

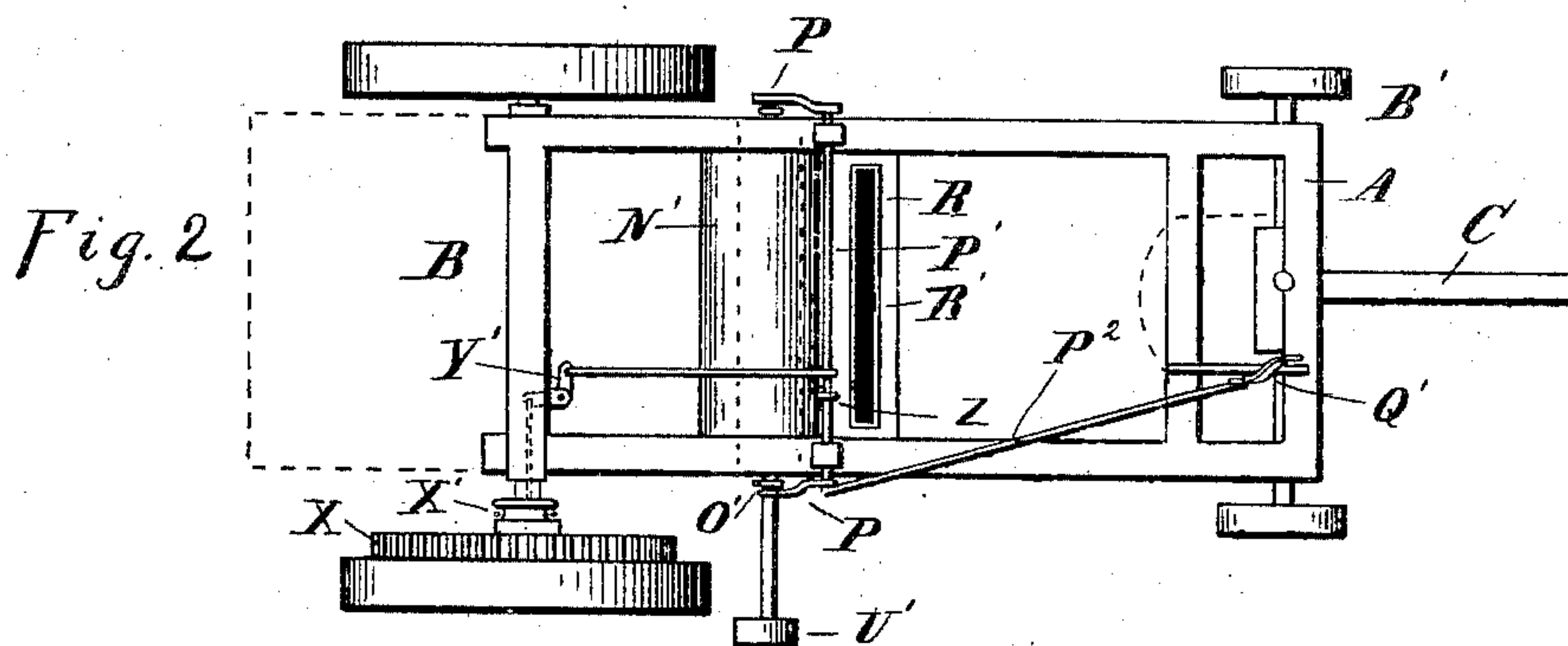
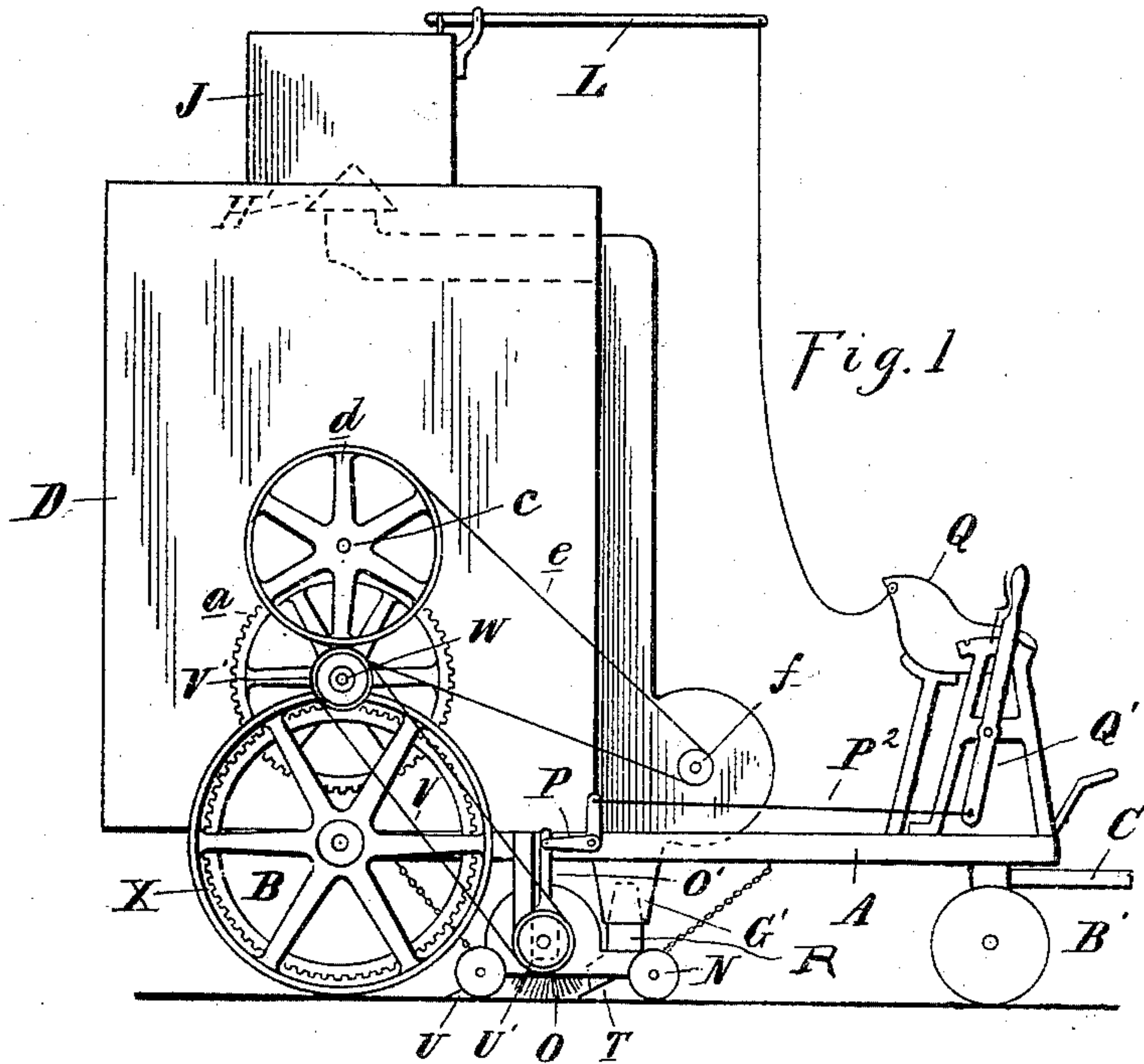
(No Model.)

2 Sheets—Sheet 1

W. AUBERLIN.
STREET SWEEPING MACHINE.

No. 444,683.

Patented Jan. 13, 1891.



Witnesses:
S. M. Hulbert
W B O'Gherly.

Inventor:
William Auberlin
By Thos. H. Sprague Esq;
Att'y.

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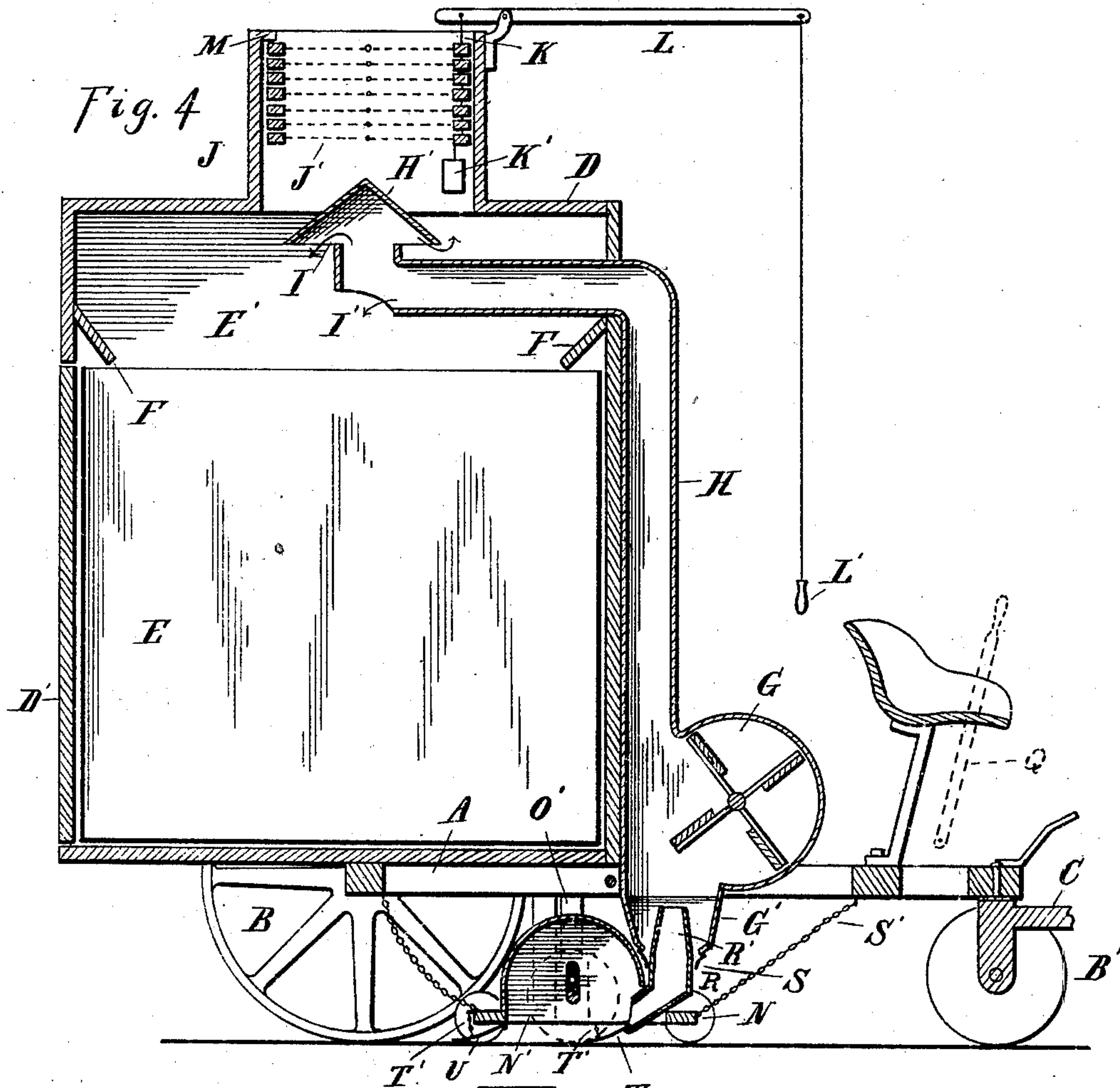
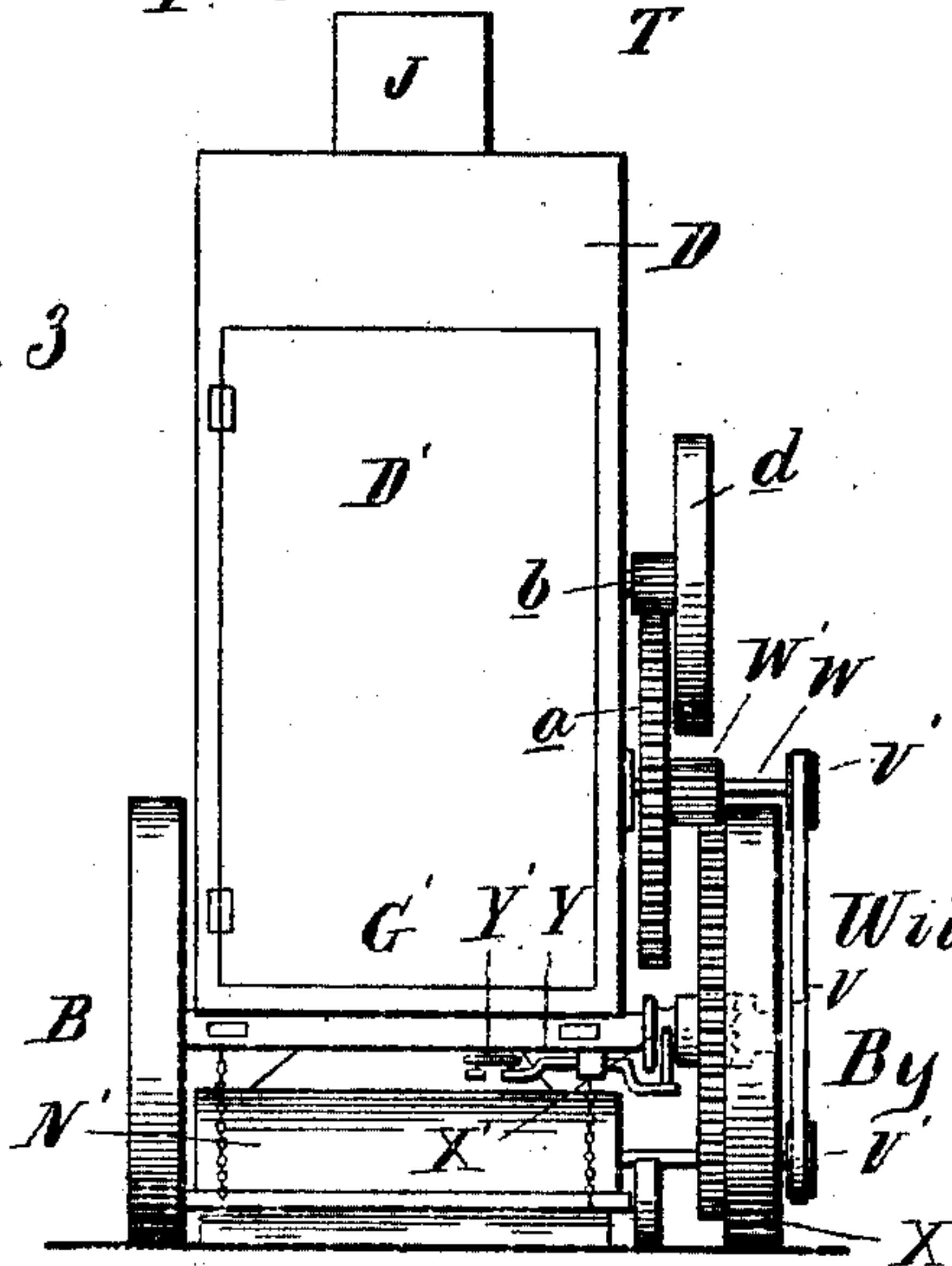


Fig. 3



Witnesses:

P. M. Hulbert
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Inventor:

William Auberin

By *Thos. Sprague & Son*
Atty.

UNITED STATES PATENT OFFICE.

WILLIAM AUBERLIN, OF DETROIT, MICHIGAN, ASSIGNOR OF THREE-FOURTHS
TO CHARLES AUBERLIN, HERMAN AUBERLIN, AND GUSTAVE AUBERLIN,
OF SAME PLACE.

STREET-SWEEPING MACHINE.

SPECIFICATION forming part of Letters Patent No. 444,683, dated January 13, 1891.

Application filed 13, 1890. Serial No. 351,649. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM AUBERLIN, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Street-Sweeping Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to new and useful improvements in street-sweeping machines; and the invention consists in the peculiar construction and arrangement of the various parts, all as more fully hereinafter described.

In the accompanying drawings, Figure 1 is a side elevation of my improved machine. Fig. 2 is a plan view thereof, with the housing shown in dotted lines. Fig. 3 is a rear elevation, and Fig. 4 is a vertical central longitudinal section.

A is the frame of the machine, supported upon the trucks B B'.

C is the draft-pole.

Upon the rear truck is supported the housing D, having rear doors D' to allow the insertion of one or more dust-boxes E, which fill nearly the entire space within the housing, leaving in the upper part a dust-chamber E'. Between the dust-chamber and the receptacle E there is a hopper F, arranged to direct the dust into the dust-box.

G is a fan or blower arranged in front of the housing, suitably incased and connecting at the lower end with the suction-spout G' and at the upper end with the discharge-spout H, which extends into the dust-chamber E' and has at the top a cap H'.

I are lateral openings from the spout H into the dust-chamber E', and I' is also an opening in the lower side of the spout, through which the dust which strikes the cap H' can fall into the dust-box beneath.

J is a central extension upon the housing, within which are pivoted a series of screens J', which are pivoted in the center and connected together at one end by means of the cord K, which at its lower end suspends the weight K' and at its free end connects to the

lever L, which has a suitable handle L' extending in proximity to the driver's seat.

M is a stop arranged upon the opposite side of the extension J. It is evident that when the operator pulls down upon the handle L' the forward ends of the screens will be raised, and upon letting go of the handle the weight K will draw the screens down quickly until the other end strikes the stop M, which will jar the accumulated dust from off the screens.

N is a sweeper-truck carrying the brush-casing N', and within which the rotary brush O is secured. This brush is journaled at its ends in the hangers O', which at their upper ends are connected to the bell-crank levers P on the shaft P', which is rocked by the rod P², which extends to near the driver's seat Q, and is there connected to the adjusting-lever Q', which is of known and usual construction. By means of this the brush may be lifted from the ground or lowered into contact therewith. The truck N carries at its forward end the vertical trunk R, which extends into the suction-spout G'. This trunk has the upwardly-extended flanges R' upon its sides, and the flaps S, preferably of rubber or leather, upon the suction-spout G', bearing against the lower sides of these flanges, forming a tight joint between. The truck N is held against accidental displacement by means of the supporting-chains S', attached to the main frame. At the lower end of the trunk R is hinged the plate T, which bears against the ground, and is supported at its rear end by means of the chain T'. A similar plate U is hinged at the rear side of the casing N', so as to make contact with the ground at the front and at the rear side of the brush-casing.

Power is transmitted to the brush through the pulley U', which is secured upon the outer end of the brush-shaft from the belt V, which at its upper end passes over the pulley V' upon the shaft W, which is driven by the pinion W', which meshes with the drive-gear wheel X, loosely secured upon the rear axle of the frame and which is engaged with the ground-wheels by means of the clutch X', of

any suitable construction, and which is operated by means of the lever Y, which is connected by a suitable bell-crank lever Y' to the rock-arm Z upon the shaft P', upon which
 5 is likewise pivoted the bell-crank P, so arranged that when the brush is raised the clutch will be thrown out of engagement with the gear-wheel X, and when the brush is lowered the clutch will engage with said gear-
 10 wheel and impart the motion thereto of the ground-wheel.

Motion is imparted to the fan from the shaft W, upon which is secured the gear-wheel *a*, which meshes with the pinion *b* upon the
 15 shaft *c*, upon which is secured the pulley *d*, the belt *e* being driven therefrom and engaged over the pulley *f* upon the shaft of the fan.

The parts being thus constructed, their operation is as follows: The driver being in
 20 position, the brush is lowered by means of the lever Q', and by the same movement the driving mechanism of the fan and brush is put in operation. A strong suction will be created within the brush-casing N', and the
 25 brush will be rotated toward the front of the machine, lifting up the dust upon the plate T, from whence it will be carried by the suction through the discharge-spout H to the top of the housing. Striking the cap H', it will
 30 be carried out by the blast through the apertures I, or falling through the apertures I' into the dust-box E. The dust is prevented from finding exit through the aperture in the top of the housing by the screens J'. It will
 35 thus be seen that my machine can operate when the weather is dry and the streets very dusty, picking up all of the light material and dust and depositing them in the dust-box E without creating any dust in the streets,
 40 which has heretofore been the great objection to such machine. When the box E is filled, it may be taken out by opening the doors E' and a new one inserted, which may be likewise filled, and the operation repeated
 45 as long as necessary. By having the case N upon an independent truck and having the hinged plates P' and U, I am enabled to make a tight contact with the street at all points in front and rear of the brush, so that the
 50 suction of the fan will be more effective, picking up all the particles of dust and dirt.

What I claim as my invention is—

1. In a street-sweeping machine, the combination, with the frame, of an independently-
 55 supported truck below the same, connections between the truck and frame, a rotary brush in the truck, a casing for the brush, a storage-compartment, a fan, a suction-spout, and

an adjustable connection between the spout and the casing, substantially as described. 60

2. In a street-sweeper, the combination, with the frame, of an independently-supported truck, a brush adjustably secured on the truck, a casing for the brush, a suction
 65 spout or trunk on the casing entering the spout, having its end loosely held therein, whereby the same may be vibrated, and a fan, substantially as described.

3. In a street-sweeper, an independent brush-supporting truck, a storage-compartment, a suction-pipe leading into the same, a
 70 fan, and a casing for the brush, having a trunk extending into and loosely held in the suction-pipe, substantially as described.

4. In a street-sweeper, the combination, 75 with the frame, a storage-compartment, and a suction-pipe leading into the same, of a fan in the suction-pipe, a rotary brush supported beneath the frame and independently thereof, a casing for the brush, a movable connection
 80 between the casing and spout, means for actuating the fan and brush, and means for simultaneously raising the brush and disconnecting the actuating means of the fan and brush, substantially as described. 85

5. In a street-sweeping machine, the combination of the independently-supported truck N, casing N', brush O, trunk R entering the suction-spout, and the plate T, substantially as
 90 described. 90

6. In a street-sweeping machine, the truck N, the supporting-chains S', the casing N', within which is the rotary brush O, the trunk R, having flanges R', the suction-spout G',
 95 having the flaps S, and the yielding plates T and U at front and rear of the truck, substantially as described. 95

7. In a street-sweeping machine, the combination, with the spout H, having an aperture I' in the upper end, of the cap H', having lateral aperture I, substantially as described. 100

8. In a street-sweeping machine, the combination of the frame, the housing D, the blower having its discharge-spout entering
 105 said housing, the extension J, hinged screens J', and means for vibrating said screens, substantially as described. 105

In testimony whereof I affix my signature, in presence of two witnesses, this 5th day of May, 110
 1890. 110

WILLIAM AUBERLIN.

Witnesses:

M. B. O'DOGHERTY,
 P. M. HULBERT.