Nov. 19, 1940. R. A. BOSSI 2,221,908

HIGHWAY STRIPER

Filed March 3, 1939 5 Sheets-Sheet 1

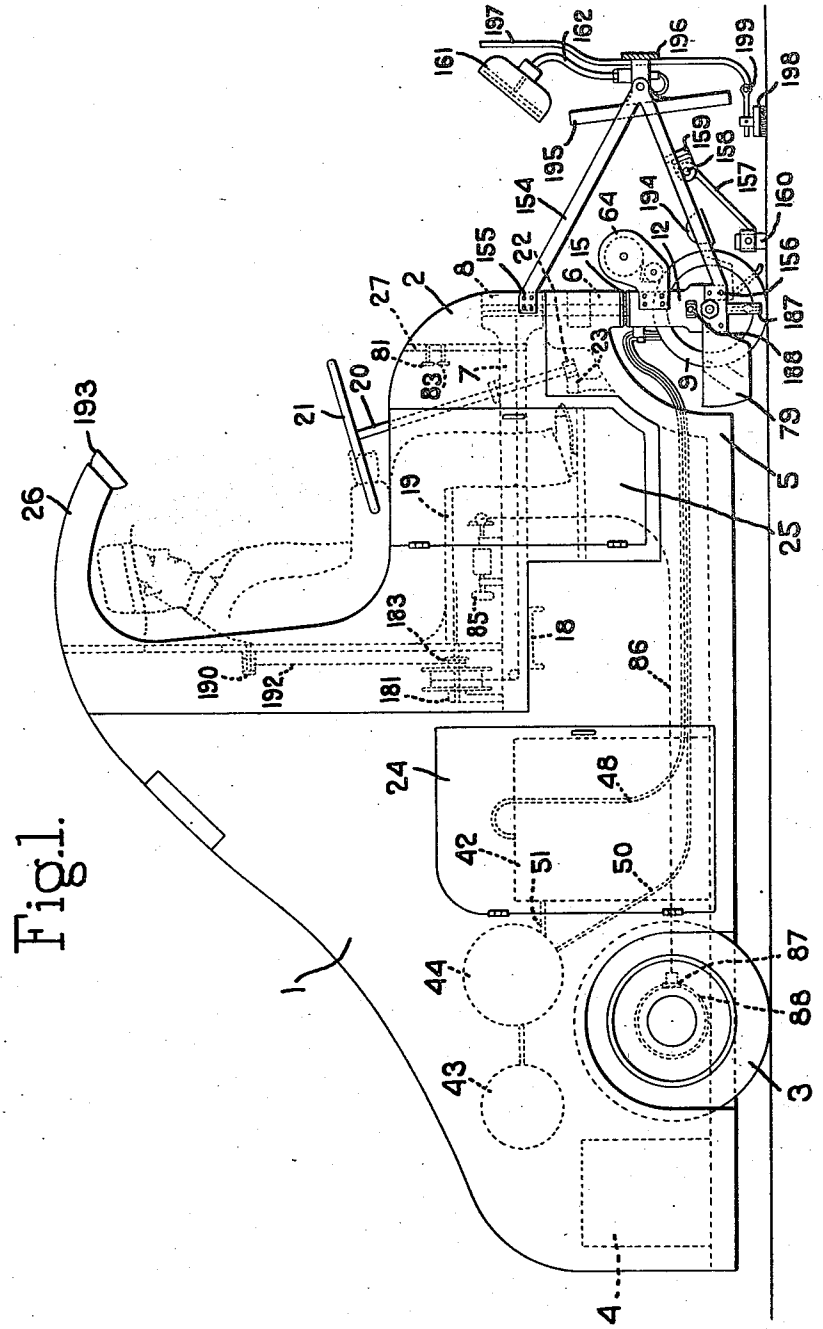

Fig. 1.

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HIGHWAY STRIPER

Filed March 3, 1939 5 Sheets-Sheet 2

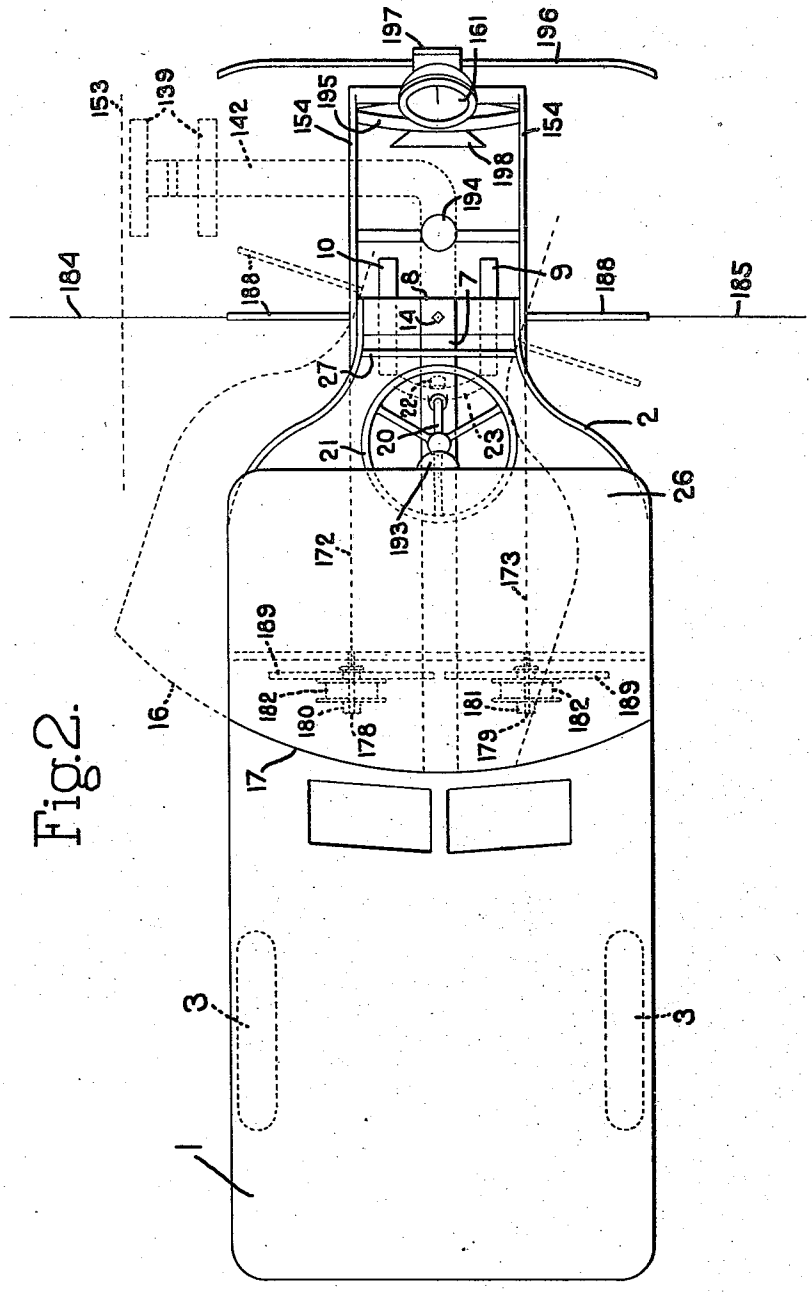

Fig. 2.

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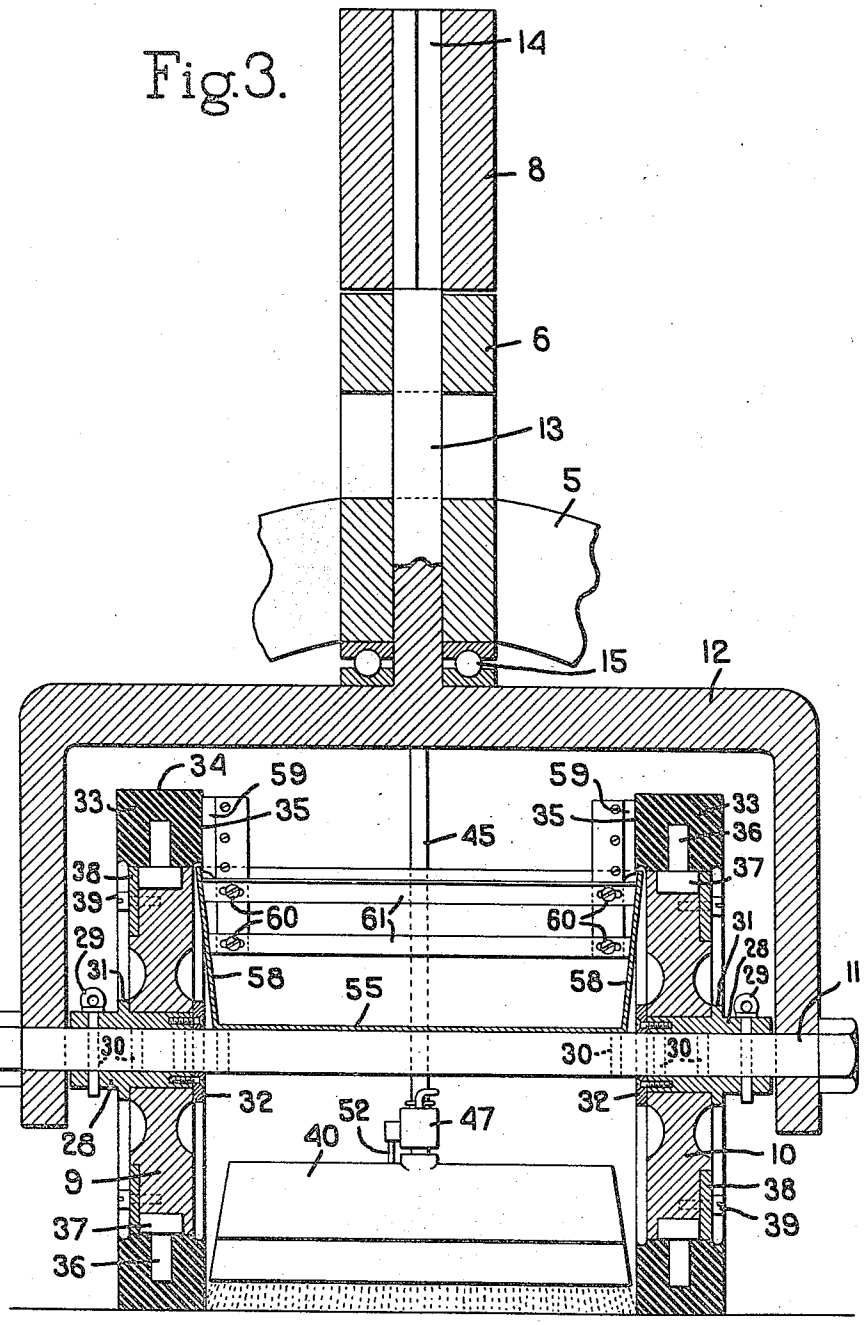
HIGHWAY STRIPER

Filed March 3, 1939 5 Sheets-Sheet 3

Fig.3.



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HIGHWAY STRIPER

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Fig. 4.

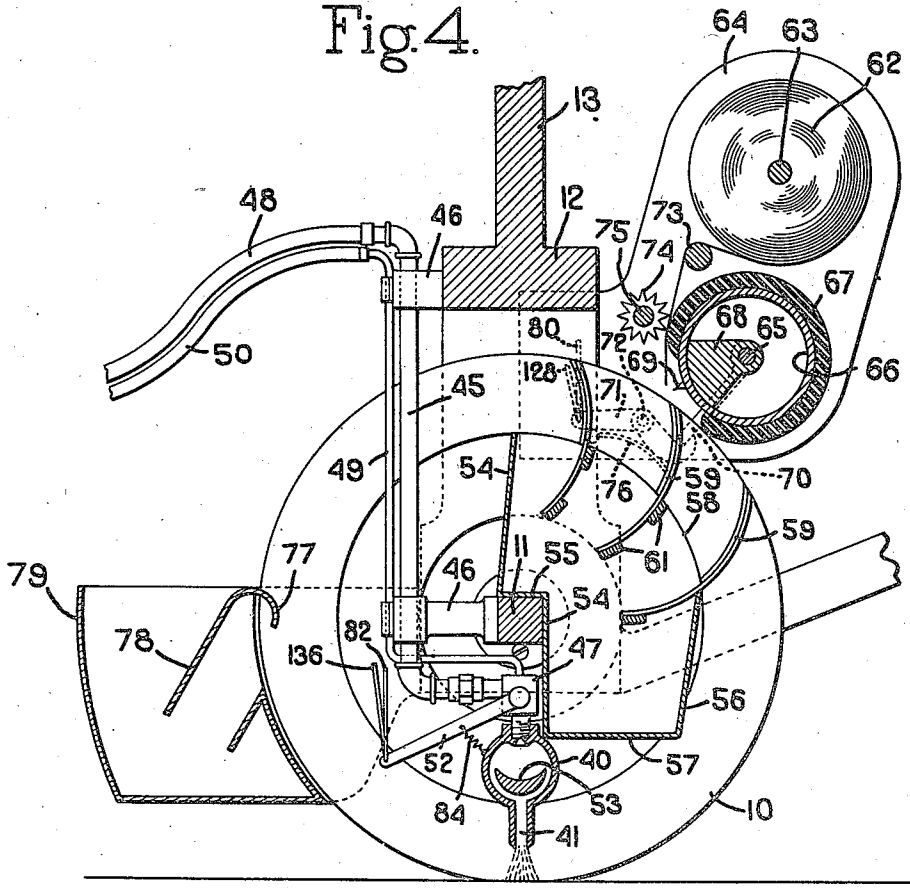

Fig. 5.

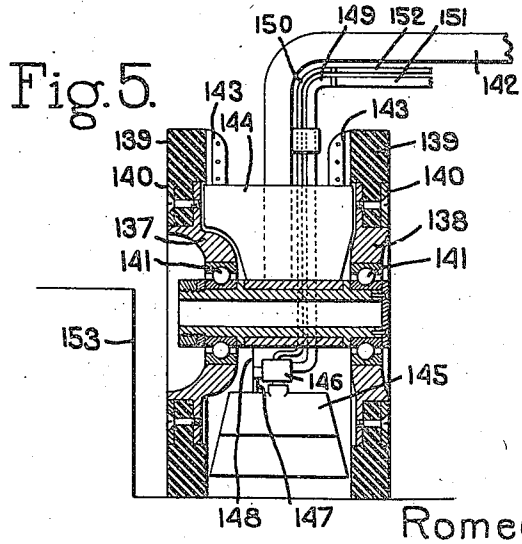

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Fig.6.

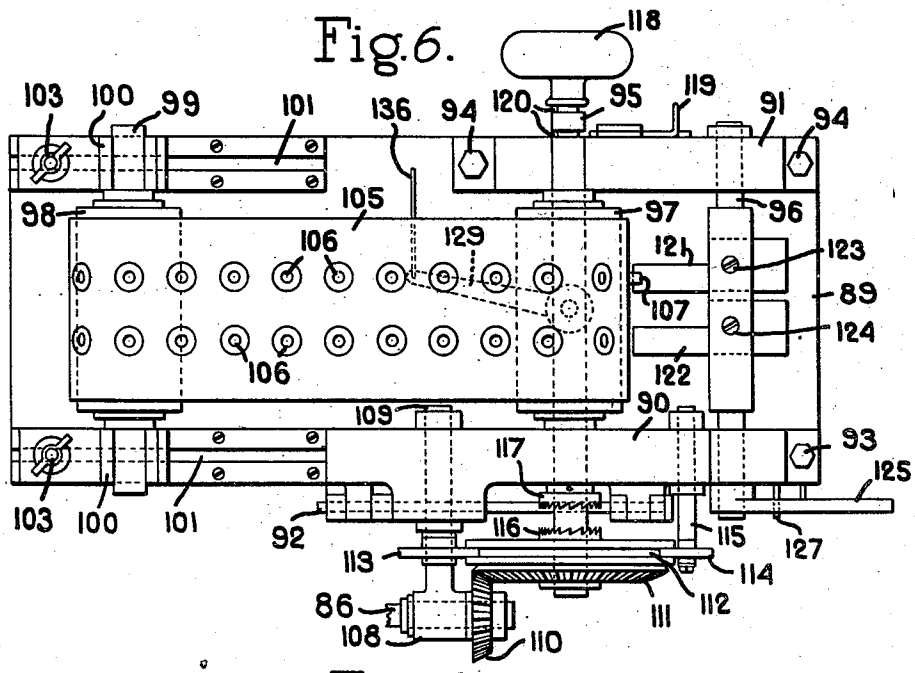


Fig.7.

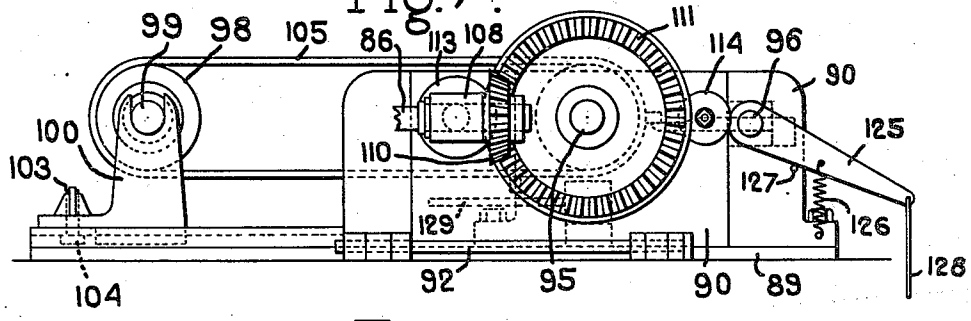


Fig.8

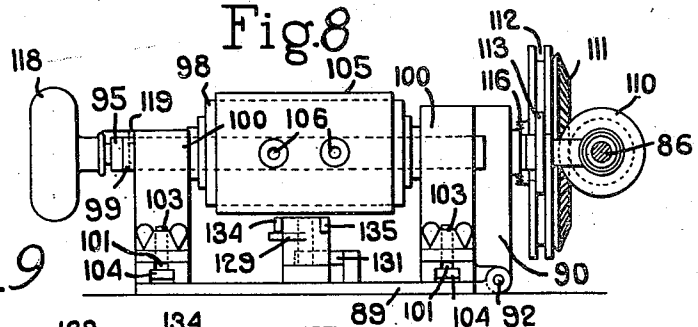
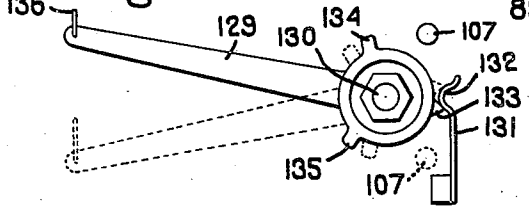


Fig.9



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Patented Nov. 19, 1940 2,221,908

UNITED STATES PATENT OFFICE

2,221,908

HIGHWAY STRIPER

Romeo A. Bossi, Newton Center, Mass.

Application March 3, 1939, Serial No. 259,585

17 Claims. (Cl. 91—12)

This invention has for its object the painting along a highway of a stripe such as now extensively employed for indicating traffic lanes.

The object of the invention is to provide a machine for painting such a stripe which will apply the stripe to the roadway rapidly and accurately along the predetermined line and with a minimum amount of labor.

The object of the invention is further to provide a machine of a novel character, preferably self-propelling, which will enable the driver readily and accurately to guide the machine along the desired line.

The object of the invention is further to provide means for insuring a sharply defined beginning and ending of the painted stripe section.

The object of the invention is further to provide pattern-controlled means for painting the stripe.

The object of the invention is further to provide the machine with means for indicating the position of the front supporting wheels laterally with respect to the desired position of the painted stripe on the roadway.

The object of the invention is further to provide means by which the position of the machine with respect to the sides of the roadway may be indicated.

The object of the invention is further to provide means by which the machine may be employed to mark upon the roadway the line substantially to be followed with the application of the painted stripe.

These and other objects and features of the invention will appear more fully from the accompanying description and drawings and will be particularly pointed out in the claims.

The drawings illustrate a simple and preferred form of machine embodying the invention with the portions thereof which may be of generally standard construction and with which the invention is not specifically concerned shown more or less diagrammatically.

In the drawings:

Fig. 1 is a side elevation of a preferred form of the machine.

Fig. 2 is a top plan view of the machine shown in Fig. 1 with some of the parts omitted to simplify the illustration, with the front body section indicated in dotted lines in a second position, and with an auxiliary mechanism for painting a side stripe indicated in dotted lines.

Fig. 3 is a view chiefly in transverse vertical cross section taken through the pivotal connection between the rear and body sections of the machine.

Fig. 4 is a view partially in side elevation and partially in vertical cross section of the main elements involved in the application of the painted stripe to the roadway.

Fig. 5 is a detail chiefly in vertical cross section of the auxiliary mechanism for painting a side stripe.

Fig. 6 is a top plan view of the main elements of a pattern mechanism for controlling the discharge of strip sections of material to be carried by the wheels to the roadway at the beginning and the end of the striped sections and for controlling the discharge of the paint.

Fig. 7 is a side elevation of the construction shown in Fig. 6.

Fig. 8 is a rear elevation of the construction shown in Fig. 6.

Fig. 9 is a detail of a lever mechanism shown in Figs. 6 to 8.

It has long been common to mark the surface of highways travelled by automobiles with narrow, painted stripes either continuous or in spaced sections for the purpose of indicating traffic lanes or for separating the portions of the highway designed for travel in opposite directions. These stripes are of different colors, depending upon the color of the roadway, and different materials are employed for the stripes. The term "paint" is herein used as broadly descriptive of any suitable material which may be employed for this purpose.

The application of these painted stripes to the roadway is generally performed by hand or by means of very simple mechanisms and is necessarily a relatively slow and expensive operation. It is necessary, moreover, that the stripes shall be applied with substantial accuracy so that the lanes of traffic shall be properly distributed, giving to each lane its proper share of the width of the roadway. Furthermore, it is desirable from an aesthetic standpoint that the stripes shall be marked with straight lines and smooth, even curves in correspondence with the path of the roadway.

The present invention in its preferred form provides a self-propelling machine which may be driven along the highway, occupying a minimum amount of space, and guided so as rapidly and accurately to apply the required painted stripe either continuous or in required spaced sections throughout any desired length and in accordance with any variation in the direction of the roadway.

In its preferred form the machine comprises two body sections, a rear body section 1 and a front body section 2. The rear body section is provided with a pair of supporting wheels 3. These supporting wheels 3 are preferably to be operated in the same manner as the driving wheels of an ordinary automobile, the motor therefore being indicated at 4. Since the means for driving and controlling these wheels may be of any suitable or standard type, no further illustration or description thereof is necessary. The frame 5 of the rear section at its forward end curves upward and tapers into a vertical head 6 provided with a central vertical shaft bearing. The front section 2 narrows in width toward the front end and the framework thereof includes a central girder 7 extending in the longitudinal axis of the front section. This girder terminates at the front in a head 8 directly above the head 6.

The front section 2 of the body is provided with a pair of supporting wheels maintained at all times parallel with the longitudinal axis of the front section. These wheels act not only to support the front section of the machine but also the front end of the entire machine and are also spaced apart the width of the desired stripe so that the paint may be applied to the roadway between these wheels with the width of the stripe defined thereby.

These front supporting wheels 9 and 10 are carried by a shaft 11 secured in the arms of a yoke 12 having a central, vertically extending shaft 13. This shaft is journalled in the vertical bearing of the head 6 and is securely fastened in the head 8, its upper end 14 being shown as polygonal and having a tight fit in a polygonal opening in the head 8. A ball bearing 15 is shown interposed between the yoke 12 and the head 6 so that that weight of the front section is transmitted directly through the shaft 13 to the supporting wheels 9, while the weight of the rear section is transmitted through the ball bearing to the yoke and thence to the supporting wheels.

The front section of the body in the rear of and in longitudinal alignment with the pivotal axis 13 and the front wheels present a platform 16 which at the rear is of arcuate shape having its center at the shaft 13, and fits against an upstanding portion 17 of the rear body section of similar arcuate shape. The front section of the body fits within the rear section and at its rear slides upon a transverse girder 18 mounted in the rear section. Thus there is provided by the shaft 13 a pivotal connection between the two body sections having its axis vertical and extending midway the front supporting wheels. The driver is located on the platform preferably in a seat 19 located centrally on the front section so that the driver sits with his legs straddling the girder 7 directly over the longitudinal axis of the front section and thus is always in line with the space between the front supporting wheels where the paint is applied and consequently always in a position to guide the machine along the required position of the stripe and to observe the painting of the stripe.

It will be recognized that the front supporting wheels 9 between which the stripe is applied support the front end of the machine and also act to direct the path of movement of the machine. Any suitable means may be employed for steering the machine by means of the front supporting wheels. A simple and preferred construction is illustrated in which a steering post 20 having a hand wheel 21 is journalled in the front section in front of the driver's seat and is provided at its lower end with a pinion 22 engaging an arcuate rack 23 formed on the frame 5 of the rear section with its center coincident with the axis of the shaft 13.

Both the rear and the front section of the body are preferably closed in, the rear section being shown as provided with a door 24 at one side and the front section with a door 25, the central portion of the front section being set down into the rear section as illustrated. The top of the front section is provided with a suitable hood 26 to protect the driver and with a suitable dash or instrument board 27.

The paint for marking the stripe on the roadway, as already noted, is applied directly between the front supporting wheels 9 and 10 and the width of the stripe is defined by these wheels. A preferred construction is illustrated more in detail in Figs. 3 and 4. The wheels 9 and 10 are journalled on sleeves 28. These sleeves are provided with central openings fitting the shaft 11 which is of polygonal cross section and are longitudinally adjustable on the shaft so as to adjust the width or space between the wheels. For that purpose each sleeve 28 at its outer end is provided with a pin 29 passing therethrough and through one of the holes 30 in the shaft 11. Each wheel is journalled on its sleeve between an annular shoulder 31 and a removable cap 32. Each wheel is provided with a slightly resilient tire 33 having a flat tread 34 and a flat inner side surface 35 with these inner side surfaces preferably parallel. These tires are preferably made of heavy, slightly resilient rubber and are secured in place by any suitable means. As shown, the tires are solid, provided with radial pins 36 having projecting heads 37 fitting into grooves or recesses in the solid hub portion of the wheels and held in place by removable annular side plates 38 secured in position by screws 39.

A spray nozzle head 40 is supported directly beneath the shaft 11 between the wheels with its opening 41 extending close to the roadway. This spray nozzle head and the means for supplying the paint thereto and discharging it therefrom may be of any suitable design and construction in accordance with the broader scope of the invention.

A simple and preferred form of means for supplying and discharging the paint is illustrated. In the rear body section there is mounted a tank or container 42 containing the supply of paint, an air compressor 43 operated from the motor 4, and a tank 44 of compressed air maintained by the air compressor. A pipe connection extends from the paint tank 42 to the nozzle 40. As illustrated, this pipe connection comprises a rigid section 45 supported by brackets 46 from the shaft 11 and the yoke 12 and entering a valve head 47. The portion of this pipe connection extending between the front and rear body sections must be flexible in order to permit the turning of the front section of the body with respect to the rear section and, as shown, the section 48 of this pipe connection is a flexible hose extending from the section 45 back to the paint tank 42. Similarly there is provided a pipe connection from the source of compressed air to the spray nozzle. This is shown as a rigid pipe 49 entering the valve head 47 and supported likewise by the brackets 46 and with a flexible section or hose 50 extending

back to the compressed air tank 44. The compressed air tank is also preferably connected to the paint tank 42 as by the connection 51 to assist in stirring up the paint. A suitable valve mechanism for controlling the discharge of paint from the valve head 47 to the nozzle is provided and is indicated as operated by a lever 52. To provide for an easy feeding of the paint through the nozzle opening 41 without too much spattering, a baffle plate 53 is shown as located in the spray nozzle head 40 extending longitudinally thereof.

Since the flat, inner side surfaces of the tires of the wheels act to limit and define the width of the stripe formed by the paint discharged from the nozzle, more or less paint may collect upon these surfaces and might work onto the treads and would tend to make the edges of the painted stripe uneven. Means are therefore provided for keeping the tires free from the paint. For that purpose a receptacle, preferably formed of metal, is supported on the shaft 11 between the wheels, and wipers are provided engaging the inner side faces of the tires and acting to wipe paint therefrom and discharge it into the receptacle. This receptacle, which is shown in vertical cross section in Fig. 4 and the upper part of which is shown in transverse section in Fig. 3, is a box-like structure open at the top. The rear wall 54 stands substantially vertical but is formed with a shoulder 55 seated upon and secured to the shaft 11. The front wall 56 extends upward generally parallel with the rear wall and the bottom wall 57 is located well below the shaft 11. The side walls 58 flare outwardly and extend beneath inward projecting portions of the tires 33. Two or more wipers may be provided and three pairs are herein shown. Each wiper is a curved metal blade having a strip 59 of felt or suitable material removably secured to and projecting from its edge and fitting snugly against the inner face 35 of the tire and its lower end adjustably mounted as by the set screws 60 upon transverse bars 61 extending between the side walls 58 of the receptacle. The wipers therefore act to engage the inner side faces of the tire and, as the wheels rotate, to wipe therefrom any paint carried thereon and discharge it into the receptacle which will be cleaned out from time to time.

It is desirable that the painted stripe, whether continuous or in sections, shall begin and end with a sharply defined transverse straight line and this would be difficult, if not practically impossible, to secure simply by starting and stopping the feed or discharge of the paint from the nozzle mouth. The invention therefore provides means for insuring that the stripe or striped section shall begin and end with such a sharply defined line. This, as well as the feed or discharge of the paint, may be controlled manually by the driver of the machine or, as further provided by the invention, may be controlled by a pattern mechanism to act automatically when the strfipe is to be formed in a number of longitudinally separated sections.

In the construction illustrated, a roll of suitable sheet material is mounted in front of and above the front supporting wheels and at the beginning or the end of a stripe or striped section a strip section of this sheet material is discharged onto the supporting wheels so as to extend transversely thereof and across the intervening space and be carried thereby to the roadway to receive the paint at the end of the stripe or striped section. When this strip section reaches the roadway, the discharge of the paint is begun or stopped according as the stripe or striped section is beginning or ending so that the painted stripe on the roadway ends with a straight line sharply defined by the edge of the section of the sheet material. As the rotation of the wheels continues, this section of sheet material with the paint thereon is carried up by the wheels and stripped off into a receptacle.

In the construction illustrated, the roll 62 of sheet material is mounted on a shaft 63 supported between brackets 64 secured to and projecting forward from the yoke 12. Any suitable material may be employed but preferably this material is paper coated on one face with an adhesive which will adhere to the tread surfaces of the tires but which will not readily adhere to the opposite surface of the paper when rolled up. Beneath the roll of sheet material there is mounted on a shaft 65 journalled in the brackets 64 a cylinder 66 having a peripheral layer 67 of rubber or suitable resilient material. This peripheral layer 67 does not extend over a short segment of the cylinder 66 and opposite this segment and interiorly the cylinder is provided with a heavy weight 68. A sharp knife 69 projects from the cylinder midway the ends of the layer 67 and transversely of the cylinder. A lug 70 extends from the shaft 65 down alongside one of the brackets 64 and engages the hooked end of a lever 71 fulcrumed at 72 on the bracket. The parts are positioned, as shown in Fig. 4, when the lug 70 is locked by the lever 71. The strip of paper leads from the roll 62 over a bar 73 mounted in the bracket 64 and is held in engagement with the outer periphery of the rubber-covered cylinder 66 by a star wheel 74 freely revolublé on a shaft 75 mounted on the bracket 64. When, now, the latch lever 71 is tripped, releasing the lug 70, the weight 68 causes the rubber-covered cylinder to rotate counterclockwise, feeding the strip of sheet material into engagement with the tread surfaces of the front supporting wheels so that it extends transversely across these wheels and across the intervening space. The rotation of the wheels, as the machine moves forward, continues the rotation of the rubber-covered cylinder with the strip of sheet material pressed between and adhering to the treads of the supporting wheels until the cylinder has made one revolution and the knife 69 coming into engagement with the strip stretched across the space opposite the weight has severed the strip. The lug 70 then again engages the latch lever 71 which has been returned to locking position by the spring 76. The strip of sheet material is now carried by the further rotation of the supporting wheels to the roadway. If it is at the beginning of a stripe or striped section, the discharge of paint is started so that it begins upon the strip laid upon the roadway and if it is at the end of a stripe or striped section, the discharge of paint is stopped so that the paint ends on the strip section. Thus in either case a clean, sharp line is formed at the end of the painted stripe. As the rotation of the supporting wheels continues, the strip section is carried upward, adhering to the treads until it engages the end 77 of a stripper plate projecting between the wheels. This stripper plate 78 is mounted inside of and secured to the side walls of a receptacle 79. The side walls of this receptacle are bolted to the yoke 12 and hold the receptacle close to and in the

rear of the supporting wheels. Consequently, as the rotation of the wheels continues, the strip of sheet material with the paint thereon is removed by the stripper and discharged into the receptacle.

When the striped sections being painted are long or substantially continuous, the control of the discharge of paint and of the discharge of the strip material at the beginning and end of the stripe is preferably manual. As a simple means for such control, a connector 80 may extend from the end of the latch lever 71 up to a suitable control, as 81 on the dashboard 27 within reach of the driver and a second connector 82 may extend from the end of the lever 52 to a control 83 on the dashboard. Thus the driver, by pulling on the controls 81 and 83, may start the discharge of paint and the discharge of the strip of sheet material. The control 83 would be locked in open position as long as the discharge of paint is continued, and when it was to be stopped, it would be released and a suitable spring such as 84 would act to close the valves and stop the discharge of paint.

The invention further provides pattern-controlled mechanism for controlling the discharge of the paint and the discharging of the sections of sheet material at the beginning and the end of a striped section so that these features will operate automatically as long as a required arrangement of separated painted stripe sections are to be painted upon the roadway. A simple and preferred mechanism for effecting such an automatic control is illustrated in Figs. 6 to 9, inclusive. The main elements of this mechanism are preferably mounted as indicated generally at 85 on the front body section beneath the driver's seat and power is supplied thereto by a flexible cable 86 having a pinion 87 and gear 88 connection with one of the rear wheels 3. The mechanism illustrated comprises a bed plate 89. Bearing brackets 90 and 91 extend upward from the bed plate at opposite sides. The main portion of the bracket 90 is hinged at the bottom at 92 to the bed plate and the end portion is secured to the bed plate by a bolt 93. The bracket 91 is secured to the bed plate by bolts 94. A shaft 95 is journalled in the main portion of the bracket 90 and in an open bearing in the bracket 91. A second shaft 96 is journalled in the two brackets. A shaft 95 has keyed thereto a roller 97 and a similar roller 98 is carried by a shaft 99 journalled in open bearings in the brackets 100 which are adjustable toward and from the roller 97. For this purpose the brackets 100 are dovetailed into grooves 101 on the bed plate and are locked in adjusted position by set screws 103, the heads 104 of which are likewise dovetailed into the grooves. An endless belt 105 or other suitable flexible element extends around the rolls 97 and 98 and is so arranged as to be driven by rotation of the roll 97. This belt has adjustably mounted therein pins or strikers which constitute the pattern elements. As illustrated, the belt is provided with a series of holes or eyelets 106 into which suitable pins 107 may be inserted as required. It will be seen that by adjusting the rear roll 98 toward and from the front roll 97 any desired length of endless belt may be provided. The shaft 95 with the main portion of the bracket 90 may be swung on the hinge 92 to allow of removal and replacement of the pattern belts. The roll 97 is driven, to drive the traveling belt 105, from the flexible shaft 86 already referred to. As illustrated, this shaft is journalled at its end in a bearing 108 forming the end of a stud 109 secured in the hinged portion of the bracket 90. At its end the shaft 86 is provided with a bevelled pinion 110 meshing with a bevelled gear 111 journalled on the outer end of the shaft 95 and held against movement longitudinally of the shaft by a peripheral groove 112 engaging a disk 113 rotatable on the stud 109 to hold against movement longitudinally thereof and a disk 114 similarly mounted on a stud 115 also secured in the bracket 90. The gear 111 carries a clutch member 116 and a cooperating clutch member 117 is secured to the shaft 95. At the outer end this shaft is provided with a hand wheel 118. A latch 119 is mounted on the bracket 91 and may be slid into engagement over either of two grooves 120 in the shaft 95 both to hold the shaft in the open bearing and to position the clutch. When it is desired to have the pattern mechanism operate, the shaft 95 is pushed inward carrying the clutch member 117 into engagement with the clutch member 116 and the latch 119 is slid over the outer groove of the shaft 95. Thereupon the pattern belt will be continuously driven in synchronism with the forward movement of the entire machine, the shaft 86 being driven, it will be remembered, from one of the rear wheels. The control for the discharge of the strip sections of sheet material to define the beginning and end of the stripe is operated by the shaft 96. Arms 121 and 122 are adjustably secured to this shaft at 123 and 124 and project in the paths of the pins 107. The outer end of the shaft 96 has secured thereto a lever arm 125. A spring 126 extending between this lever arm and the bracket 90 acts to hold the lever arm against a pin 127 with the arms 122 in position to be struck by the pins 107. A suitable connector 128 extends from the end of the lever arm 125 to the latch lever 71. Thus it will be seen that by positioning a pin in either of the rows of holes 106 in the belt 105, the shaft 96 will be rocked at a predetermined time to unlatch the lever 71 from the lug 70 and effect the discharge of the strip of sheet material with the same result as in the case of the manual operation already described. The control of the discharge of the paint from this pattern mechanism is shown as secured by means of a lever 129 mounted on a vertical shaft 130 beneath the lower run of the belt 105. This lever is releasably held in either of its two extreme positions, shown respectively in full and dotted lines in Fig. 9, by a spring 131 having a bulge 132 engaged by a projection 133 in line with the main arm of the lever 129. The lever is provided around its fulcrum with an enlargement having radial projections 134 and 135 extending into the paths travelled by the pins 107 located in the pattern belt. A suitable flexible connector 136 extends from the outer end of the lever 129 to the end of the lever 52. With the parts in the position shown in full lines in Fig. 9, the valves for discharging the paint are closed. When now a properly located pin 107 on the pattern belt rides against the projection 134, the lever 129 is snapped to the position shown in dotted lines, thus pulling the lever 52 upward and opening the valves. The parts remain in this position until another properly located pin 107 strikes the projection 135 swinging the lever 129 from the dotted line position back to the full line position and thus allowing the spring 84 to close the valves.

It will thus be seen that at any time the ma-

chine may be placed under the control of this pattern mechanism and operate under its control to produce any desired arrangement of the striped paint sections all as determined by the position of the pins 107 in the pattern belt.

Occasionally it is desirable to apply the painted stripe to the roadway adjacent the edge of the roadway, as, for example, at a short distance from a curb, and the invention provides means for painting such a stripe. For this purpose a pair of auxiliary wheels similar to the front pair of wheels hereinbefore described are supported from the front body section of the machine forward of the front wheels. The wheels of this auxiliary pair are maintained parallel with and at one side of the longitudinal axis of the front section and are spaced apart the width of the desired stripe and provision is made for feeding the paint to the space between the auxiliary wheels. This auxiliary apparatus would only be in position when it was desired to paint such a side stripe and consequently would preferably be detachably connected to the machine and provided with detachable connections extending to the paint and air supply. A form of construction is illustrated somewhat in detail in Fig. 5 and the position thereof on the mechine is indicated in dotted lines in Fig. 2. The auxiliary wheels 137 and 138 are shown as having tires 139 of the same material as in the case of the main front wheels. These tires are shown having an inner annular rib and in each case clamped in place between a rigid portion of the body of the wheel and an annular plate 140 by suitable bolts. The wheels are mounted on ball bearings 141 on a central hub structure rigidly connected to and supported by a bracket 142. This bracket is suitably connected to and extends forward and then laterally from the head 8 of the front section of the machine. This auxiliary pair of wheels is provided with the wipers 143 and a receptacle 144 similar to those already described. Likewise, the means for discharging the paint between the wheels is illustrated as similar to that already described. The nozzle spray head 145, the valve head 146 with its operating lever 147 and connection 148 extending therefrom, the pipe 149 for the paint and the pipe 150 for the compressed air may also be of similar construction to that already described. Flexible or hose connections 151 and 152 extending respectively to the paint and air pipes are illustrated. When the auxiliary striping mechanism is in use, the flexible pipes 48 and 50 may be disconnected from the pipes 45 and 49 and connected to the flexible pipes 151 and 152, respectively. The lever 147 for controlling the valves will be operated in the same manner as the lever 52 and have its connector 148 extending back to the dashboard or other convenient position for operation.

It will thus be seen that by the use of this auxiliary mechanism the machine may readily be guided so as to paint a stripe adjacent to a curb 153 at the side of the road or along any desired line at the side of the machine.

It is important, if not necessary, that the driver of the machine shall have some accurate guide on the roadway to enable the painted stripe to be applied in the required position laterally of the roadway. If the machine is employed in repainting a worn or partially obliterated stripe, the driver can use that as a guide, but usually it will be necessary to mark the roadway sufficiently to enable the driver to guide the machine with accuracy and paint an even and regular stripe. For the purpose of insuring the required guiding of the machine, the invention provides a simple and effective means. Preferably the machine will be run over the roadway, making a temporary mark on the roadway. Then the machine will be guided by the driver to follow as closely as possible this mark but avoiding irregularities therein to paint an even stripe.

The front body section of the machine is shown as provided with a forwardly projecting frame 154 secured at 155 to the front end of the body section and at 156 to the yoke 12, so that this frame is rigid with the front body section and symmetrically disposed laterally with respect to its longitudinal axis. For preliminarily marking the roadway, there is shown in Fig. 1 an arm 157 hinged at 158 to a support 159 which, when in use, will be mounted on the frame 154 so that the arm 157 will swing in a vertical plane parallel with the longitudinal axis of the front section and preferably about in the plane of one of the front starting wheels. This arm has adjustably mounted therein a block 160 of suitable marking material, such, for example, as soapstone. Thus as the machine is driven over the roadway, the required preliminary mark will be made.

In order to enable a required line longitudinally of the roadway at the center thereof or at a predetermined distance from the center or from either edge of the roadway to be determined, the machine may be provided with an indicating mechanism. An indicator 161 is shown mounted on a suitable support 162 from the frame 154 so as to face the driver and readily be viewed by him as shown in Figs. 1 and 2.

The elements of this indicator are operated by flexible shafts 172 and 173 which extend, respectively, to, and rotate with, shafts 178 and 179 journalled in brackets 180 and 181 symmetrically located on the front section of the body as, for example, in the space behind the driver's seat. The shafts 178 and 179 have secured thereto similar large pulleys 182 and similar small pulleys 183. Thus equal amounts of rotary movement of the pulleys will be transmitted through the flexible shafts to give equal movements of the indicating elements. Two cords 184 and 185 of equal length extend around and are connected to the corresponding pulleys 182. These cords run over suitable guides 186 and down through tubes 187 carried by the yoke 12. Rods 188 are secured, preferably removably, to the yoke and project laterally therefrom at right angles thereto. Take-up means are provided for rotating the pulleys 182 reversely to the rotation effected by pulling the cords and for that purpose levers 189 are fulcrumed at 190 at the rear of the driver's seat.

It will thus be seen that if the ends of the cords 184 and 185 be drawn outward at right angles to the yoke 12, as indicated by the guide rods 185, and to equal distances from the yoke, the indicating elements will turn together and remain in alignment, while if one cord be drawn a greater distance than the other, the indicating elements will separate. In use, therefore, the ends of the cords are held by men and carried along as close as possible to the side edges of the roadway and if a marking line is to be laid midway of the roadway, the driver of the machine simply has to steer it so as to keep the indicating elements in alignment.

The machine is provided with suitable lights and other means for assisting the driver in viewing the marking of the roadway, the painting of

the stripe and in properly steering the machine. A light is shown at 193 on the front of the hood 26 directed toward the indicator 161 and another light 194 is conveniently mounted on the frame 154 reflecting directly upon the roadway. A mirror 195 adjustably mounted at the front end of the frame 154 enables the driver to view the space between the wheels where the painted stripe is being laid and also the bulk of marking material 160. The machine is also provided with a suitable bumper 196 at the front end of the frame 154 and also with an upright 197 to protect the indicator 161. It is desirable also that the roadway should be cleaned in advance of the marking of the line when the marker 160 is used and in advance of the laying of the paint. For that purpose a scrubbing brush 198 is shown resting on the roadway and pivotally connected at 199 to the lower end of the upright 197.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is:

1. A striping machine comprising a rear body section having a pair of supporting wheels, a front body section, a pivotal connection between the two sections having its pivotal axis vertical, a pair of supporting wheels on the front section spaced apart the width of the desired stripe and maintained parallel with and equidistant from the longitudinal axis of the front section passing through said pivotal axis, a platform on the front section in the rear of and in longitudinal alignment with the said pivotal axis and front wheels, means for feeding paint to the space between the front wheels and means on the front section controlled from the platform for turning said section on the pivotal axis, thus to enable a driver located on the platform always to be in line with the space where the paint is applied and readily and accurately to guide the machine along the line of the desired stripe.

2. A striping machine comprising the construction defined in claim 1 in which the pivotal axis of the connection between the two body sections intersects the axis of the pair of front wheels.

3. A striping machine comprising the construction defined in claim 1, together with means operable from the said platform for controlling the paint feeding means.

4. A striping machine comprising a pair of roadway-engaging wheels spaced apart the width of the desired stripe, means for feeding paint to the space between the wheels, and means for discharging to, and transversely across, the wheel treads a strip section of sheet material to be carried by the wheels to the roadway to receive the paint at an end of a painted stripe.

5. A striping machine comprising the construction defined in claim 1, together with means operable from the said platform for discharging to and transversely across the front wheel treads a strip section of sheet material to be carried by said wheels to the roadway to receive the paint at an end of a painted stripe.

6. A striping machine comprising a pair of roadway engaging wheels spaced apart the width of the desired stripe, means for feeding paint to the space between the wheels, and pattern-controlled means for discharging to, and transversely across, the front wheel treads strip sections of sheet material to be carried by said wheels to the roadway to receive the paint at the beginning and at the end of each painted stripe.

7. A striping machine comprising a rear body section having a pair of supporting wheels, a front body section, a pivotal connection between the two sections having its pivotal axis vertical, a pair of supporting wheels on the front section spaced apart the width of the desired stripe and maintained parallel with and equidistant from the longitudinal axis of the front section passing through said pivotal axis, a platform on the front section in the rear of and in longitudinal alignment with the said pivotal axis and front wheels, means for feeding paint to the space between the front wheels, a steering post journalled in the front section at the front of said platform and having a pinion at its lower end, and an arcuate rack on the rear section engaging said pinion and having its center coincident with said pivotal axis, thus to enable a drive located on the platform always to be in line with the space where the paint is applied and to steer the machine along the line of the desired stripe.

8. A striping machine comprising a rear body section having a pair of supporting wheels, a front body section having a pair of supporting wheels maintained parallel with the longitudinal axis of the front section and spaced apart the width of the desired stripe, a pivotal connection between the two sections having its pivotal axis vertical and extending midway the front wheels, a nozzle mounted on the front section between the supporting wheels to spray paint to the space between the wheels and thus form a stripe upon the roadway the width of said space, a paint container and a source of compressed air mounted on the rear section, and pipe connections extending respectively from said container and from said source of compressed air to the nozzle.

9. A striping machine comprising a pair of parallel spaced roadway-engaging wheels having slightly resilient tires with flat treads and flat inner side surfaces, means for discharging paint on the roadway between said wheels to form a stripe as the machine advances, the width of which is defined by the distance between the wheels, a receptacle mounted in the rear of the wheels, and wipers engaging the said inner side faces of the tires acting as the wheels rotate to wipe therefrom any paint carried thereon and discharge it into the receptacle.

10. A striping machine comprising a pair of parallel spaced roadway-engaging wheels having slightly resilient tires with flat treads and flat inner side surfaces, means for discharging paint on the roadway between said wheels to form a stripe as the machine advances, the width of which is defined by the distance between the wheels, a roll of adhesive coated sheet material, means for detaching a strip section of said material from the roll and positioning it with its adhesive face upon and transversely of the wheel treads and across the intervening space, and means for removing the strip section from the wheels after it has been carried thereby down upon and off from the roadway.

11. A striping machine having the construction defined in claim 10, together with means for controlling the discharge of the paint to cause the discharge to begin on a strip section after it has been carried by the wheels to the roadway and to end on another strip section after it has been carried by the wheels to the roadway.

12. A striping machine comprising a pair of parallel spaced roadway-engaging wheels having slightly resilient tires with flat treads and flat inner side surfaces, means for discharging paint on the roadway between said wheels to form a

stripe as the machine advances, the width of which is defined by the distance between the wheels, a roll of adhesive-coated sheet material, and pattern-controlled means for detaching a strip section of said material from the roll and positioning it with its adhesive face upon and transversely of the wheel treads and across the intervening space and for controlling the discharge of the paint to cause the discharge to begin and end on strip sections carried by the wheels to the roadway.

13. A striping machine comprising the construction defined in claim 12, together with means for removing the strip section from the wheels after it has been carried thereby down upon and off from the roadway.

14. A striping machine comprising the construction defined in claim 12, together with a receptacle mounted in the rear of the wheels and means for removing the strip section from the wheels and discharging it into the receptacle after it has been carried by the wheels down upon and off from the roadway.

15. A striping machine comprising a pair of parallel spaced roadway-engaging wheels having silghtly resilient tires with flat treads and flat inner side surfaces, means for discharging paint on the roadway between said wheels to form a stripe as the machine advances, the width of which is defined by the distance between the wheels, a roll of adhesive-coated sheet material, and normally inactive strip-feeding and severing means acting when released to engage the wheels and be operated thereby to feed a strip section of said sheet material with its adhesive face into engagement with the wheel treads transversely thereof and to sever the said section from the roll and then return to inactive position.

16. A striping machine comprising a rear body section having a pair of supporting wheels, a front body section having a pair of supporting wheels maintained parallel with the longitudinal axis of the front section and spaced apart the width of the desired stripe, a pivotal connection between the two sections having its pivotal axis vertical and extending midway the front wheels, means on the front section for turning said section on the pivotal axis, an auxiliary pair of wheels maintained parallel with and at one side of the longitudinal axis of the front section and supported from the front section forward of the supporting wheels, the said auxiliary wheels being spaced apart the width of a desired stripe, and means for feeding paint either to the space between the front wheels or the space between the auxiliary wheels as required.

17. A striping machine comprising the construction defined in claim 4, together with pattern mechanism for controlling the paint-feeding means and the strip section-discharging means to cause stripes of predetermined length, separated predetermined distances to be painted with strip sections of the sheet material receiving the paint at each end of each stripe.

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