May 7, 1929. M. H. SHEPPARD 1,712,358

FORM MAKER FOR ROAD CURBINGS

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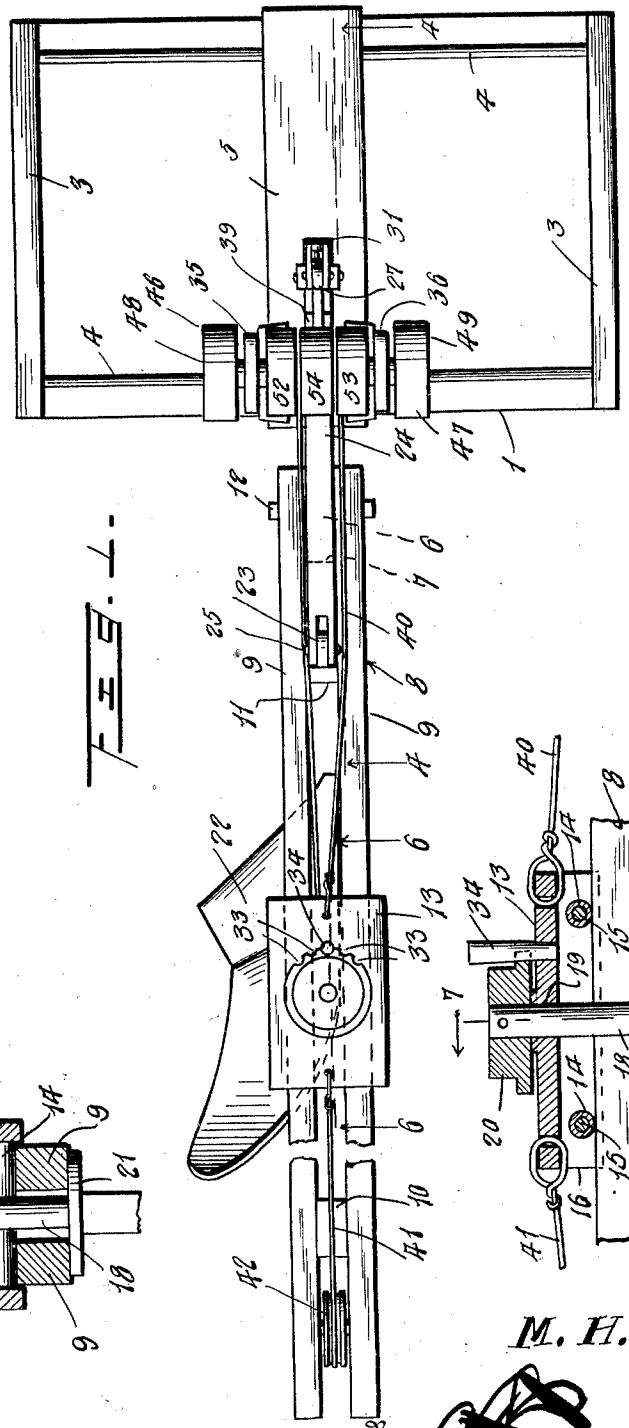


FIG. 1.

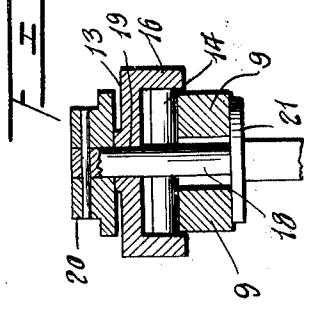


FIG. 7.

FIG. 8.

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FORM MAKER FOR ROAD CURBINGS

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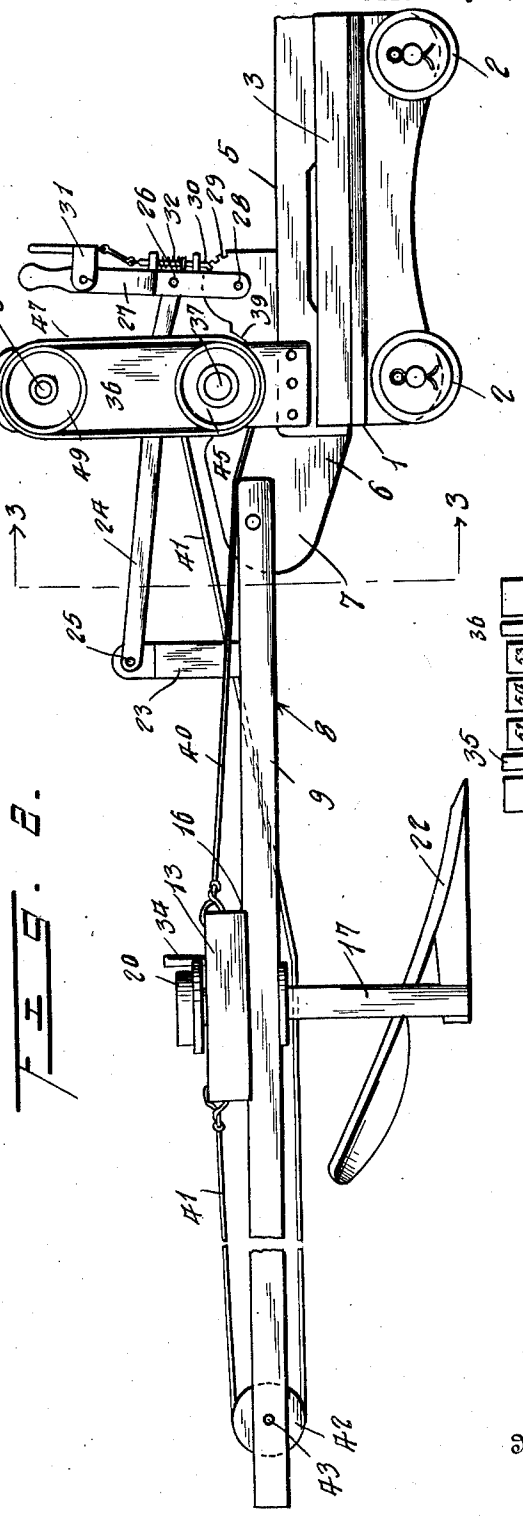


FIG. 2.

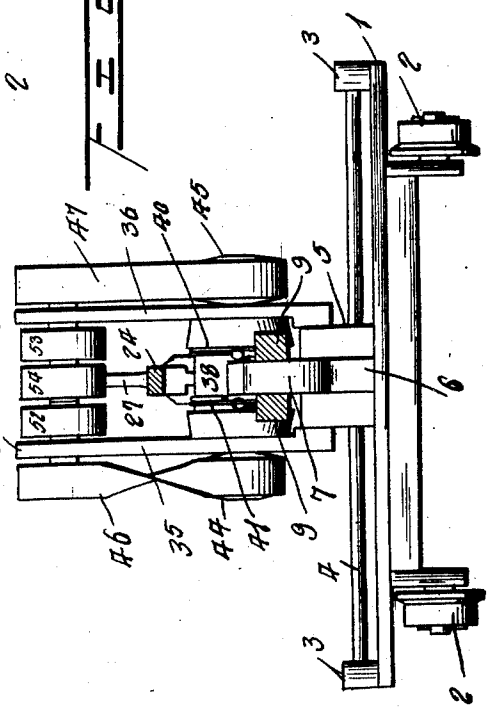


FIG. 3.

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FORM MAKER FOR ROAD CURBINGS

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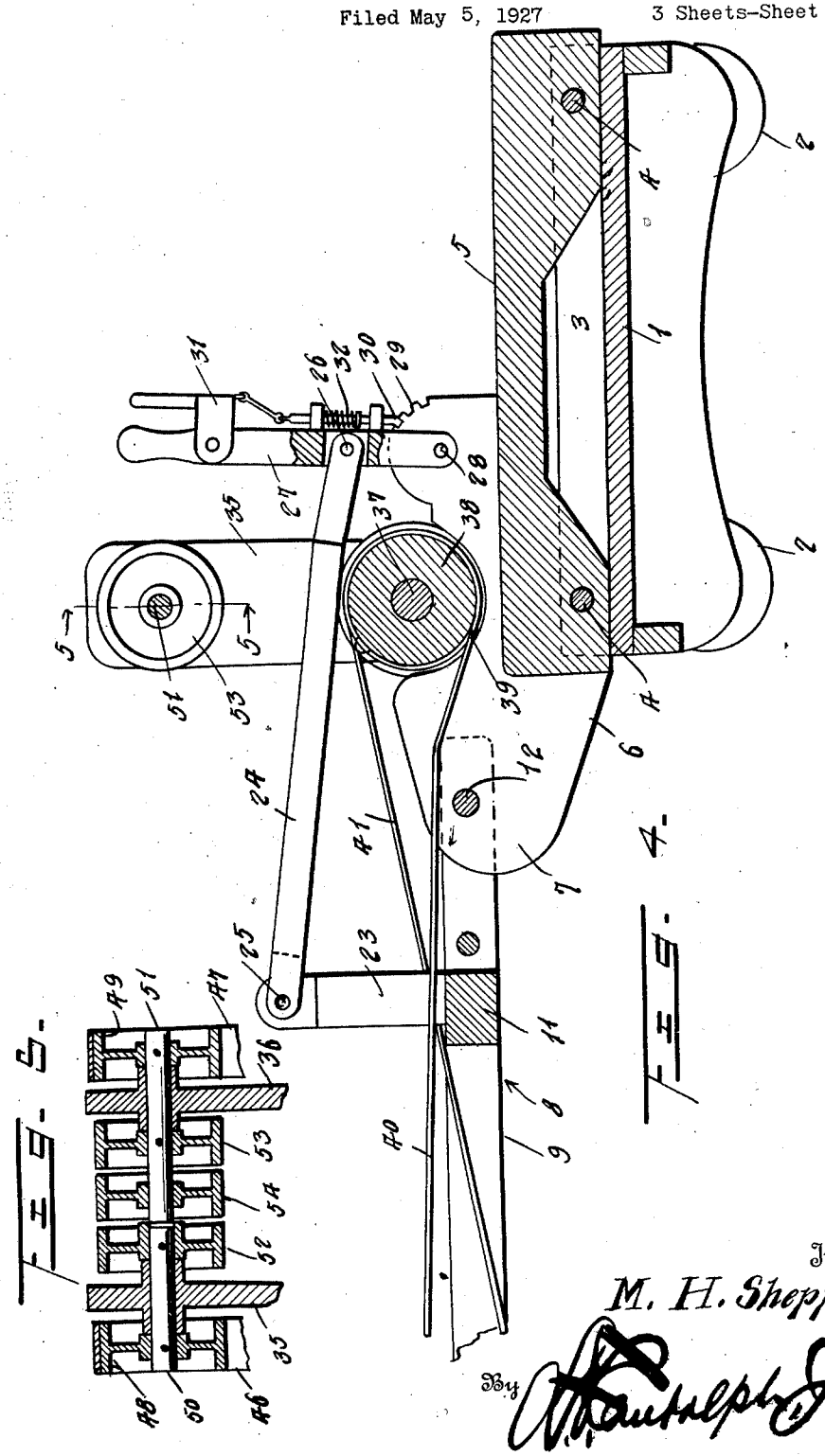


FIG. 4.

FIG. 5.

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UNITED STATES PATENT OFFICE.

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FORM MAKER FOR ROAD CURBINGS.

Application filed May 5, 1927. Serial No. 189,020.

The invention relates to the art of road making and has particular reference to replacing of curbs on paved highways.

Because of the increase in the use of motor vehicles, roads that have heretofore been of sufficient width to adequately take care of motor vehicle traffic are now insufficient for this purpose, and the practice has grown up in many of the States of adding a curb on the sides of the road of sufficient width on the two sides of the road to make a roadway that had theretofore been of sufficient width to accommodate two cars traveling abreast to accommodate three cars traveling abreast thus making it possible for the road to accommodate an increased traffic use of the road.

The invention has for its object the provision of a machine designed to cut out the dirt at the sides of the road to form the mold into which the concrete is poured to form the shoulder, the mold obviously being built up where necessary with timbers.

This operation has heretofore been done principally by hand and for that reason has been somewhat expensive, and a further object of the invention is to reduce the expense of making the mold forms.

A further object of the invention is the provision of a form maker including a plow, said plow being mounted for movement on a suitable guide, the guide being adapted to be adjusted to limit the depth of the furrow cut by the plow to the depth of the mold desired.

The invention will be described in detail hereinafter and will be found illustrated in the accompanying drawings, in which

Figure 1 is a top plan view of the improved form maker,

Figure 2 is a side view in elevation,

Figure 3 is a transverse sectional view on a plane indicated by the line 3—3 of Figure 2,

Figure 4 is a longitudinal sectional view on a plane indicated by the line 4—4 of Figure 1,

Figure 5 is a sectional detail on the plane indicated by the line 5—5 of Figure 4,

Figure 6 is a sectional detail on a plane indicated by the line 6—6 of Figure 1, and

Figure 7 is a sectional detail on a plane indicated by the line 7—7 of Figure 6.

In the drawings similar reference characters will be used to designate corresponding parts throughout the several views.

The improved form maker is mounted on a truck 1 having wheels 2 that may be of the flange type as shown in the drawings for operation on rails or may be of any other selected type found most suitable for the conditions. Truck 1 is provided with upright side members 3 supporting transverse rods 4, on which is slidably mounted a platform 5, said platform being adjustable on the truck laterally thereof to admit of moving the platform to properly place the plow share, to be hereinafter described, to cut out the earth where needed to form the mold, and to adjust the position of the plow share as the work of forming the mold progresses to admit of making the mold form of different widths as may be required.

Secured to the platform 5 is an upright supporting member 6, having a portion extending in front of the platform as shown at 7, and pivotally mounted on the extended portion 7 is a guide member 8 that comprises two longitudinal beams 9 that are spaced apart by means of cross members 10 and 11, and straddle the forwardly extended portions of the supporting member 6 and are pivoted thereto by means of a pivot pin 12. A traveler 13 is mounted for longitudinal travel on the guide member 8, having rollers 14 journaled on shafts 15 connecting downwardly extended flanges 16 engaging the upper surface of the guide member 8. A plow stock 17 having a reduced cylindrical portion 18 is rotatably mounted in an opening 19 in traveler 13, and has a notched disk 20 secured to its upper end, said cylindrical portion 18 extending between the side beams 9, 21 indicating a disk mounted on the stock 17 and engaging the under side of the guide member 8. 22 indicates a plow share secured to the plow stock 17. Secured to the cross member 11 is an upright 23, and 24 designates a rod pivotally secured at 25 to said upright 23 and having its opposite end pivotally engaging as at 26 a lever 27 fulcrumed at 28 on supporting member 6, 29 designating a segmental rack adapted to be engaged by a sliding detent 30 controlled by a thumb latch 31 on the lever, 32 designating a spring to hold the detent 30 in engagement with segmental rack 29. By this construction it will be apparent that guide member 8 and parts carried thereby may be adjusted on the pivot 12 to govern the depth of the cut of the plow share 22, and also to lift the plow share from engagement with the ground when the machine is to be moved from place to place.

To adjust the angle of the cut of the plow share 22 disk 20 is provided with a series of notches 33, and 34 is a pin to engage in an

opening in the traveler 13 and in one of the notches 33 to hold the plow share in adjusted position.

Supported on platform 5 are upright members 35 and 36. 37 is a shaft journaled in the uprights 35, 36, and secured thereto between said uprights is a drum 38. The supporting member 6 is provided with a curved recess 39 to receive the drum 38. 40 designates a cable or other flexible member connected at one of its terminals with the front end of the traveler 13 and having its other terminal secured to the drum 38 on one side of the supporting member 6, while 41 is another cable or other flexible element secured to the rear end of the traveler 13 and trained around the pulley 42 journaled on shaft 43 adjacent to the outer free end of the guide member 8 and having its free terminal secured to drum 38 on the other side of the upright member 6 from the end of the cable 40, and designed to be wrapped on the drum in the opposite direction from the cable 40. By this construction it will be apparent that rotation of the drum 38 in one direction will move the plow share 22 toward the truck 1 to cut a furrow, while rotation of the drum 38 in the opposite direction will serve to return the traveler 13 and plow share 22 to the outer end of the guide member preparatory to cutting another furrow.

Secured to the ends of the shaft 37 on the outer side of the upright members 35 and 36 are pulleys 44 and 45, and trained on said pulleys 44 and 45 are belts 46 and 47 that are trained on pulleys 48 and 49 secured for rotation with shafts 50 and 51 respectively, journaled on uprights 35 and 36, respectively.

52 and 53 indicate pulleys keyed to shafts 50 and 51 respectively, and adapted to be driven from any type of motor, 54 indicating an idle pulley loose on the inner end of shaft 51 to accommodate the idle belt on the motor when the plow share is not being operated, it being apparent that any standard form of belt shifter may be used in connection with the device, and it being considered to be unnecessary to illustrate the motor for driving the pulleys and the belt shifting mechanism.

In use after the trench is dug the length of the guide member or boom 9 form boards will be set up to provide the mold for pouring the concrete or other material. These form boards are placed apart a width corresponding to the gauge of the wheels 2 and thereafter the form boards are used as a track for the wheels, suitable anchoring means being provided to fix the truck 1 during the excavating operation. It will be also apparent that the machine is adaptable for grading roadways for surfacing roads and may also be employed in subgrading.

What is claimed is:—

1. In a form maker for road curbing, a truck, rods secured transversely of the truck, a platform slidably mounted on said rods and transversely adjustable on the truck, a rotatable drum carried by said platform, means to rotate the drum, a guide member carried by the platform and consisting of spaced longitudinal beams, a traveler mounted for movement on the guide member, a plow stock carried by said traveler, a plow share carried by said stock, and a flexible member secured to the drum and engaging the traveler.

2. In a form maker for road curbing, a truck, rods secured transversely of the truck, a platform slidably mounted on said rods and transversely adjustable on the truck, a rotatable drum carried by said platform, means to rotate the drum, a guide member consisting of spaced longitudinal beams pivotally engaged by one of its ends to the platform, means carried by the platform to adjust the position of the guide member, a traveler mounted for movement on the guide member, a plow stock carried by said traveler, a plow share carried by said stock, and a flexible member secured to the drum and engaging the traveler.

3. In a form maker for road curbing, a truck, rods secured transversely of the truck, a platform slidably mounted on said rods and transversely adjustable on the truck, a rotatable drum carried by said platform, means to rotate the drum, a guide member consisting of spaced longitudinal beams pivotally engaged by one of its ends to the platform, means carried by the platform to adjust the position of the guide member, a traveler mounted for movement on the guide member, a plow stock carried by said traveler, a plow share carried by said stock, flexible members having ends secured to the drum to be wound thereon, said flexible members being connected to opposite ends of said traveler.

In testimony whereof I affix my signature.

MARSHALL H. SHEPPARD.