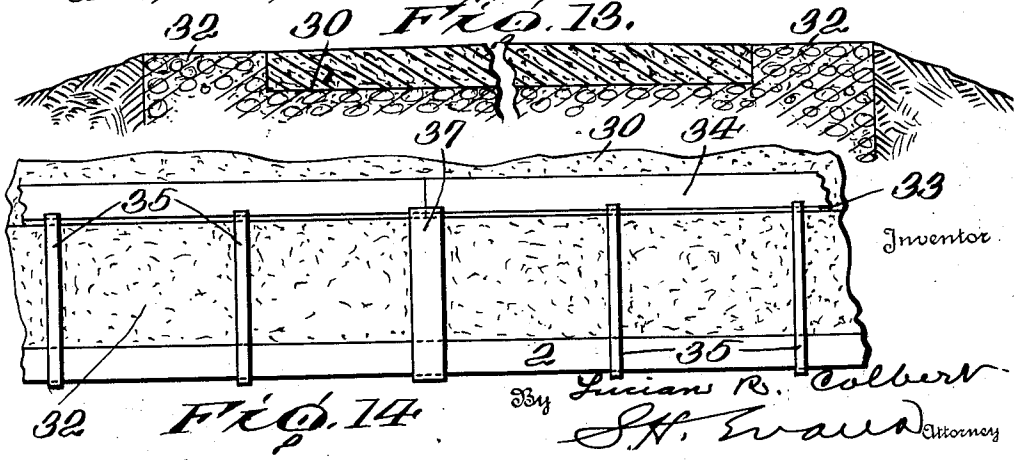


FIG. 14.

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Patented Feb. 12, 1935 1,990,931

UNITED STATES PATENT OFFICE

1,990,931

ROAD FINISHING MACHINE

Lucian R. Colbert, Fredericksburg, Va.

Application September 27, 1932, Serial No. 635,114

7 Claims. (Cl. 94—45)

My invention relates to improvements in road finishing machine and method of forming the road.

One object of my invention is to provide a road finishing machine having the templet so constructed that the road can be formed with a curb and so adjusted that the curb can be made of different widths.

Another object of my invention is to provide a machine and method whereby the inner and outer vertical walls of the curb are maintained by forms until the concrete has set and in which the inner form will not in any way mark or injure the road surface.

Another object of my invention is to provide the machine and method of forming the curbing so that the form for the inner face of the curb is maintained in its proper relation to the outer form or track upon which the machine is supported to form a curb of uniform width and height.

A further object of my invention is to provide a machine of this character in which the proper crown can be given the road surface and providing means for varying said crown.

A still further object of my invention is to provide a machine of this character which is simple in structure and operation and having certain details of structure and combination of parts hereinafter more fully set forth.

In the accompanying drawings:—

Figure 1 is a diagrammatical view of a road bed under construction with the machine mounted on the side forms and showing the form for the inner face of the curb in position.

Figure 2 is an enlarged side elevation of Figure 1 partly broken away.

Figure 3 is an enlarged vertical sectional view of the templet.

Figure 4 is an enlarged plan view of one end of the templet.

Figure 5 is a transverse sectional view of the templet taken on the line 5—5 of Figure 3.

Figure 6 is a perspective of one end of the member secured to lower face of the templet for finishing the road surface and forming the curbing.

Figure 7 is a perspective view of a modified form of the member shown in Figure 6 whereby the width of the curb can be varied.

Figure 8 is a transverse sectional view showing the first step in the method of forming the road surface.

Figure 9 shows the road surface after the machine has formed the same.

Figure 10 is a perspective view in section showing the form in position for holding the concrete in position to form the curbing with a vertical inner wall.

Figure 11 is a sectional view showing the forming of the curbing at each side of the road surface.

Figure 12 is a sectional view similar to Figure 11 and showing the forms on the inner faces of the curbings.

Figure 13 is a sectional view of the completed road bed.

Figure 14 is a top plan showing the retaining forms for the inner face of the curbing.

Figure 15 is a perspective view of a modified form of holding means for the curb forms.

Referring now to the drawings:—

1 represents the road bed, 2 and 3 the usual side forms made of metal and securely held in position in any desired manner and upon which the road finishing machine 4 travels. This road finishing machine may be of any desired form mounted upon the side forms by means of wheels 5 driven by a chain 6 passing over the sprocket 7 which is driven by an engine mounted in the housing 8 carried by the center of the machine. The particular form of machine and driving mechanism forms no part of this invention and is shown to form an operative device.

Carried by the forward and rear ends of the machine 4 are the two templets 9 and 10 which rest upon the side forms 2 and 3 of the road bed and are driven by link connections 11 and 12. Said link connections being driven by the shaft 13 which in turn is driven by the engine or mechanism within the housing 8 carried by the center of the machine. The templets 9 and 10 are supported from the frame 14 of the machine by chains 15 and in order to vertically adjust the templets, the lever mechanism 16 is used. All of which could be varied without departing from my invention.

The templets at each end are provided with guide members 17 through which pass the rollers 18 which insures perfect transverse movement of the templets. The ends of the templets are extended slightly forward as indicated at 19 and provided with upwardly and forwardly extending shoes 20 which push the concrete forward and also throws it inwardly to prevent it from being thrown over the side forms.

These templets are preferably formed of U-beams 21 carried by the lower end of the two U-beams 22 and 23 and bolted to the flat horizontal beam 25 by means of the bolts 26. In order to give the road surface a slight crown, these bolts are tightened to a greater extent adjacent the

center of the beam 25 so as to spring the center of the U-beam 21 upwardly. It is understood that the crown on these roads is very slight and it has been found that this spring of the U-beam 21 is sufficient to give the road the proper crown.

In the ordinary construction of roads the templets form the surface of the roads flush with the upper face of the side forms 2 and 3, but in this road construction it is necessary or desirous to form a curb at each side of the road and in order to accomplish this I secure, to the lower face of the U-beam 21 of the templet by means of bolts 27, a U-beam 28 which is slightly tapering and has its end closed by the plate 29 as fully shown in Figure 6 of the drawings. When this U-beam 28 is secured to the lower face of the templet or forms a particular form of templet, it will be seen that the road surface 29 is formed below the lower face of the side forms 2 and 3 and finishes the road surface smooth and the solid end 29 banks the concrete against the side forms 2 and 3. It is understood that the U-beam is of a length less than the distance between the side forms 2 and 3.

After the machine has passed over and finished the road surface, the inner wall 31 of the bank 32 will assume a slight angle, due to the softness of the concrete and the inner form 33 for the curbing is then placed in position. This inner form as shown in Figures 10 and 12 is of a vertical shape, having a broad flat surface 34 which rests upon the finished surface 30 of the road and will not mark or disfigure the road surface. These inner forms are forced tightly against the machine face 31 of the curbing, causing a vertical wall on the curbing and are held in position by the U-shaped clips 35 which bridge across the curbing and having their downwardly turned ends 36, engaging the inner and outer faces of the forms 2 and 3 and the forms 33. The inner forms 33 are made of links approximately ten feet and one end of each form 33 has welded thereto a broad clip 37 which overlaps the joint between the two abutting ends of the inner forms and holds them in proper alinement to form an even wall on the inner face of the curbing.

In order to make the curbing of different widths, the U-shaped beam 28 carried by the lower face of the templet is provided with an adjustable end 38 held to the U-shaped beam 28 by means of bolts 39 by extending the adjustable ends 38 or retracting them. It will be readily understood that the width of the shoulder is increased and decreased as desired. While I have shown this particular form of means for varying the width of the curbing, it will be understood that templets will be provided with the U-beam 28 of different lengths or one or more blocks 29^a secured thereto by screws 29^b which would accomplish the same result.

In order to hold the inner form in proper position with different width curbing, I have provided the clips 35 with an adjustable means. This adjusting means is shown in Figure 15 and the clips are formed of two members 40 and 41, each having a series of openings 42 and held together by means of the bolts 43.

My improved device is especially designed to form curbing at the side of the road and said curbing being for different purposes. Such curbs are often formed to prevent wash of the road and often roads are built of concrete with curbing on each side and the space between the curbing filled with concrete or other road surfaces.

The method and operation of my invention is the same as used in any road construction up to a certain point. I carry the ordinary method further and so form the road surface with the curbing so that as soon as the machine has passed over and completed a portion of the curb, the inner forms are placed in position and remain in position until the concrete has properly set. The forms are easily removed and a road bed is then completed with a curbing at each side thereof. Through the use of the templet hereinbefore described, the road can be finished in a single continuous operation, or if desired one side only can be finished with the templet moving in one direction, and the device can then be reversed and the other side of the road finished with the curb. While I have shown the detailed construction and method thus forming a road bed, it will be understood that the same can be varied without departing from my invention.

I claim:

1. In a road finishing machine, the combination with a carriage mounted on the side forms of the road, means for driving said carriage thereon, a templet carried by the carriage and resting upon the side forms and beam removably carried by the lower face of the templet and of a length less than the distance between the forms for finishing the road surface below the upper face of the forms and forming a curb along the inner faces of the forms.

2. In a road finishing machine, the combination with a carriage mounted on the side forms of the road, means for driving said carriage thereon, a templet carried by the carriage and resting upon the side forms and reciprocating transverse the road and a removable member carried by the lower face of the templet of a length less than the distance between the forms for finishing the road surface below the upper face of the form and forming a curb along the inner faces of the forms.

3. In a road finishing machine, the combination with a carriage mounted on the side forms of the road, means for continuously driving said carriage thereon, a templet carried by the carriage and resting upon the side forms, means for reciprocating said templet transverse the road bed and a removable member carried by the lower face of the templet and of a length less than the distance between the forms for finishing the road surface below the upper faces of the forms and forming a curb along the inner faces of the forms.

4. In a road finishing machine, a combination with a carriage mounted on the side forms of the road, means for driving said carriage thereon, a templet carried by the carriage and resting upon the side forms and a slightly tapering removable member carried by the lower face of the templet and of a length less than the distance between the forms and finishing the road surface below the upper faces of the forms and forming a curb along the inner faces of the forms.

5. In a road finishing machine, the combination with a carriage mounted on the side forms of the road and removable thereon, a transversely reciprocating templet carried by the carriage and resting upon the side forms, a broad tapering member bolted to the lower face of the templet and of a length less than the distance between the forms for finishing the road surface below the upper face of the form and the ends thereof forcing the concrete against the inner faces of the forms and forming a curb along the same.

6. A road finishing machine, having in combi-

nation a carriage mounted on the side forms of the road and movable thereon, a transversely reciprocating templet carried by the carriage and resting upon the side forms, a broad tapering channel member bolted to the lower face of the templet and having broad closed ends and of a length less than the distance between the forms for finishing the road surface below the upper face of the form and said closed ends thereof forcing surface concrete against the inner face of the forms to form curbs.

7. In a road finishing machine, a combination with a carriage mounted for continuous movement in either direction on the side forms of the road, means for driving said carriage thereon, a templet carried by the carriage and resting upon the side forms and beam removably carried by the lower face of the templet and of a length less than the distance between the forms for finishing the road surface below the upper face of the forms and forming a curb along the inner faces of the forms.

LUCIAN R. COLBERT.