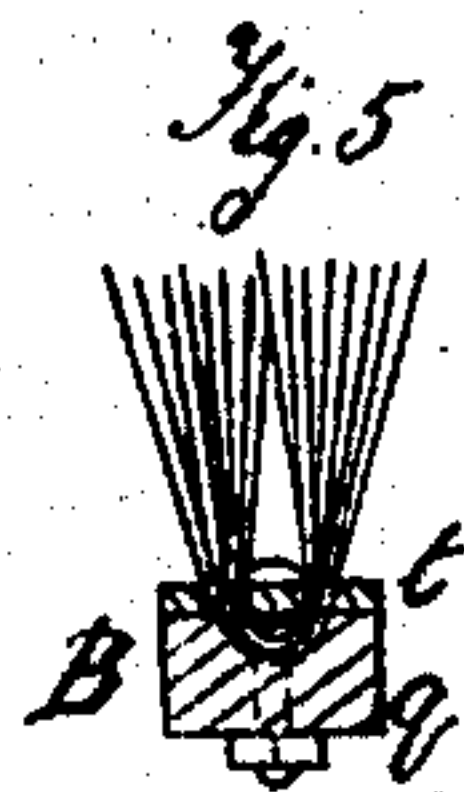
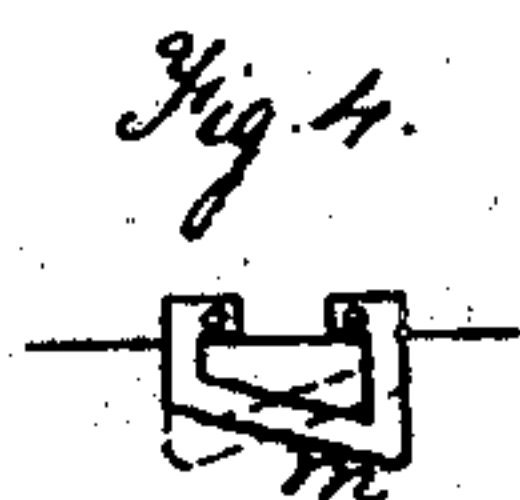
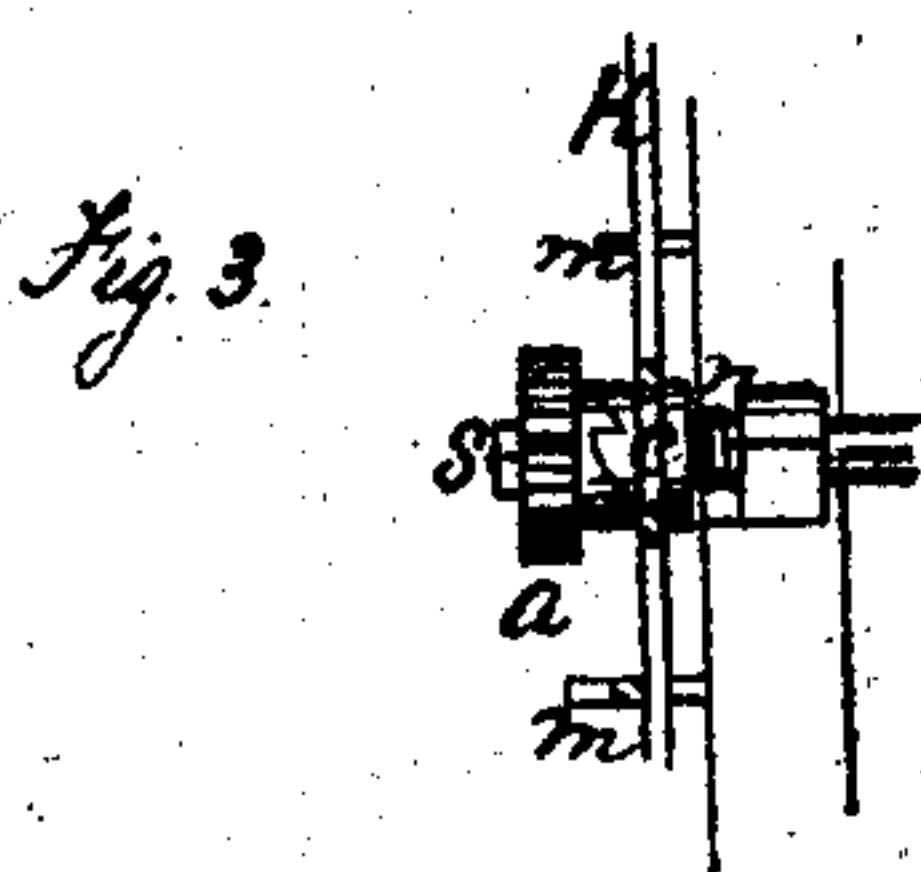
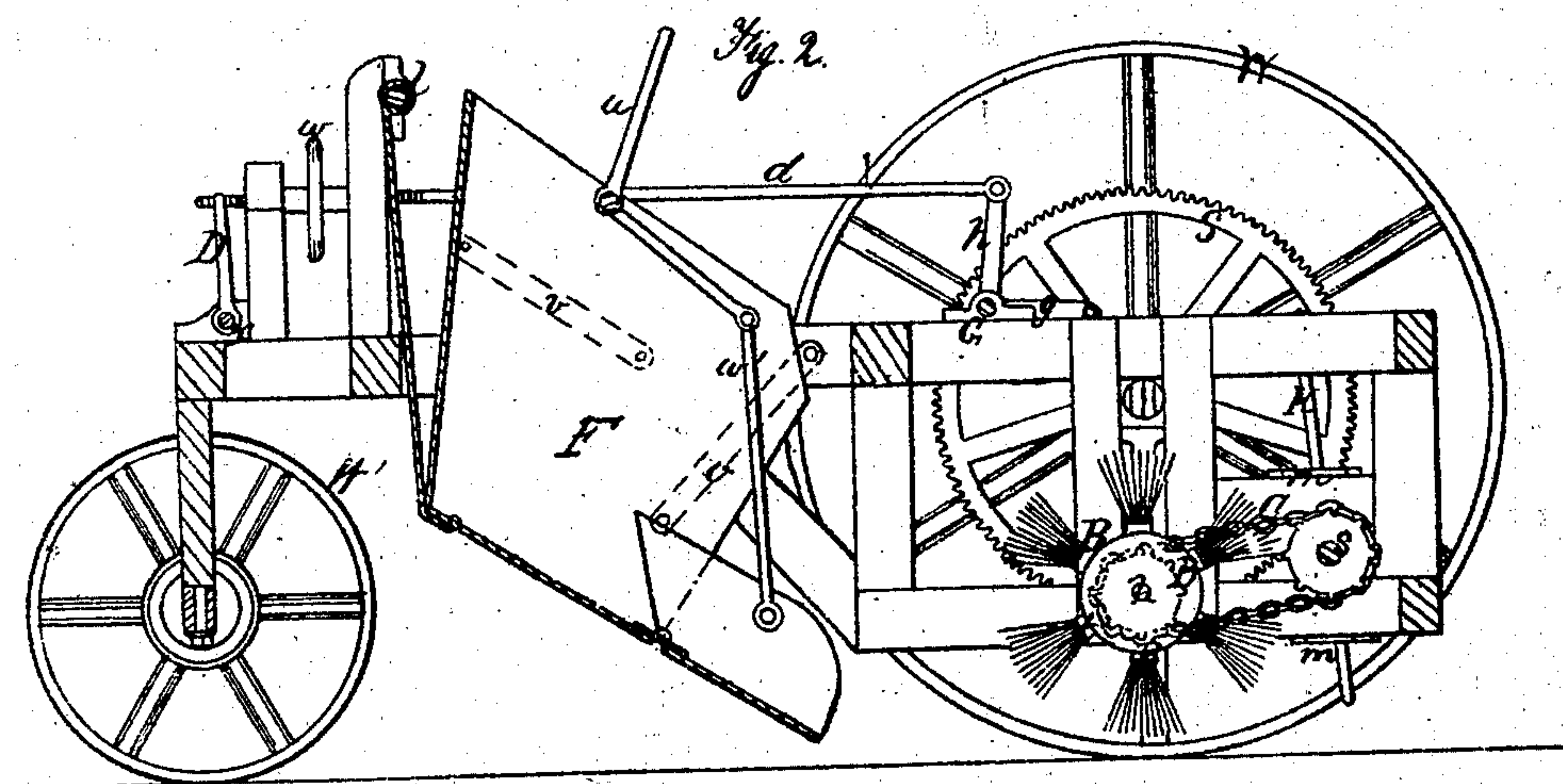
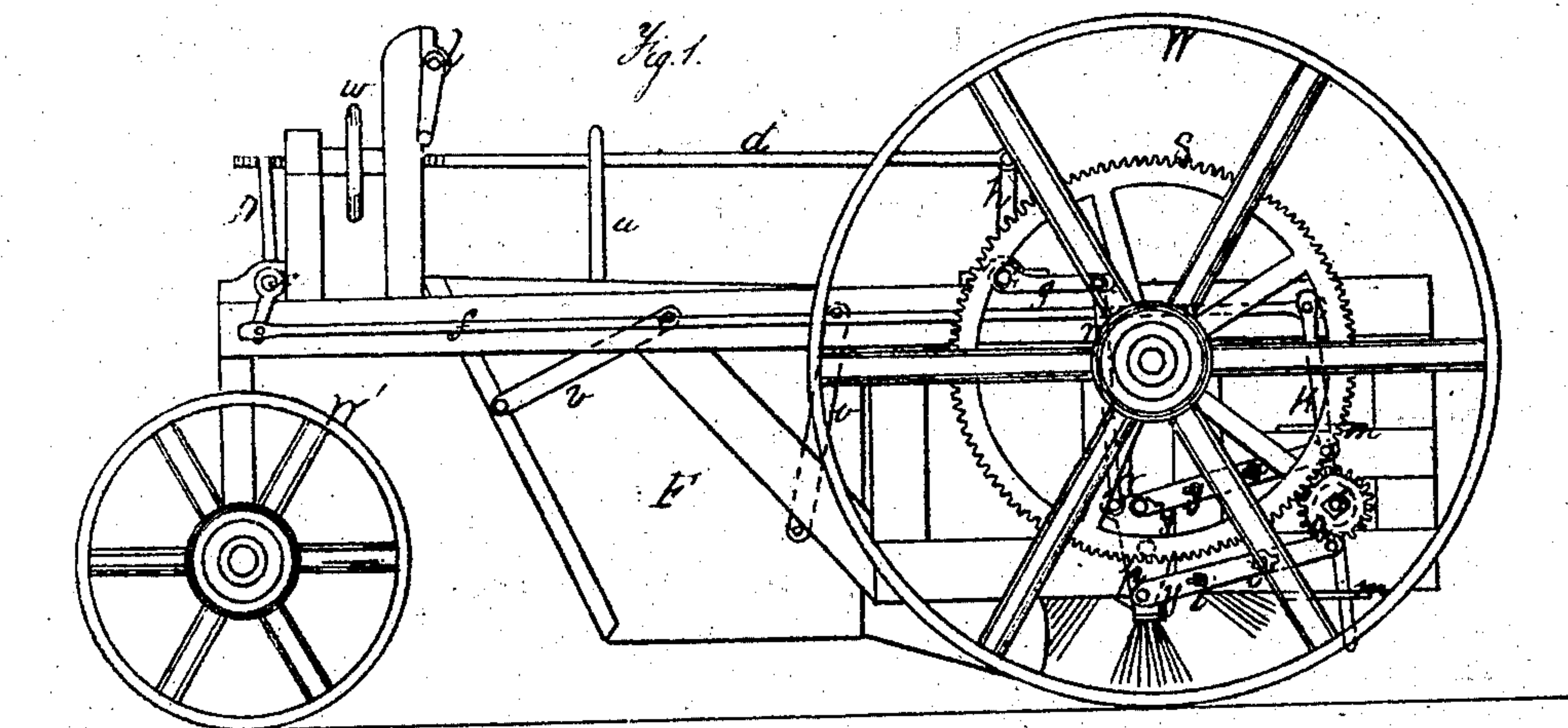


M^r Connell & Pringle

Street Sweeper.

N^o 71894

Patented Dec. 10, 1867.



Witnesses
Wm. S. Loughborough
Fred. A. Hatch

Inventors
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United States Patent Office.

ROBERT Y. McCONNELL AND GEORGE PRINGLE, OF ROCHESTER, NEW YORK.

Letters Patent No. 71,894, dated December 10, 1867.

IMPROVED STREET-SWEEPER.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, ROBERT Y. McCONNELL and GEORGE PRINGLE, of Rochester, in the county of Monroe, and State of New York, have invented certain new and useful "Improvements in Street-Sweepers;" and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side elevation of our invention.

Figure 2 is a vertical longitudinal section of parts, as shown in fig. 1.

Figure 3 is a rear view of the driving-pinion and its clutching-apparatus.

Figure 4 is a top view of the counter-inclined planes, through which the clutch-lever operates.

Figure 5 is a transverse section of one of the broom-bars, B, detached and somewhat enlarged.

Like letters of reference indicate corresponding parts in all the figures.

The nature of this invention will be better understood by reference to the drawings and specification.

The frame of the machine is supported upon four suitable carrier-wheels, the rear two acting as driving-wheels for the broom-shaft. To each of these wheels is rigidly attached a spur-wheel, S. The counter-shaft *s* is so hung that the pinions *a* are always in gear with the spur-wheels S. The pinions are hung loosely upon the shaft *s*, but are coupled to it by means of the feathered clutches *c*. The spiral spring *n* (fig. 3) forces the clutch against the pinion, but will yield, and permit the pinion to travel backward if the carrier-wheel on that side of the machine happens to be turned backward, as when turning around, while the pinion on the opposite end will continue to drive the shaft. This shaft drives the broom-shaft *b* by the chain C (fig. 2.) The chain C may be tightened at any time by means of the clamping-bolts *i* in the straps *y*, which are made double, one of them having slots for the bolts to pass through, and the other, round holes to fit the bolts. One-half of each strap is connected to the frame at points above and below the counter-shaft, and equidistant from it. The other portion of the straps is similarly hinged to a plate, *p*, through which the broom-shaft revolves. There is a suspension-rod, *r*, attached to the upper end of this plate, on each side of the machine. These rods connect with a short arm, *g*, at each end of the rock-shaft G, the arm *h* of which connects with the adjusting-rod *d*, which is gauged by the threaded hand-wheel *w*. It will be seen that by this means the broom-shaft is raised or lowered in nearly a vertical line, under the axle of the carrier-wheels W, and held in the desired adjustment. The clutch *c* is thrown out of gear and held there by the operator, by means of the hand-lever D, rock-shaft *x*, rod *f*, and lever *k*, which latter is pivoted to the coupling *e*, as shown in fig. 3, which is drawn toward the side of the frame of the machine by means of the reversed or counter-inclined planes *m*, shown in fig. 4, the lever being drawn into the contracted portion of the plates *m*. The broom-bars B may be made as shown in fig. 5, the plate *t* being drilled or punched, to receive the rattans, and the wooden bar *g*, grooved or channelled, to receive the fold or bow of the materials constituting the brush part. The plates, after being filled, are bolted to the wooden bars, as shown. There may be ten or more broom-bars attached to the shaft *b*. We construct the dirt-pan F about as shown in the drawings, and suspend it to the frame by the straps *v*. The hinged apron E is placed and held in any desired position by the lever *u* and the jointed rods *w'*, fig. 2. It is raised and dumped by means of a suitable crank-shaft, *l*, and chains. The forward wheels, W', are attached to a very short axle-tree, so as to facilitate turning around. This end of the machine may be carried upon suitable springs. The broom-shaft boxes may be hung in a single adjustable rigid arm, if desired, having the counter-shaft *s* for its axial point. The brooms are made to rise and fall with the surface over which they pass, by being arranged directly under the axle of the carrier-wheels W. The machine may be entirely encased except at the bottom, from the rear edge of the hinged apron E, to a point back of the broom-shaft, to confine the dust.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The pinions *a* of the counter-shaft *s*, combined with carrier-wheels W of street-sweepers, by suitable sliding clutches, *c*, all arranged substantially as shown and described, and for the purpose of equalizing the strength and efficiency of those portions of the machine.
2. The broom-shaft *b* and the counter-shaft *s*, arranged substantially as shown, being held by means of the adjustable rigid straps *y*, for the purposes set forth.
3. The spring-clutches *c*, governed by means of the hand-lever D, connecting-rod *f*, lever *k*, and the counter-inclined planes *m*, all arranged and operating substantially in the manner and for the purposes set forth.

ROBT. Y. McCONNELL,
GEORGE PRINGLE.

Witnesses:

WM. S. LOUGHBOROUGH,
FRED. A. HATCH.