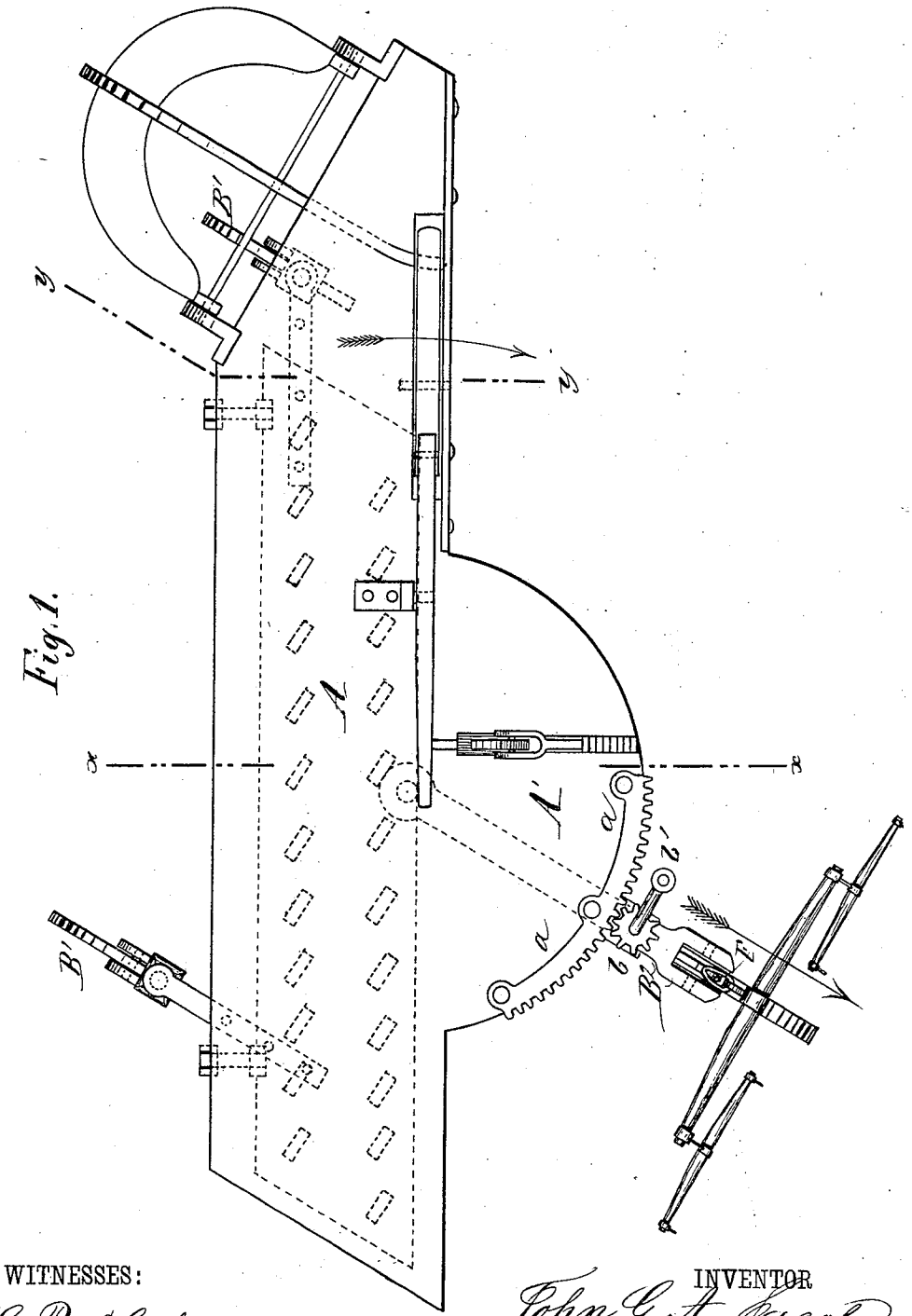
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J. G. A. JACOB.

STREET SWEEPING MACHINE.

No. 267,433. Patented Nov. 14, 1882.



WITNESSES:

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Otto Risch.

INVENTOR

John G. A. Jacob

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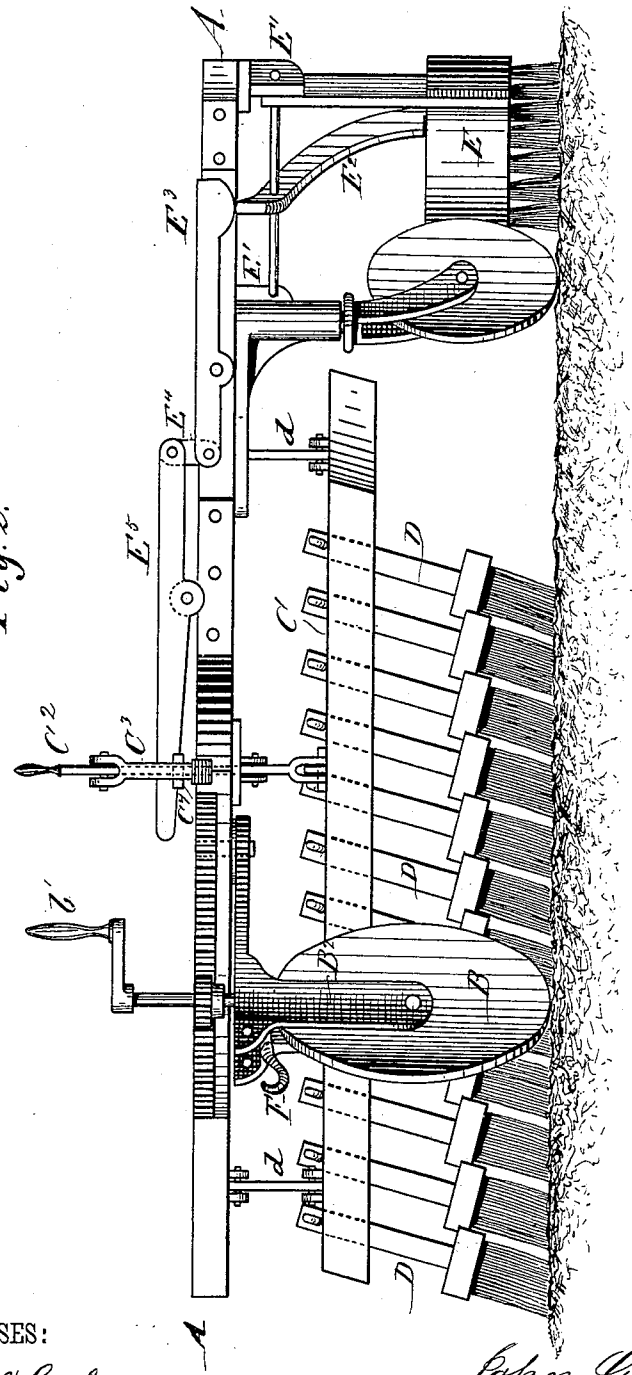
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Fig. 2.



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Fig. 3.

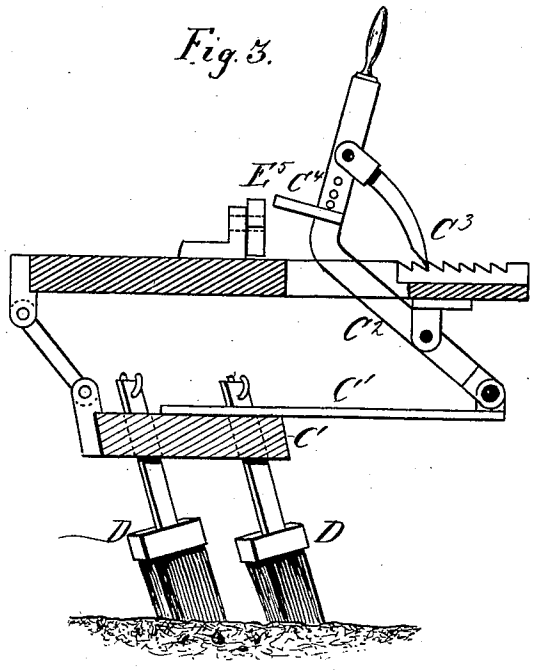


Fig. 5.



Fig. 6.

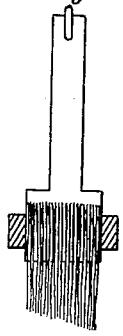
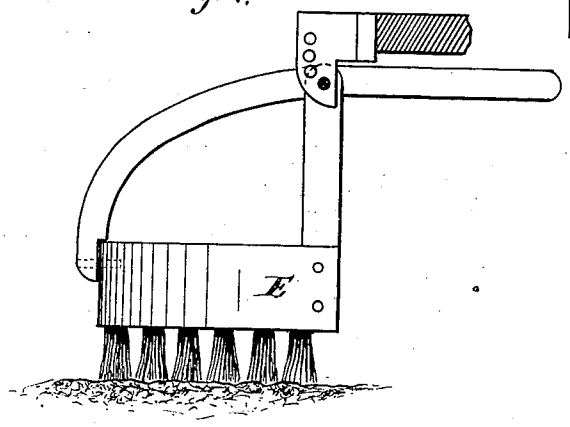


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN G. A. JACOB, OF NEW YORK, N. Y.

STREET-SWEEPING MACHINE.

SPECIFICATION forming part of Letters Patent No. 267,433, dated November 14, 1882.

Application filed August 2, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN G. A. JACOB, of the city, county, and State of New York, have invented certain new and useful Improvements in Street-Sweeping Machines, of which the following is a specification.

This invention relates to a machine which is adapted to sweep wide or narrow streets, which passes readily over rough surfaces thereof, and which admits of the collection of the dust and dirt in an economical and effective manner.

In the accompanying drawings, Figure 1 represents a plan view of my improved street-sweeping machine. Fig. 2 is a front elevation of the same. Fig. 3 is a vertical transverse section on line *x x*, Fig. 1. Fig. 4 is a vertical transverse section on line *y y*, Fig. 1, showing the U-shaped sweeping-brush; and Figs. 5 and 6 are details of one of the sweeping-brushes.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents an oblong platform or main frame, which is supported by a front steering-wheel, B, and swiveling hind wheels, B′. The platform A is provided with a segmental forward extension, A′, along the toothed portion *a* of which the steering-wheel B is adjusted by means of a pinion and hand-crank, *b b′*, the crank-shaft turning on bearings of the angular supporting-frame B^2 of the steering-wheel B, the rear end of which frame is pivoted to the center of the segmental or arc-shaped extension A′, while to the front end is attached a hook, F, to which the double-tree is applied. By means of the segmental gear and pinion the steering-wheel may be set in any desired angle of inclination to the longitudinal axis of the platform A, so that the direction of the draft may be more or less oblique to the axis of the machine, whereby the latter may be moved over the pavement of the street at a more or less oblique angle to the center line of the same, according to the width of the street. The smaller the angle of inclination of the machine to the center line of the street the smaller will be the sweep of the machine, while the greater the angle of inclination to the center line of the street the greater will be the sweep of the machine, owing to the fact that nearly the full width thereof is brought into action. By thus regulating the angle of the line of draft to the longitudinal axis of the machine a greater or less sweep of the machine is obtained, and thereby the machine adapted for wider or narrower streets, as required.

Below the platform A is suspended on pivot-links *d* a supporting-frame, C, of iron or other suitable material, which supports a number of sweeping-brushes, D. The shanks of the sweeping-brushes pass through inclined slots of the supporting-frame C, being loose therein, so as to rise and fall in passing over uneven surfaces of the street. The upper ends of the shanks are provided with stop-pins, which prevent the brushes from dropping out of the frame.

I employ preferably metallic bristles for my brushes, which bristles are secured by screws to a suitable socket or clamped together in any other approved manner. A fixed forward-extending arm, C′, is secured to the supporting-frame C and connected to a fulcrumed lever, C^2, that is operated by the driver, being provided with a step, C^4, for the purpose, and locked by a pawl-and-ratchet device, C^3, as shown in Fig. 3. By means of this lever mechanism the brush-supporting frame and brushes can be raised when passing over an uneven surface of the pavement or whenever the machine is thrown out of use to pass over the ground.

The inclined position of the sweeping-brushes, in connection with the inclination of the supporting-frame toward the center line of the street, causes the dirt to be gradually swept by the brushes from the forward end of the machine on one side to the rear end on the opposite side.

At the rear end of the machine is arranged, at a suitable angle to the main frame A, a U-shaped sweeping-brush, E, which is hung by means of arms in an adjustable manner to brackets E′ of the main frame A, as shown clearly in Figs. 2 and 4. This U-shaped sweeping-brush is also made of metallic bristles and provided with a metallic head of large weight, so as to press with considerable force upon the pavement and collect the dirt swept by the lateral brushes together into a heap.

To the heavy head of the brush E is attached

a lever, E^2, that is fulcrumed to the lateral pintle of the brush, the front end being acted upon by a fulcrumed lever, E^3, which is connected by a link, E^4, with a lever, E^5, which latter is operated by the foot of the driver, so as to raise or lower the U-shaped collection-brush whenever the heap of dust collected by the same is of sufficient size, or when the machine is to be thrown out of work. In that case its operating-levers E^5 are locked and the brush retained in raised position by a suitable locking device of the operating-arm of the supporting-frame C of the sweeping-brushes D, as shown in Fig. 3.

If desired, there may be arranged on the main platform of the sweeping-machine a water-reservoir, and in connection therewith a suitable sprinkling device, so as to sprinkle the street ahead and reduce thereby the dust. This feature is not shown in the drawings, and I do not claim the same.

The advantages of the machine are as follows: First, that by my machine a surface of from five to fourteen feet, according to the lateral inclination of the machine, may be swept and then collected at proper intervals into heaps, ready to be carted away; secondly, that by the arrangement of the vertically-movable gravity-brushes streets with even and uneven surfaces and irregular pavements may be swept in an effective manner; thirdly, that the machine may be started and its work interrupted with great facility, and also after use the lateral width of the machine reduced to such an extent that the same does not interfere with the traffic of vehicles in the streets.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a street-sweeping machine, the combination of a wheeled main platform with a brush-supporting frame arranged parallel to the axis of the same and provided with vertically-sliding brushes, and with mechanism for raising or lowering the brush-frame, substantially as described.

2. In a street-sweeping machine, the combination of a supporting main platform having a segmental front extension with a steering-wheel, the frame of which is pivoted to the center of the extension and adjusted by means of suitable gearing to a varying angle of inclination to the axis of the platform, substantially as and for the purpose set forth.

3. In a street-sweeping machine, the combination of the platform A, an adjusting swiveling support attached to said platform, an adjustable front steering-wheel, B, attached to said support, swivel hind wheels, B′, a brush-supporting frame suspended below the platform, having vertically-sliding gravity-brushes, and a suitable lever mechanism for raising or lowering the brush-frame, substantially as specified.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

JOHN G. A. JACOB.

Witnesses:
SIDNEY MANN,
CARL KARP.