

No. 695,255.

Patented Mar. 11, 1902.

C. A. WHEELER.

WASHING APPARATUS FOR RAILWAY OR TRAMWAY CARRIAGES.

(Application filed Jan. 21, 1901.)

(No Model.)

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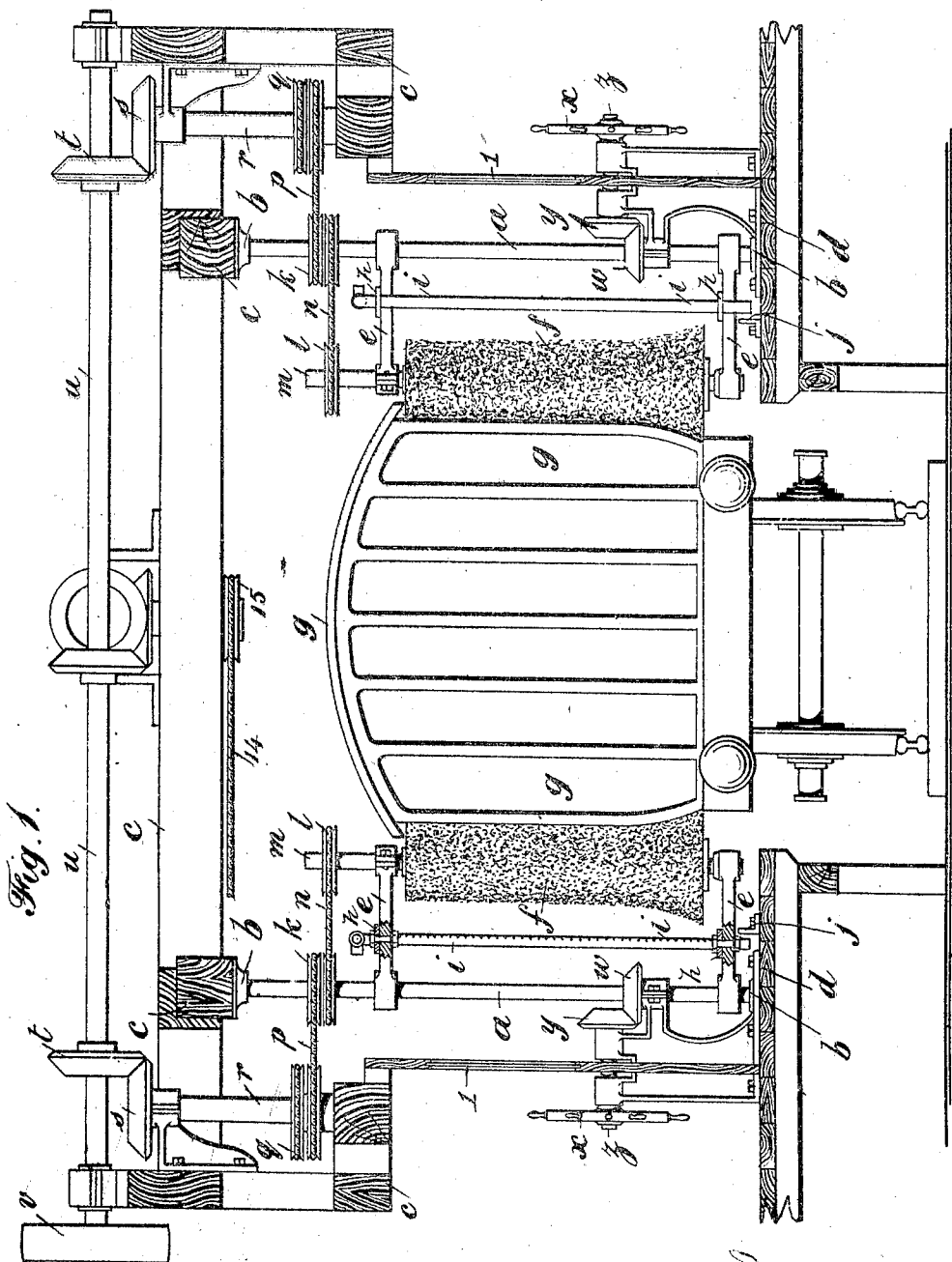


Fig. 1.

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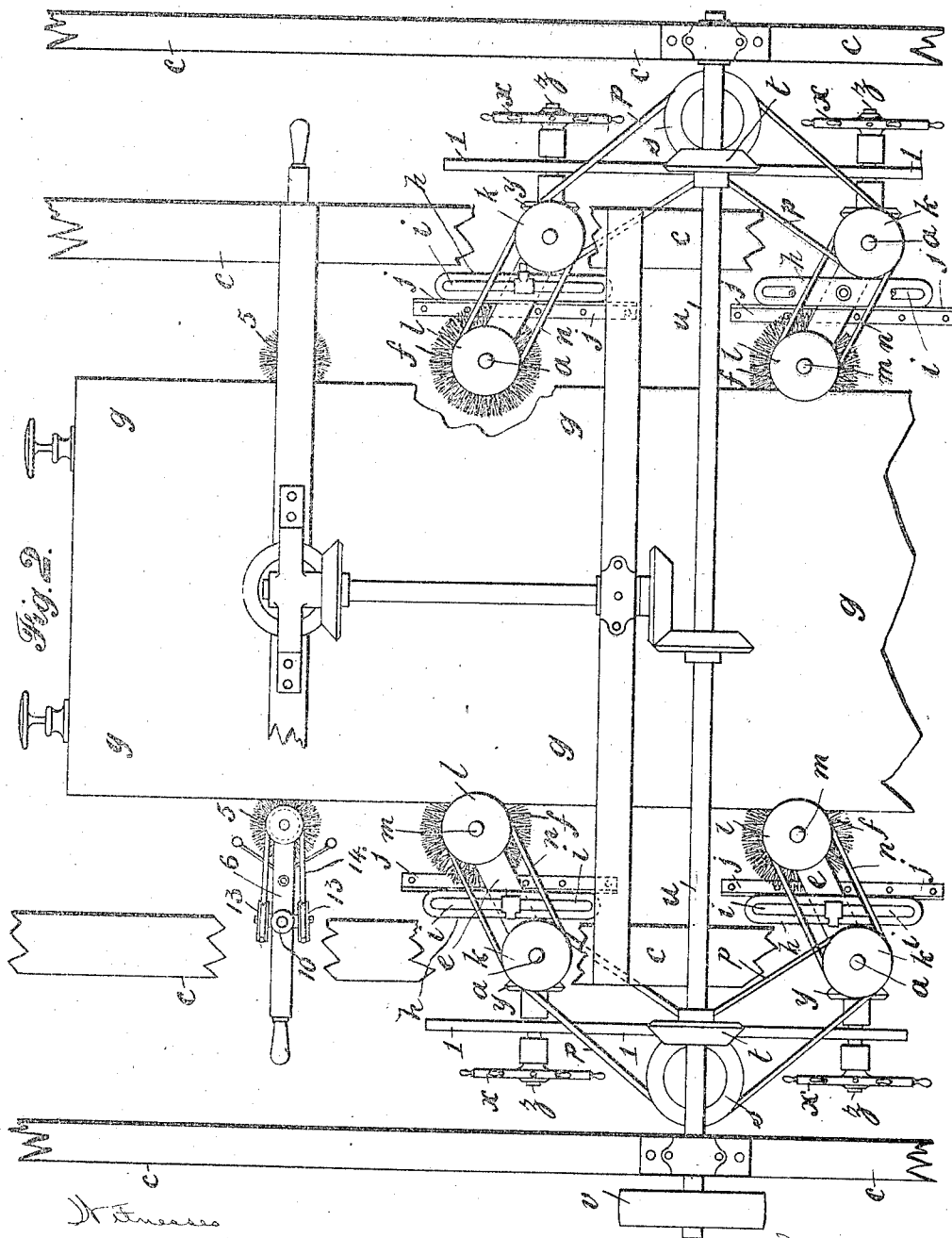
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W. E. F. F. F.

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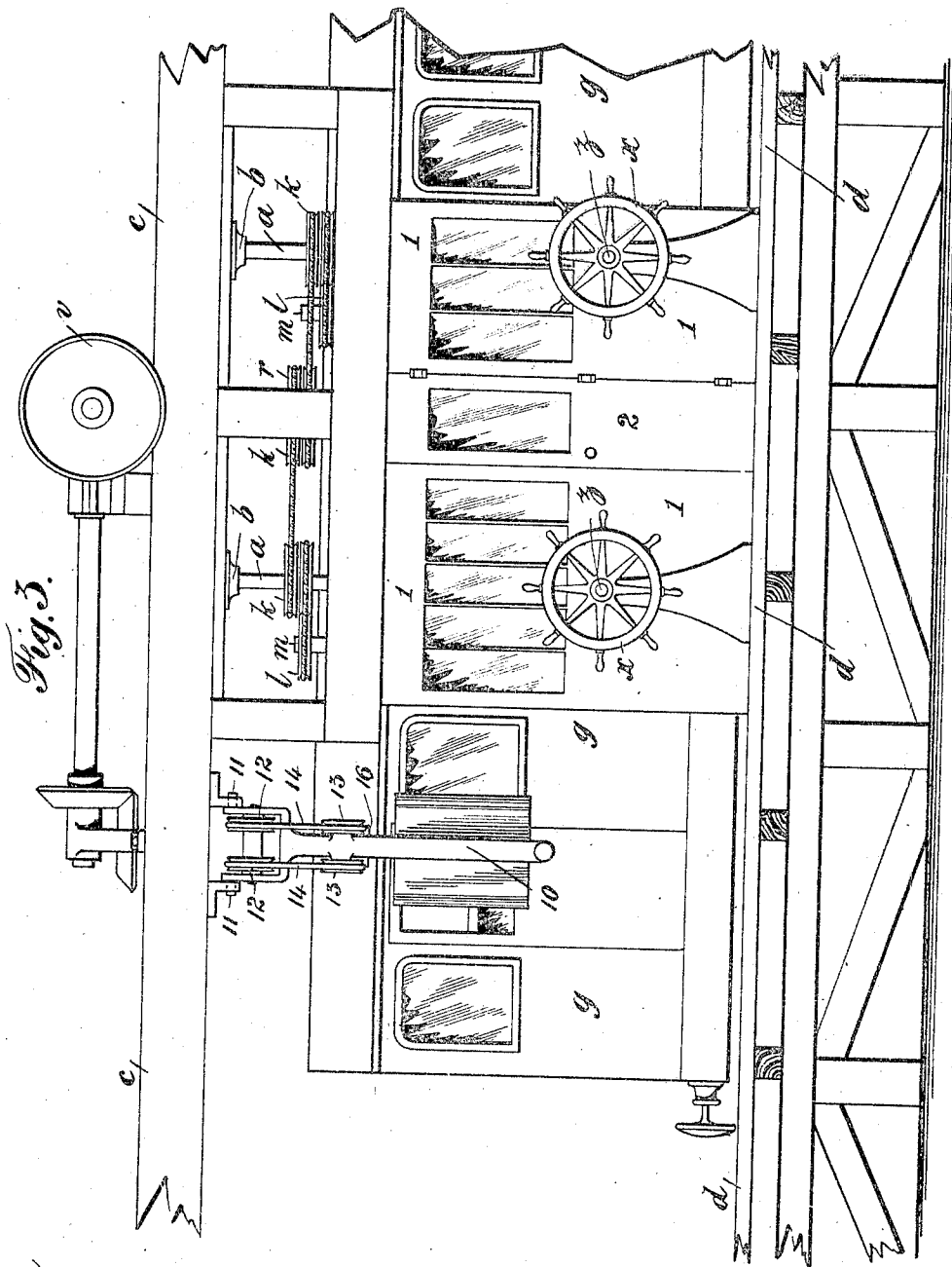
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5 Sheets—Sheet 3.



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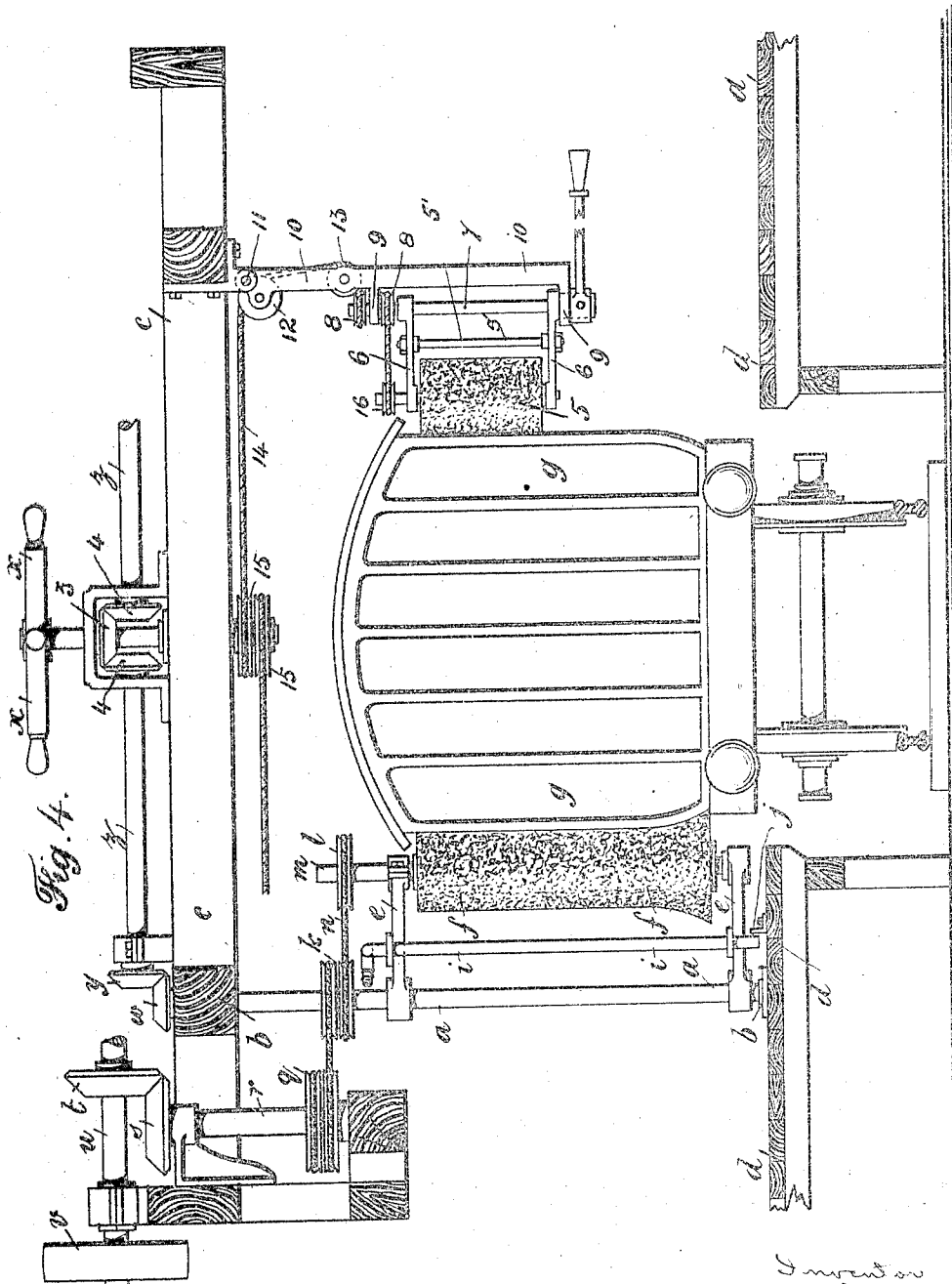


Fig. 4.

Witnesses

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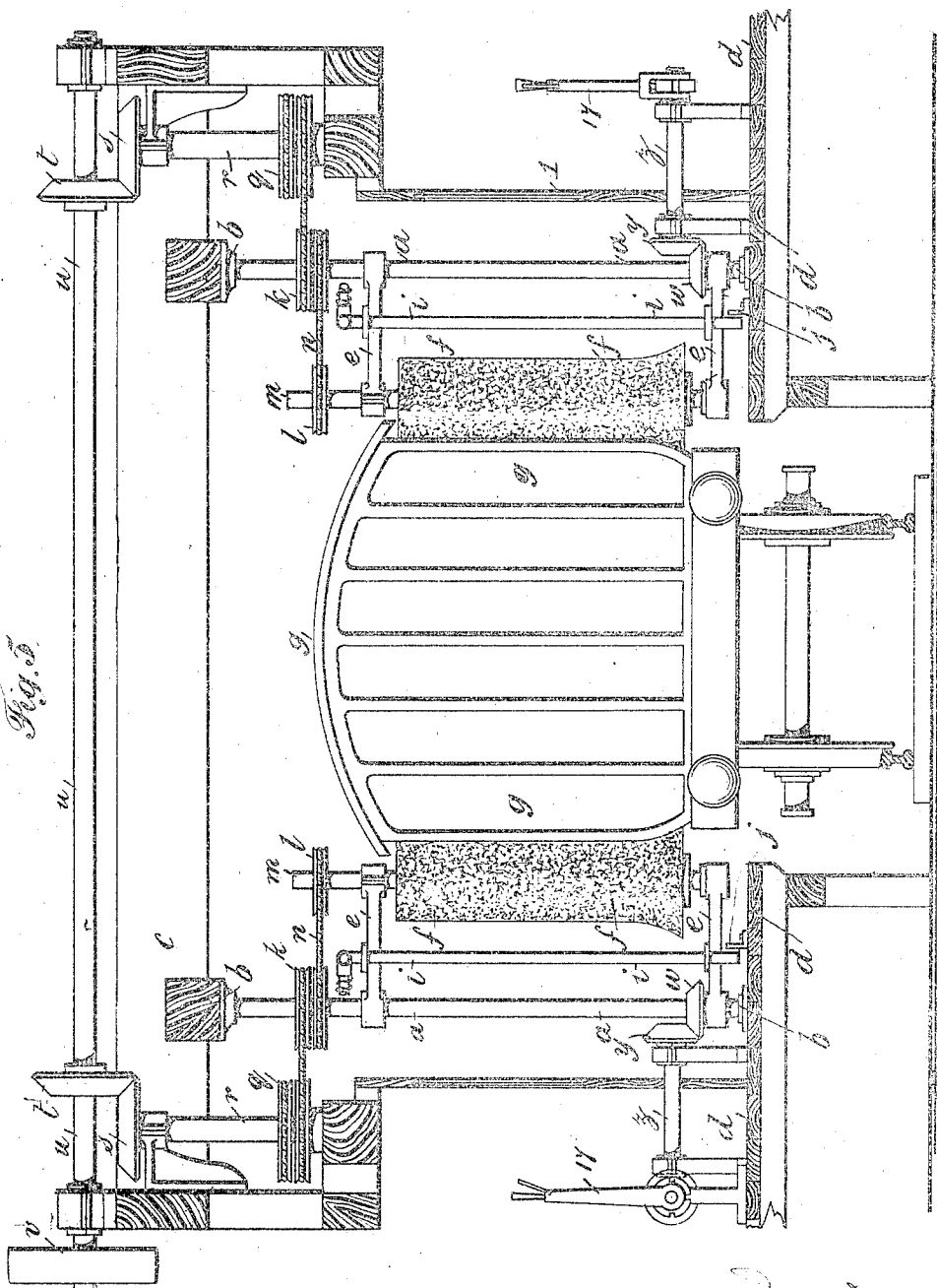


Fig. 5.

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UNITED STATES PATENT OFFICE.

CHARLES ALEXANDER WHEELER, OF HARLESDEN, ENGLAND

WASHING APPARATUS FOR RAILWAY OR TRAMWAY CARRIAGES.

SPECIFICATION forming part of Letters Patent No. 695,255, dated March 11, 1902.

Application filed January 21, 1901. Serial No. 44,081. (No model.)

To all whom it may concern.

Be it known that I, CHARLES ALEXANDER WHEELER, a subject of the Queen of Great Britain, residing at 14 Harley road, Harlesden, county of Middlesex, England, have invented certain new and useful Improvements in Washing Apparatus for Railway and Tramway Carriages, of which the following is a specification.

This invention relates to certain new and useful improvements in washing apparatus for railway and tramway carriages; and the object thereof is to construct a washing apparatus of this character which shall be simple in its construction, strong, durable, efficient in its use, comparatively inexpensive to set up; and to this end it consists of the novel combination and arrangement of parts hereinafter more specifically described, illustrated in the accompanying drawings, and particularly pointed out in the claims hereunto appended.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, wherein like letters of reference indicate corresponding parts throughout the several views, and in which—

Figure 1 is an elevation of an apparatus embodying my invention, the building being shown in section. Fig. 2 is a plan of Fig. 1. Fig. 3 is a side elevation showing the screens and hand operating-gear. Fig. 4 is an end elevation of a modified arrangement showing large brushes on one side and appliances to enable such brushes to be operated from the overhead platform, the other side showing a window-brush and the appliances for actuating the same. Fig. 5 is an end elevation of a modified arrangement showing a lever for operating the brushes instead of hand-wheels, that on the left hand being actuated to and from the carriage and that on the right sidewise of the carriage to operate the brushes.

α is a shaft situate in bearings $b b$ of the roof c and platform d . There are a plurality of these shafts on each side of the carriage-track and each has fixed to it arms e , carrying a revolving brush f , which is constructed to have action against the whole side of the carriage g . The arms e have loosely pivoted to them yokes h , which yokes carry perfo-

rated water-pipes i , the perforations looking toward the carriage g . The ends of the water-pipes i are also connected together, the bottom part riding against a guide or track j , fixed to the platform d , so that as the brush f is moved in an oscillatory manner to bring it into or out of contact with the carriage the water-pipes i will be moved away from their position adjacent to the carriage simultaneously with the brushes, but when moved toward the carriage their movement will be limited by the track or guide j , so that they will move substantially in a horizontal manner. Such movement is obtained by connecting the water-pipes to the arms e by means of the loosely-connected yokes h .

Each of the shafts α carries at its upper or other part a double-grooved pulley k , and one of the grooves being in connection with the pulley l , mounted upon the axle m of the brush f , by a cord n , the other groove of the pulley k being in connection by a cord p with one groove of a double-grooved pulley q , one being used in common on each side of the track and each mounted on an axle r , having its motion through the gear-wheels $s t$, axle u , and pulley v from any prime mover. Each of the shafts α also carries a gear-wheel w , this being in connection with a hand-wheel x or lever by a bevel-wheel y and axle z , so that on the operation of the hand-wheel x or lever the brushes f can be moved to and from the carriage to be washed.

1 is a glazed screen situate between the operator and the brush, so that the operator will not be splashed with water. Said partition 1 is provided with a door 2, situate between the two operating-wheels $x x$, so that the operator may inspect the carriages as they pass through, if needed.

In some cases the operating appliances may be situate on an overhead platform, in which case the bevel-wheel w is placed on the end of the shaft α and above the overhead platform, which bevel-wheel w meshes with the wheel y for operation of the brushes by the hand-wheel x through the gear-wheels $s t$. I also provide a small set of brushes 5 and water-pipes $5'$ for cleaning windows only, and in which case I pivot on each side of the track a brush 5 to the supporting-arm 6, which are connected together by the rods 7. The

latter is provided at its lower end with a handle and its upper end with the pulleys 8. The rod 7 is also swivelly connected to the brackets 9 of a depending lever 10. The latter is pivoted, as at 11, to the roof *c* and carries the pulleys 12 13, over which and the pulleys 8 the cord 14 is wound to communicate motion through the pulley 15 to the brush 5 by means of the pulley 16. The latter is suitably connected to the pulleys 8. The pulley 15 is operated by the gears 3 4, axle *z*, gears *w y*, shaft *a*, pulley *k*, cord *p*, pulley *q*, axle *r*, gears *s t*, axle *u*, the latter driven by the wheel *v*, in suitable communication with the prime mover. The pulley 12 is situated at a suitable distance from the pivot 11, so that when the brush 5 is moved to and from the carriage *g* by the handle the cord 14 will always be taut. By this construction the window-brush has a to-and-fro motion on the pivot 11 and an oscillatory movement on the rod 7, so that every desired movement can be given to the brush.

In Fig. 5 levers 17 are employed instead of the hand-wheels *x*, each axle *z* in this case being provided with a bevel-wheel in mesh with another bevel-wheel carrying a ratchet for actuation by the spring-pawl of a lever in either direction. The water-pipes *i* are in connection by flexible pipes (not shown) with the source of supply, and suitable taps are provided within reach of the operator for actuation when required.

What I claim, and desire to secure by Letters Patent, is—

1. In an apparatus for washing railway and tramway carriages, brushes engaging the carriages for cleaning the same, operating means therefor, arms for supporting the brushes, water-pipes, yokes pivoted to said arms for supporting said pipes, and a track engaged by the said yokes.

2. In an apparatus for washing railway and tramway carriages, brushes adapted to engage the carriages for cleaning the same, perforated pipes arranged in suitable relation to said brushes, means for supporting brushes, means for rotating said brushes, means for connecting said pipes to the supporting means for the brushes, means for moving said brushes into and out of contact with the carriages and for simultaneously moving said pipes to the desired position, and means engaging the said connecting means for guiding said pipes.

3. In an apparatus for washing railway and tramway carriages, cleaning-brushes for the carriages, arms for supporting said brushes,

means for supporting said arms, operating means for said brushes, water-pipes arranged in suitable relation to the brushes, a yoke for suitably connecting the water-pipes to said arms, means connected to the supporting means for the arms for moving the brushes into and out of contact with the carriages, and a track to prevent the contacting of the water-pipes and carriages when the brushes are brought into contact with the latter, substantially as herein shown and described.

4. In an apparatus for washing railway and tramway carriages, brushes for cleaning the carriages, perforated pipes arranged in suitable relation to said brushes, yokes for supporting said pipes, means for moving said brushes into and out of contact with said carriages and for simultaneously moving said pipes, and means engaging with the said yokes to prevent the contacting of the perforated pipes with the carriages when the brushes are brought into contact with the latter.

5. In an apparatus for washing railway and tramway carriages, cleaning-brushes adapted to engage the carriages, supporting means for pivoting the brushes to a suitable support, operating means for said brushes, a screen arranged at one side of said supporting means, a gear mounted upon said supporting means, and means extending through said screen, engaging said gearing and adapted when operated to move the brushes into and out of contact with the carriages.

6. In an apparatus for washing railway and tramway carriages, cleaning-brushes adapted to engage the carriages, supporting means for pivoting the brushes to a suitable support, perforated pipes, yokes for connecting said pipes to said supporting means, operating means for said brushes, a gear carried by said supporting means, a screen arranged at one side of said supporting means, means extending through said screen, engaging said supporting means and adapted when operated to move said brushes into and out of contact with the carriages and for simultaneously moving the said pipes, and a track engaged by the said yokes for guiding the same, substantially as herein shown and described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHARLES ALEXANDER WHEELER.

Witnesses:

WM. O. BROWN,
IRÉNÉO FRANCO. VELHO.