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E. V. BILES

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TRANSPORTING MEANS FOR ROAD ROLLERS

Filed July 7, 1932

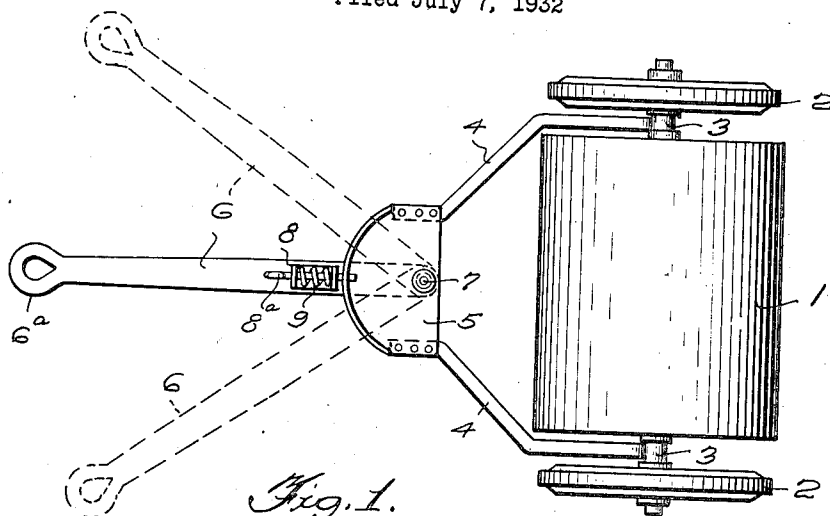


Fig. 1.

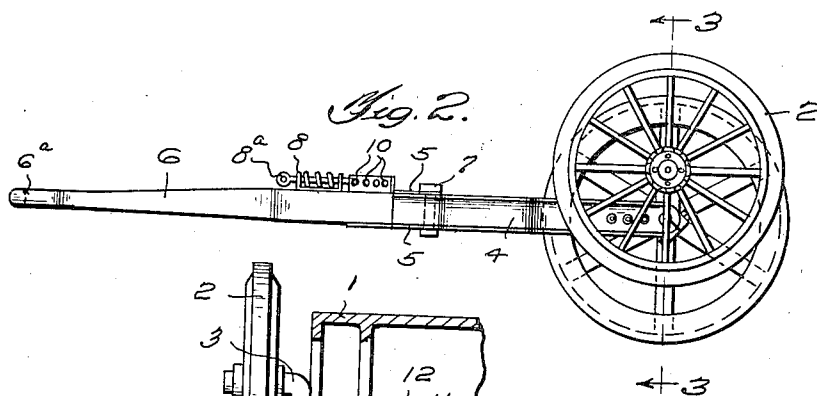


Fig. 2.

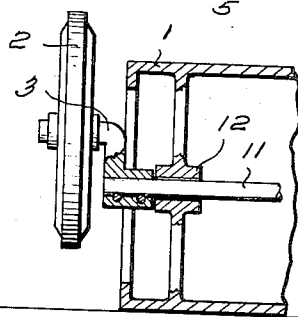


Fig. 3.

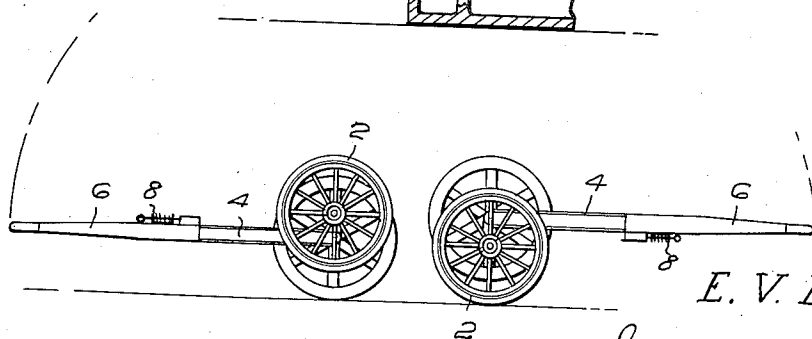


Fig. 4.

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TRANSPORTING MEANS FOR ROAD ROLLERS

Application filed July 7, 1932. Serial No. 621,284.

This invention relates to certain new and useful improvements in cylindrical gravity rollers such as are commonly used for smoothing and compacting the surface of lawns, breaking clods in agriculture and for smoothing and compacting earth and other materials, such as asphalt, in highway and other forms of construction.

Heretofore it has been the practice to have such devices consist of a heavy or weighted cylindrical roller rotatably attached to a handle or tongue by means of which they were pushed or pulled over the surface to be rolled. Transportation of rollers of this type can only be accomplished by loading them into another vehicle or by rolling them from place to place. The first of these is laborious and expensive and the latter slow and destructive of both the roller and the roadway.

The object of the invention is to provide a roller which may be readily transported from place to place with a minimum of effort and with a minimum of damage to either the roller or the roadway.

In my copending application Serial No. 621,283, filed July 7, 1932, I have disclosed one embodiment of the invention intended for use in conjunction with large or heavy duty rollers.

The construction shown and described in the present application, which will be treated as the parent application, relates more particularly to rollers of somewhat lighter weight. Broadly stated, the invention consists in providing a roller of suitable weight and dimension in combination with a plurality of suitable wheels so disposed that the roller may be brought into contact with the ground and used as a roller while the wheels are maintained out of contact with the roadway so that they do not in any way interfere with the action of the roller; the assembly being such that the relative positions of the parts may be reversed and the wheels may be brought into contact with the roadway to maintain the roller in an elevated position and clear of the roadway in which position it is supported by and becomes transportable upon the wheels.

The invention will be best understood by reference to the accompanying drawing in which

Figure 1 is a plan view.

Figure 2 is a side elevation.

Figure 3 is a fragmentary sectional view upon line 3—3 of Fig. 2, and

Figure 4 is a diagrammatic view showing the manner in which the wheels and roller are brought to relatively reversed positions by the mere inversion of the structure.

In the drawing, 1 is a cylindrical roller which may be as shown, or solid, or of the hollow ballasted type, axially rotatable on axle 11 through one or more suitable bearings 12, one of which is shown. Axle 11 is fixed to the wheel spindles 3—3 upon which wheels 2—2 are rotatably mounted the axes of the wheels and the roller being eccentrically disposed with respect to each other. Yoke members 4—4 are attached to the spindles 3—3 and at their outer extremities are fastened together by suitably shaped gusset plates 5—5 in the upturned edge of one of which are a series of holes 10. The tongue 6 is provided at its forward end with suitable means for connecting the roller to the source of traction. The inner end of the tongue is supported between the gusset plates 5—5 and held by the pivot bolt 7 in a manner leaving it free to move to a number of radial positions, as shown. A lock, consisting of supporting webs 8, a bolt 8a and a spring 9 is provided and arranged so that when the bolt 8 is withdrawn the spring 9 will be compressed and when released will be forced through one of the holes 10 thereby retaining the tongue in any one of the several positions provided for.

While I have described the element 6 as being a tongue, it is to be understood that this element may be shaped to provide a handle, a pair of shafts to which a draft animal may be attached, or it may be, as shown, provided with an eye 6a at its forward end so that the structure may be towed behind a motor vehicle.

It is clear that any of the foregoing elements, viz., tongue, handle, shaft, or the like, are the mechanical equivalents of each other,

it being intended that the element 6 shall be so shaped as to adapt it for the application of any suitable tractive power.

In the diagrammatic view, Fig. 4, the roller is shown at the left as being in contact with a roadway, while the wheels 2 lying in eccentric relation to the roller are elevated from the roadway. However, at the right of Fig. 4 it is shown how the parts have been brought to reverse position with the wheels 2 in contact with the roadway and with the roller elevated from the roadway by merely swinging the tongue 6 over, in the manner indicated by the dotted line, to bring about an inversion of the parts. Whether the roller is in use or the wheels are in use, the tongue 6 serves as the means for drawing the structure along.

While the construction shown and described is adapted to serve the purposes sought in a facile, economical and efficient way, I wish it to be understood that the invention is not limited to the particular arrangement shown, because, as illustrated in my co-pending application, other ways may be resorted to for accomplishing the desired result. Therefore, it is to be understood that the invention includes within its purview whatever changes come within either the terms or the spirit of the appended claims.

Having described my invention what I claim is:

1. A structure of the character described comprising a roller, supporting wheels for the same eccentrically disposed with respect to the roller, a shaft and axle structure upon which the roller and wheels are respectively mounted, and means for bodily inverting said structure.

2. A structure of the character described comprising a roller, supporting wheels for the same eccentrically disposed with respect to the roller, a shaft and axle structure upon which the roller and wheels are respectively mounted, and means for bodily inverting said structure, said means comprising a tongue attached to said structure.

3. A structure of the character described comprising a roller, supporting wheels for the same eccentrically disposed with respect to the roller, a shaft and axle structure upon which the roller and wheels are respectively mounted, means for bodily inverting said structure, said means comprising a tongue attached to said structure, and means for adjusting said tongue to a plurality of radial positions.

4. A device of the character described comprising a roller, a shaft upon which the roller is mounted, axles eccentrically disposed with respect to the shaft, wheels upon said axles, a draft structure comprising a tongue affixed to said axles and comprising an arcuate member with respect to which the said tongue is pivoted, and a lock carried by the tongue and

engaging the arcuate member to lock the tongue in varying positions of radial adjustment, said tongue being reversible as described and being connected to said axles in such manner that when the tongue is reversed the relative positions of the wheels and roller are reversed to bring either the wheels or the roller into engagement with the ground, as described.

In testimony whereof I affix my signature.
EDGAR V. BILES.

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