

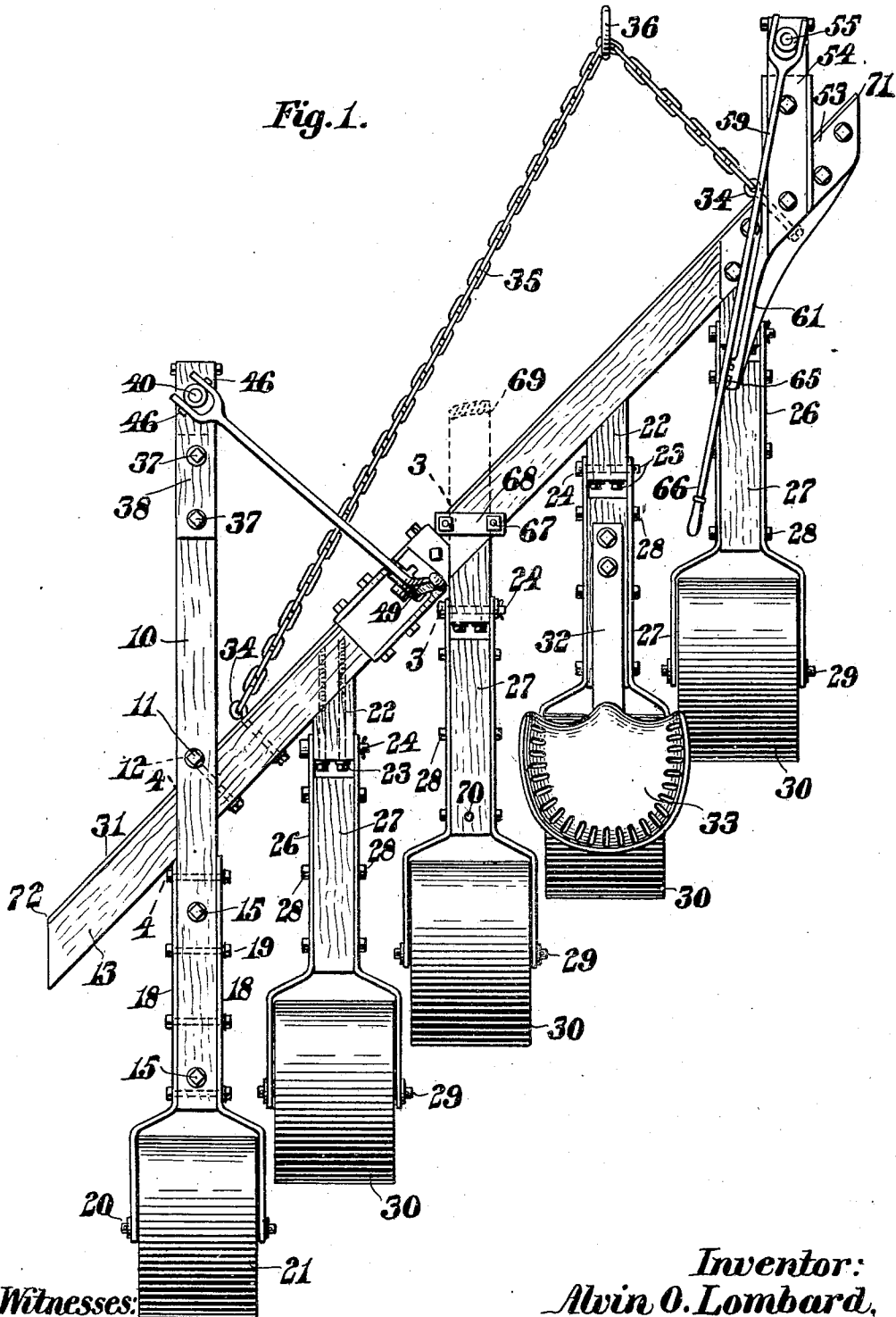
A. O. LOMBARD.
MACHINE FOR MAKING ROADS.
APPLICATION FILED JUNE 26, 1909.

945,560.

Patented Jan. 4, 1910.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses:

Nathan O. Lombard
Edna C. Cleveland

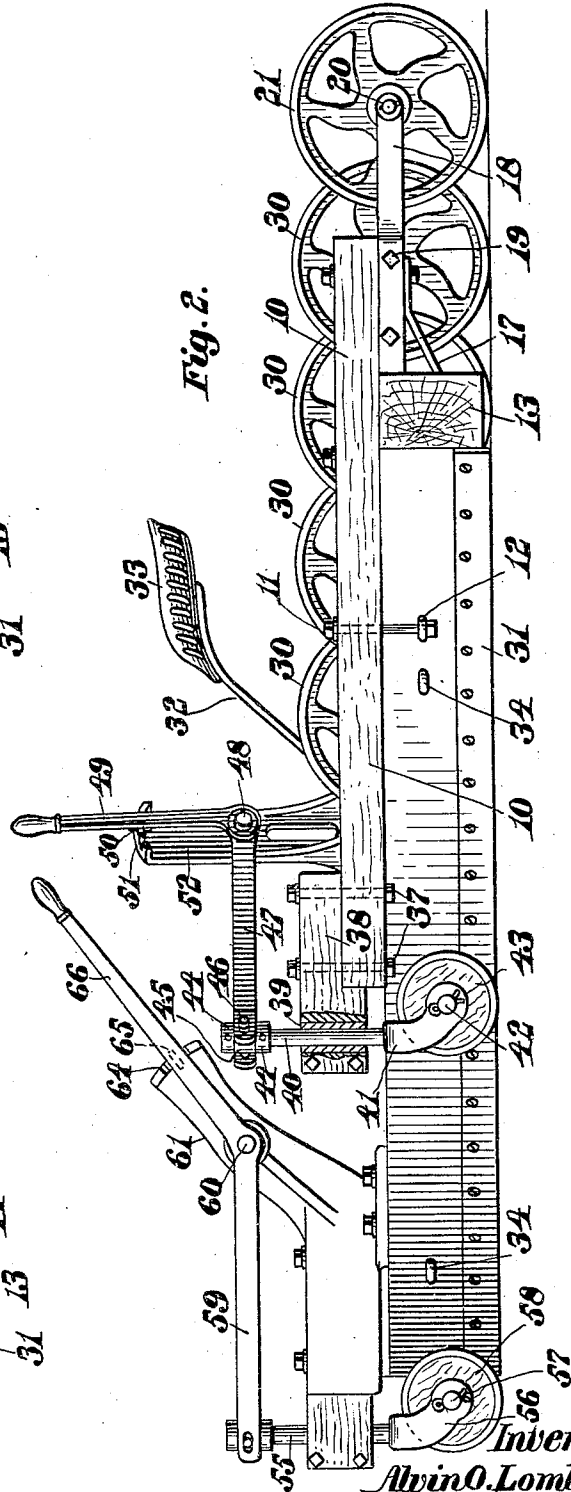
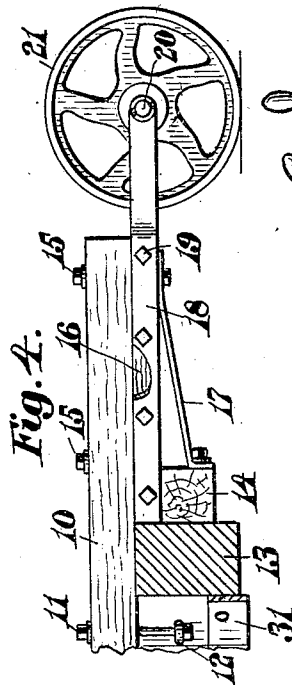
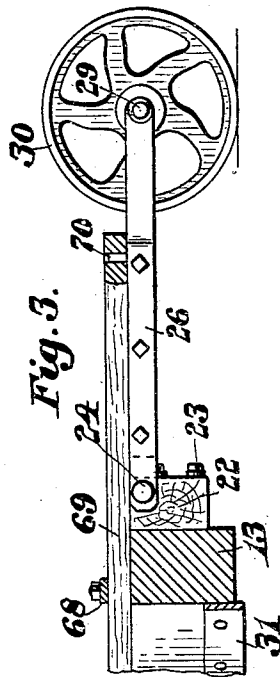
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Alvin O. Lombard,
by Walter E. Lombard,
Atty.

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Nathan C. Lombard
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UNITED STATES PATENT OFFICE.

ALVIN O. LOMBARD, OF WATERVILLE, MAINE.

MACHINE FOR MAKING ROADS.

945,560.

Specification of Letters Patent.

Patented Jan. 4, 1910.

Application filed June 26, 1909. Serial No. 504,605.

To all whom it may concern:

Be it known that I, ALVIN O. LOMBARD, a citizen of the United States of America, and a resident of Waterville, in the county of Kennebec and State of Maine, have invented certain new and useful Improvements in Machines for Making Roads, of which the following is a specification.

This invention relates to road-making machines and has for its object the production of a machine which is adapted to scrape the surface of the road, removing the humps therefrom and delivering the dirt obtained therefrom into the hollows while simultaneously by means of weighted rollers the dirt forming the surface of the road is compressed and made compact.

The object of the invention is to provide a device which may be utilized either on the sides of a country road to clear the ditch and round off the edges of the road, throwing the surplus material into the center of the road or which may be adjusted for use on the center of the road to smooth the surface thereof.

The invention consists in certain novel features of construction and arrangement of parts which will be readily understood by reference to the description of the drawings and to the claims hereinafter given.

Of the drawings: Figure 1 represents a plan of a machine embodying the features of this invention. Fig. 2 represents a side elevation of the same. Fig. 3 represents a vertical section through the scraper, the cutting plane being on line 3—3 on Fig. 1, and showing one of the pivoted roller-supporting members, and Fig. 4 represents a section, the cutting plane being on line 4—4 on Fig. 1, showing the fixed roller and the means for securing it to the scraper.

Similar characters designate like parts throughout the drawings.

In the drawings, 10 represents a member fixedly secured by means of a bolt 11 passing through an eye 12 secured to a timber 13 extending at an angle of about 45° to said member 10, the greater length of said timber 13 being preferably at the right of said member 10 and inclined toward the front thereof substantially as shown in Fig. 1 of the drawings.

Secured to the rear face of the timber 13 is a block 14 while secured by means of bolts 15 to the under face of the member 10 is a

block 16 supported by a brace 17 fastened to the block 14. On either side of the block 16 are secured straps 18 by means of bolts 19, the rear ends of which are bent from each other and support a shaft 20 carrying a weighted roller 21. To the rear face of the timber 13 are secured a plurality of blocks 22 by means of bolts 23. Each block 22 is provided with a pivot pin 24 by which straps 26 are pivotally secured thereto, each pair of straps being separated by a block 27 secured thereto by means of bolts 28. The rear ends of each pair of these straps 26 are bent from each other and support a shaft 29 upon which is mounted a weighted roller 30, each of these weighted rollers being the same distance from the rear face of the inclined timber 13.

The front face of the timber 13 has secured thereto a steel scraper plate 31 extending the entire length thereof and projecting slightly below the under face of said timber 13. One of the blocks 27 to the right of the center roller-supporting member has secured thereto by means of a suitable support 32 a seat 33 of any well-known construction. Eye-bolts 34 secured to the timber 13 have secured thereto a chain 35 carrying a ring 36 which may be secured to a hook of a whiffletree attached to a team of horses for the purpose of drawing the machine over the surface of the road to be operated upon.

Secured by bolts 37 to the member 10 is a block 38, the front end of which is provided with a cylindrical bearing 39 through which extends the spindle 40 of a bifurcated member 41 carrying a pin 42 considerably out of alinement with the axis of the spindle 40 and supporting a wheel 43. The upper end of the spindle 40 has secured thereto separated collars 44 between which is a loose collar 45 provided with suitable trunnions 46 extending through slots in the bifurcated end of a lever 47 pivoted at 48. This lever 47 is provided with a spring handle 49 having a projection 50 on one face thereof adapted to engage with notches 51 in a standard 52 secured to the timber 13 in any well-known manner. It is obvious that by pressing the handle 49 outwardly the tooth or projection 50 thereon may be disengaged from the notches 51 in the standard 52 and when thus disconnected the lever 47 may be moved about its pivot 48 to raise or lower the truck 43 as may be desired and locked in

a new position. In a similar manner the forward end of the inclined timber 13 has secured thereto in any well-known manner a support 53 carrying a block 54 which forms a bearing for a spindle 55 of a bifurcated member 56 carrying a pin 57 on which is revoluble a truck or wheel 58. In the same manner that the spindle 40 is connected to the lever 47 the spindle 55 is connected to a lever 59 pivoted at 60 to an extension 61 formed upon the support 53, the outer end of said extension being provided with a plurality of notches 64 with which engages a projection 65, on one face of the handle 66. It is obvious that by disconnecting the projection 65 from one of the notches 64 the truck or wheel 58 may be raised or lowered as desired and the projection 65 engaged in a new notch to retain the truck in its adjusted position.

Secured by bolts 67 to the timber 13 midway of its length is a strap 68 adapted to receive a draw-bar 69 having at its rear end an opening adapted to engage a pin 70 in the block 27. When the timber 69 has been thus positioned as is indicated in Fig. 3, the block 27 is prevented from moving about its pivot 24 and the whole timber 13 with its scraper 31 thereon may be elevated above the surface of the ground so that the machine may be drawn to any locality where it may be required, being supported during this movement by means of the rollers 21 and 30.

The machine is intended to be operated in conjunction with another machine for ditching the sides of the road and when the ditches have been made on either side of the road or if previously made, have been cleared by the ditching machine, the handle 66 is operated to move the truck 58 upwardly above the lower face of the scraper 31 and by means of the handle 49 the truck 43 is moved downwardly below the lower surface of the scraper 31. This will cause the timber 13 to be inclined with its point 71 downward and its rear end lifted above the surface of the ground. The point 71 is then inserted in the ditch at the side of the road and the whole device is drawn by a team of horses attached thereto by means of the ring 36. As the scraper 31 thus passes over the surface of the rough road all humps and hillocks thereon will be leveled and the surplus dirt removed therefrom will pass along the front face of the scraper to the rear and as the scraper 31 passes over depressions and hollows in the road the surplus dirt removed from the projecting hillocks and hummocks will be forced into these depressions and hollows, any surplus dirt not being thus disposed of during the movement of the scraper being deposited nearer the center of the road as it passes beyond the heel 72 of said scraper. The

fixed rollers 21 and the pivoted rollers 30 follow in the path of the scraper 31 and compress and compact the dirt on the surface of the road passed over.

When the scraper is being drawn over the higher portions of the road near the center thereof the trucks 43 and 58 are adjusted so as to be more nearly on a level with the bottom of the scraper 31 and when the center of the road is being traversed the trucks 43 and 58 are adjusted so as to be substantially on the same level with their contacting faces on the same level with the bottom of said scraper 31.

By a machine of this construction country roads may be very readily and economically placed in excellent condition and turnpiked where necessary.

It is believed that the operation and many advantages of the invention will be thoroughly understood without any further description.

Having thus described my invention, I claim:

1. In a machine of the class described, the combination of a scraper; a rigid frame extending from the rear thereof; a plurality of frames pivotally secured to the rear of said scraper; and a roller in each frame.

2. In a machine of the class described, the combination of a scraper; a rigid frame extending from the rear thereof at an acute angle thereto; a plurality of frames pivotally secured to the rear of said scraper at an acute angle thereto; and a roller in each frame.

3. In a machine of the class described, the combination of a scraper; a rigid frame extending from the rear thereof at an acute angle thereto; a plurality of frames pivotally secured to the rear of said scraper at an acute angle thereto; a roller in each frame; and means for raising and lowering either end of said scraper.

4. In a machine of the class described, the combination of a scraper; a rigid frame extending from the rear thereof at an acute angle thereto; a plurality of frames pivotally secured to the rear of said scraper at an acute angle thereto; a roller in each frame; and means for varying the inclination of said scraper.

5. In a machine of the class described, the combination of a scraper; a rigid frame extending from the rear thereof at an acute angle; a plurality of frames pivoted to the rear wall of said scraper at an acute angle thereto; a roller in each frame; and a truck in advance of one end of said scraper.

6. In a machine of the class described, the combination of a scraper; a rigid frame extending from the rear thereof at an acute angle; a plurality of frames pivoted to the rear wall of said scraper at an acute angle thereto; a roller in each frame; a truck in

advance of one end of said scraper; and means for varying the height of said truck relative to said scraper.

5 7. In a machine of the class described, the combination of a scraper; a rigid frame extending from the rear thereof at an acute angle; a plurality of frames pivoted to the rear wall of said scraper at an acute angle thereto; a roller in each frame; and a truck
10 in advance of each end of said scraper.

8. In a machine of the class described, the combination of a scraper; a rigid frame extending from the rear thereof at an acute angle; a plurality of frames pivoted to the
15 rear wall of said scraper at an acute angle thereto; a roller in each frame; a truck in advance of each end of said scraper; and means for varying the height of either of said trucks relative to said scraper.

20 9. In a machine of the class described, the combination of a scraper; a rigid frame extending from the rear thereof at an acute angle; a plurality of frames pivoted to the rear wall of said scraper at an acute angle
25 thereto; a roller in each frame; a truck in advance of one end of said scraper; a lever

for varying the height of said truck relative to said scraper; and means for locking said lever.

10. In a machine of the class described, 30 the combination of an oblique scraper; and a plurality of rollers in echelon secured to the rear of said scraper.

11. In a machine of the class described, the combination of an oblique scraper; a 35 plurality of rollers in echelon secured to the rear of said scraper; and means for elevating or depressing one end of said scraper.

12. In a machine of the class described, the combination of an oblique scraper; a 40 plurality of rollers in echelon secured to the rear of said scraper; a truck adjustably secured in advance of one end of said scraper; and means for retaining said truck in
45 adjusted position.

Signed by me at Waterville, Maine, this 23rd day of June 1909.

ALVIN O. LOMBARD.

Witnesses:

GEORGE E. VOSE,
GRACE L. VOSE.